

-MEMORANDUM-
E-470 Hazardous Material Designation

Summary:

Adams County and several municipal and county partners have been promoting the option of turning E-470 into a designated hazardous material (hazmat) route. Adams County and municipal partners both submitted letters urging consideration of hazmat designation. It is Adams County's position that E-470 is a safer and more efficient route for transporting hazardous materials than local highways and arterial streets. Due to proximity (West of HW-85 and East of I-76) the City of Brighton is a key partner in ensuring the success and efficiency of designating E-470 a hazardous material route. There are three major reasons for designating E-470 a hazmat route; Safety, Efficiency & Reduced Congestion, and Community Support (See "Purpose of Designation" on Page 6).

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Background

Current Process:

Title 42, Article 20 of the Colorado Revised Statutes governs the routing of hazardous materials by motor vehicles on all public roads in Colorado. To designate a state highway in Colorado as a hazmat route, CDOT staff members, local governments, or private entities must request the Mobility Section of the Division of Transportation Development to perform an analysis of the route. To perform this analysis the Mobility Section will convene a Hazmat Advisory Team to determine if the proposed route meets the *Required Criteria*. If the *Required Criteria* are met, and approved by the Transportation Commission, CDOT will file a petition with the Colorado State Patrol (“CSP”) for approval. If CSP approves the petition, the route will be designated a hazmat route.

Hazmat Advisory Team Required Criteria:

- The route(s) under consideration are feasible, practicable, and not unreasonably expensive for such transportation.

- The route(s) is continuous within a jurisdiction and from one jurisdiction to another.
 - The route(s) does not unreasonably burden interstate or intrastate commerce.
 - The route(s) designation is not arbitrary or intended by the petitioner merely to divert the transportation of hazardous materials to other communities.
 - The route(s) designation will not interfere with the pickup or delivery of hazardous materials.
 - The route(s) designation is consistent with all applicable state and federal laws and regulations; and
 - The route(s) provides greater safety to the public than other feasible routes.
- Considerations include but are not limited to:
- AADT, crash and fatality rates
 - Population within a one-mile swath of each side of the highway
 - Locations of schools, hospitals, sensitive environmental areas, rivers, lakes, etc.
 - Emergency response capabilities on the route
 - Condition of the route, i.e., vertical and horizontal alignment, pavement condition, level of access to the route, etc.

For further information on the *Required Criteria*, please see [here](#). A map of all hazardous material designated routes can be found [here](#). Safety oversight of hazardous material transport is the jurisdiction of the Colorado State Patrol. The current head of the Colorado State Patrol (Department of Public Safety) is Commander John Hahn.

Colorado General Assembly 2019 Regular Session Bills Under Consideration

1. **SB19-032 (Hazardous Materials Transportation Routing):**
 - a. This bill authorizes a public highway authority or a governmental partner in a public-private partnership to apply to the Colorado State Patrol (CSP) for a new or modified hazardous materials route designation for a road or highway that it directly or indirectly maintains.
 - b. The bill also requires the department of transportation (CDOT) to conduct a study to assess the feasibility of allowing the transportation of hazardous materials through the Eisenhower-Edwin C. Johnson Memorial Tunnel and prepares a study report that includes findings and recommendations as to whether and under what conditions the transportation of hazardous materials through the tunnel should be allowed. CDOT must solicit input from representatives of specified counties, towns, communities, ski resorts, industries, organizations, emergency services providers, and the CSP regarding the scope of the study and must consider specified information and criteria and conduct specified types of analysis when conducting the study.
2. **SB19-032 & Adams County/E-470:**
 - a. Neither Adams County nor E-470 designed or brought forward SB19-032. These are not in any way, shape, or form our bill.
 - b. This bill was initiated by Grier Bailey of the Executive Director of Colorado Wyoming Petroleum Marketers Association, Tim Stewart. E-470's only involvement in the bill is that Director Stewart was contacted to provide input on the bill. Adams County was not involved in the stakeholder process and/or the development of SB19-032.

General Hazardous Material Information

- **Authority:** Hazardous materials/waste is heavily regulated at the local, state, and federal level. Regulatory oversight authorities include the Federal Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Motor Carrier Safety Administration (FMCSA), Public Utilities Commission (PUC), Colorado Department of Public Health & Environment (Waste Management Division), Colorado State Patrol (CSP), and other important organizations.

To provide an example, the governing body of the Environmental Protection Agency (EPA) and its comprehensive Resource Conservation and Recovery Act (RCRA) legislation regulates all hazardous materials, from the time of its generation to its eventual disposal (or “cradle to grave”). All generators of hazardous waste are required to have an “identification number” from the EPA. The EPA program is administered through the Colorado Department of Public Health & Environment, Waste Management Division. The division can provide generators with the regulations they will need to meet in disposal of their wastes and with more information on resources available to small generators in disposing of their wastes. Colorado solid waste laws forbid the disposal of any non-residential hazardous waste in state solid waste landfills.

- **Federal:** Regarding the movement of hazardous materials, the Secretary of the Department of Transportation receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 U.S.C. 5101 et seq. The Secretary is authorized to issue regulations to implement the requirements of 49 U.S.C. The Pipeline and Hazardous Materials Safety Administration (PHMSA) (formerly the Research and Special Provisions Administration (RSPA)) was delegated the responsibility to write the hazardous materials regulations, which are contained in 49 CFR Parts 100-180. In order to accomplish his responsibilities under the HMTA the Secretary "...may authorize any officer, employee, or agent to enter upon inspect, and examine, at reasonable times and in a reasonable manner, the records and properties of persons to the extent such records and properties relate to: (1) the manufacture, fabrication, marking, maintenance, reconditioning, repair, testing, or distribution of packages or containers for use by any "person" in the transportation of hazardous materials in commerce; or (2) the transportation or shipment by any "person" of hazardous materials in "commerce."

The hazardous materials regulations have changed significantly over the last several years. These changes were first introduced in Docket HM-181 which provided for the harmonization of the United State's hazardous materials regulations with international standards in order to facilitate foreign trade and maintain the competitiveness of U.S. goods.

The applicability of the hazardous materials regulations was extended to all intrastate shipments of hazardous materials by highway effective October 1, 1998, as published in the final rule, Docket HM-200 dated January 8, 1997. This final rule also provided

exceptions for "materials of trade", "agricultural operations" and certain non-specification packaging used in commerce.

Special agents of the Department of Transportation can not be denied reasonable access to those areas that fall within the official scope of their duties. The Secretary has delegated this authority to the Federal Aviation Administration (FAA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railway Administration (FRA), Pipeline and Hazardous Materials Safety Administration (PHMSA), and the United States Coast Guard (USCG).

- **Colorado:** While exercising the police powers of the state for the purpose of protecting the health, peace, safety and welfare of the state's citizenry, the Colorado Legislature enacted §42-20-101, et seq, C.R.S., and declared that the permitting and routing of motor vehicles transporting hazardous materials (HAZMAT) was a matter of statewide concern and was affected with a public interest.

The Chief of the Colorado State Patrol (CSP) is authorized by §42-20-108 (1) and (2) and §§42-20-403, 504, and 508, CRS, to promulgate [rules and regulations](#) for the permitting, routing and safe transportation of hazardous and nuclear materials by motor vehicle within the state of Colorado, both in interstate and intrastate transportation. Pursuant to §42-20-108.5, CRS, the Chief of the CSP is authorized to adopt rules and regulations which exempt agricultural products from the hazardous materials rules.

Hazardous Materials Carriers are also subject to Colorado Public Utility Commission (PUC) registration and insurance requirements. Colorado statutes require that any person transporting hazardous materials that require placarding to obtain a Hazardous Materials Permit from the Public Utilities Commission.

- The [Hazardous Materials Section](#) is Troop 8-C within the Colorado State Patrol. The Hazardous Materials Section contributes to the safety of hazardous material transportation in order to protect citizens and the environment. Twenty-five Hazardous Materials Technician level trained troopers are deployed throughout the state, working with all levels of government as well as private industry through close communication and cooperation. The head of the Hazardous Material Section is Captain John Hahn.

Definition: As defined within §42-20-103 (3), CRS, are those materials listed in Tables 1 and 2 of Title 49, Code of Federal Regulations (CFR), 172.504 ([49 CFR 172.504](#)), excluding highway route controlled quantities of radioactive materials as defined in 49 CFR 173.403 (1), excluding ores, and the wastes and tailing there from, and excluding special fireworks where the aggregate amount of flash powder does not exceed 50 pounds. In general, there are nine classes of hazardous waste:

- 1) Explosives
- 2) Gases
- 3) Flammable Liquid and Combustible Liquid
- 4) Flammable Solid, Spontaneously Combustible and Dangerous When Wet

- 5) Oxidizer and Organic Peroxide
- 6) Poison (Toxic) and Poison Inhalation Hazard
- 7) Radioactive
- 8) Corrosive
- 9) Miscellaneous, and the general Dangerous placard

- **Hazardous Material/Waste Producers:** Many small businesses are likely to produce hazardous wastes that require disposal under state Health Department regulations. Many of these products are every-day hazardous material and travel along major designated roadways each-and-every day (such as I-25).

Most likely generators include businesses like: dry cleaners, bakeries, newspapers/printing shops/graphic arts, wineries, breweries, distilleries, organic and inorganic chemical formulators and manufacturers, wood finishers, furniture manufacturing and repair, paint manufacturers and applicators, metal finishers, foundries, auto body shops, lumber mills and paper product manufacturers, cement plants, leather finishers and manufacturers, photo equipment and supply manufacturers, hospitals, funeral homes, general contractors, rubber and tire manufacturers, canneries, gasoline service stations, gasoline tank trucks/bulk terminals, producers of natural gas liquids, manufacturers of plastic and synthetic materials, explosives manufacturers, agricultural chemical manufacturers and applicators, meat packing plants, refineries, manufacturers and applicators of asphalt and tar paving mixtures, manufacturers of soap/detergent/cleaning and polishing products, refrigerator/air conditioner service/repair shops, photo finishing labs, utilities, laboratories, and pest control operators.

- **Commodity Flow Studies:** –§42-20-108, C.R.S. , authorizes the Chief of the CSP to promulgate rules and regulations for the permitting, routing and safe transportation of HAZMAT by motor vehicles within the State of Colorado. To fulfill its responsibilities, the CSP must maintain an ability to determine continuously the kinds of HAZMAT being transported on roadways within the state. Among others, that information is useful in 1) informing communities, government officials and the general public regarding Colorado's HAZMAT freight specifics on a statewide, regional and corridor-specific basis, and 2) defining the equipment and training needs of technical, operational and first responders.

Such information is also important to the ability of local communities to fulfill their responsibilities as Designated Emergency Response Authorities (DERAs) as set forth in –§29-22-101, et seq, C.R.S., and under the Emergency Planning and Community Right to Know Act (EPCRA), 42 U. S. C., 11001, et seq.

Accordingly, the CSP has developed a HAZMAT flow study process for use on the following routes of interest:

- 1) Joint CSP/Local venues: where the CSP and local concerns overlap.
- 2) CSP venues: locations bearing characteristics of unique concern to the CSP.
- 3) Local venues: locations bearing characteristics of unique local concern.

Though the process is generally applied to 24 hour surveys, it can be readily applied to longer survey periods. The process has also been designed to be user friendly and require a minimal expenditure of materiel and personnel resources. All data collected during the surveys is available to the public. Adams County requested information on two hazmat flow studies; the most recent study conducted in Colorado and the most recent study conducted in Adams County (Loveland Pass-US 6 and I-76 at 88th Ave.).

Based on Captain John Hahn's comments and the reviewed commodity flow studies (Loveland Pass-US 6 and I-76 at 88th Ave. in Adams County) it is apparent that most of what we're seeing on the roadways in Adams County is Class 3 hazardous material. Mr. Hahn says this reflects what we see across the state (with roughly 80% of materials being Class 3, things like fuel oil and gasoline). To clarify, Class 3 are liquids that can become flammable or combustible when they reach a defined flashpoint. [Federal regulations](#) go as far as to list more specific information related to this in CFR Title 49.

Purpose of Designation

- **Safety:** E-470 is a safer and more efficient route for transporting hazardous materials than local arterial streets because of almost uninterrupted traffic flow from a multitude of grade-separated crossings. Allowing this type of transportation on E-470 will minimize the number and severity of potential conflicting transportation movements and risks. The physical proximity of E-470's traveling lanes are much further away from homes, schools and business than the local streets in the unlikely event of an emergency situation.
- **Efficiency & Reduced Congestion:** Given the nature and character of these types of hazardous material vehicles, the design and construction specifications of the E-470 transportation system is suited far better than the local transportation systems. Due to design, major hazardous material roadways such as I-25, US-85, and I-76, cause vehicles to have to exit onto local side streets in order to move between hazardous material routes. Allowing E-470 as an option would allow hazardous material trucks to circumvent the main arterial streets that run through our local communities, avoid urban centers and reduce traffic congestion. Allowing an additional hazardous material route that can be easily accessed from the north-east metro area will help disperse the concentration of hazardous material along an additional roadway.
- **Community Support:** Adams County is not alone in advocating for the designation of E-470 as a hazardous material route. Adams County, Douglas County, the Town of



Parker, Commerce City, and the City of Thornton have all expressed the same sentiment. We want to keep hazardous material movement on the perimeter of our communities and not right through the center on our local roadways. The Greater Brighton Fire Rescue District (whose emergency services area includes nine miles of E-470) have stated that a majority of their calls regarding hazardous materials take place on local roads, and as such, would support getting these materials on roadways that are more conducive to the transportation of these materials. Further, the fire district views the hazmat designation as a way of moving these materials away from more densely populated neighborhoods. Additionally, our energy industries are supportive of this proposal, as it would generate more efficiency in transporting hazardous material across the state.

Additional Talking Points

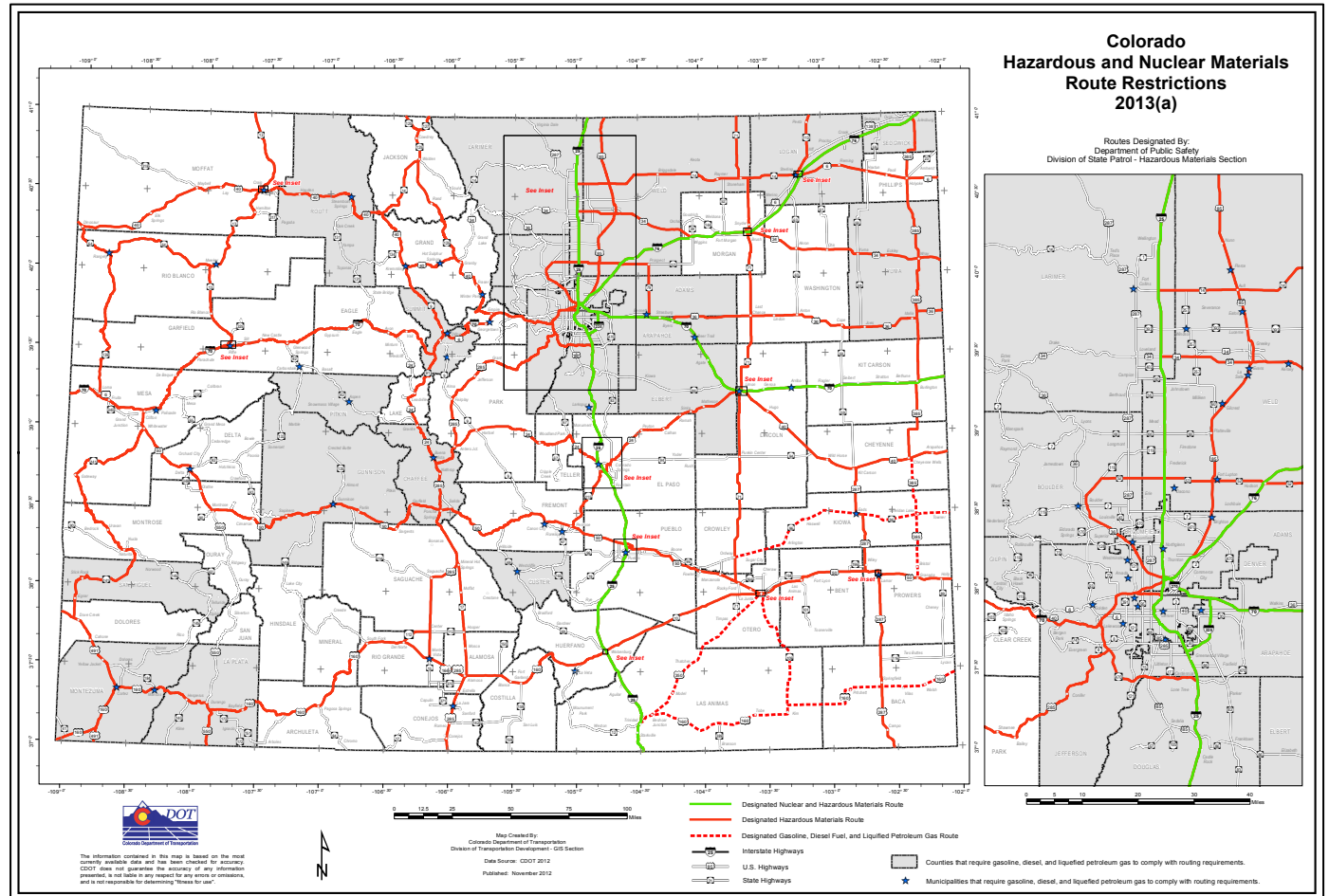
- **Economic Development & Conservation:** As you know, E-470, 47 miles long, is predominantly a four-lane highway. The 300-foot right-of-way (plus, for most of its length and on both sides of the mainline right-of-way, 75-foot wide multi-use easements) includes medians and shoulders capable of accommodating future mass transit and multi-use bicycle/pedestrian paths. Notably, this-right-of-way ensures development is set back a significant 300 feet from E-470, considerably more than arterial roadways where hazardous material vehicles might venture between designated hazmat roadways.

There has been some additional concern raised that the proposed designation might hinder economic development within the region as well as impact open space. Economic development and preserving the open space we all love continues to be a priority for Adams County and community partners. Designating E-470 as a hazmat route now, before major development along E-470 in the north-east metro area occurs, allows local governments to plan growth in an intelligent, thoughtful way that ensures communities/businesses that have yet to be developed are located in appropriate proximity from the roadway. Further, the designation of E-470 as a hazmat route does not alter land-use or zoning rules.

Additionally, current roadways that are designated as hazardous material routes have not prevented growth or open space development within areas along the roadway (I-25, I-76, etc.). Some of the largest and fastest growing communities in Colorado have hazardous material routes in their jurisdictions which have not inhibited growth and/or development.

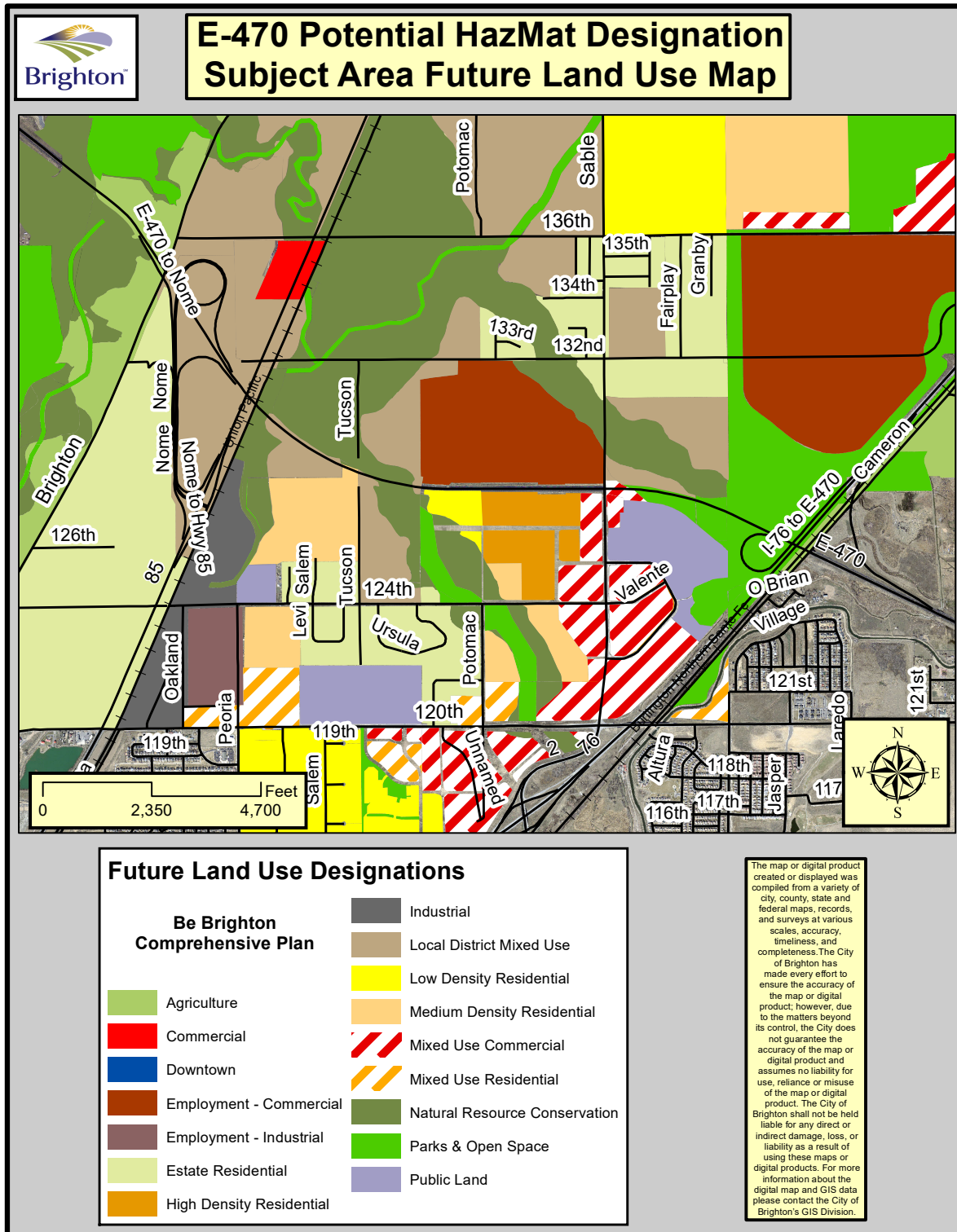
- **Multiple Hazmat Roads:** It has been suggested that the designation of E-470 as a hazmat route would mean that the City of Brighton may be taking on more than its fair share of hazmat routes as compared to other communities. Communities such as Denver, Colorado Springs, and Pueblo all have multiple hazardous material routes running through their communities. Further, the goal of designating E-470 as a hazmat route is to remove hazardous material traffic from local roadways, not to increase the amount of hazardous material going through the region. This designation would more equitably disperse hazardous material throughout the region and help keep hazardous material on the exterior of our communities rather than on local roadways. .

Current Hazardous and Nuclear Materials Route Restrictions



(Zoom-in should be enabled to see listed roadways)

Brighton Comprehensive Plan Future Land Use Map



The Economic Impact of E-470

THE ECONOMIC IMPACT OF



\$38.4 Billion in Real Estate Valuation

Since 1986, E-470 has catalyzed \$38.4 billion in real estate valuation along its corridor. As a result, E-470's Impact Area contributes \$467 million in property taxes annually to regional governments.

407,000 People & 132,000 Jobs



E-470's Impact Area population represents 15 percent of the MSA's population. The Impact Area accounts for 10 percent of the MSA's wage and salary jobs (i.e. excluding sole proprietors).



12% of Annual Economic Activity

The direct spending associated with labor and business-to-business purchases (i.e. output) in the E-470 Impact Area is \$25 billion per year, which accounts for 12 percent of the MSA's direct output.

Higher Average Wages and Incomes



Wages of workers employed in E-470's Impact Area average \$63,860, which is 5 percent higher than the MSA average. Average incomes of these households are \$104,250, which is 20 percent higher than average.



7,800 Workers Depend on E-470

More than 21,000 households and 7,800 workers are dependent on E-470 for their travel needs. It is estimated that without E-470, this magnitude of additional population and jobs would push surrounding road networks beyond failure points.

14.8 Million Hours of Driving



E-470 saves MSA residents 14.8 million hours of driving per year, translating to \$26.1 million in annual travel time savings. More time spent driving translates to lost productivity and lower quality of life.



Avoided Traffic Incidents

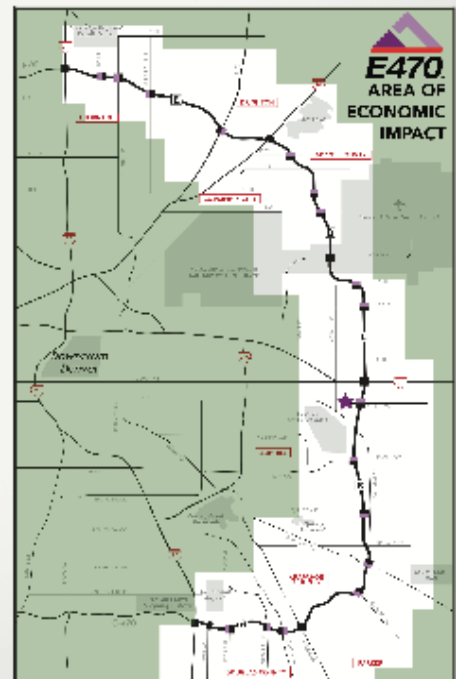
E-470 also provides unseen economic benefit in terms of avoided traffic incidents. Because it moves traffic to a safer roadway type, E-470 is also responsible for the avoidance of an estimated \$24 million in accidents, injuries, and fatalities per year.

Regional Economy Contributions



E-470 employs or contracts 272 full and part-time workers. Annually, its operations contribute approximately \$25.1 million in GRP to the MSA, inducing an additional \$23.8 million in GRP contributions.

Economic & Planning Systems (EPS) with subcontractor Felsburg, Holt & Ullevig (FHU) were contracted to complete an economic impact study for the E-470 Public Highway Authority (PHA). The following are the major findings of that analysis within the E-470's context of the 6-County Denver Metropolitan Statistical Area (MSA) for 2015.



(Zoom-in should be enabled)

E-470 General Fact Sheet



FACT SHEET

Facts that our customers should know.

OUR FOCUSED GOALS ARE TO PROVIDE:
SAFETY • SERVICE • STEWARDSHIP • SPEED



47 MILES 8 MEMBERS

The E-470 Public Highway Authority is a political subdivision of the State of Colorado and it consists of 8 voting member jurisdictions.



COUNTIES:

1. Adams County
2. Arapahoe County
3. Douglas County

MUNICIPALITIES:

4. City of Aurora
5. City of Brighton
6. Commerce City
7. Town of Parker
8. City of Thornton

E-470 ROAD STATS:

47 Miles Long
96 Bridges
16 Interchanges
24 Snow Plows
Lanes are 12' Wide

NO TAX DOLLARS FUND E-470

The operation and improvement of the road is funded entirely through toll revenue. Tolls are the largest source of revenue, which is applied toward bond debt payments, in addition to the operating and maintenance costs of the road.

\$1.5 BILLION IN BOND DEBT IS SCHEDULED TO BE PAID OFF BY 2041

It is required to pay off in accordance with the Plan of Finance that was established in 1995 and amended in 2010.

Through this Plan of Finance, scheduled toll increases were put in place to ensure that E-470 could continue to meet its bond debt obligations.

Vehicle registration bonds will be paid off in 2018.

Our debt ratio requirement is 1.3.

Debt obligation increases each year by an average of \$6.5 million until 2020. These increase then level off at \$125 million annually until final maturity 2041.



A BRIEF HISTORY OF CONSTRUCTION COSTS

Historic Highway Construction Costs

On average, E-470 construction costs and debt are higher than older toll roads in the United States. This is primarily due to the time period it was built and the higher cost of materials and labor during the initial construction period of 1988-2003.

After the Federal Aid Highway Act of 1956

Construction on federally funded toll roads began during this era in the 1950s & 1960s. In contrast, E-470 has received no federal or state funding for its construction and maintenance. E-470 is funded nearly completely by tolls generated by the road.



CONSTRUCTION & BOND DEBT A TIMELINE OF EVENTS

1987	Public Highway Authority Act Signed
1991	First segment of E-470 opens
1995	Plan of finance established
2003	Final segment of E-470 completed
2017	Board approves toll rate adjustment & ExpressToll rate freeze
2018	Vehicle registration bonds mature
2020	Debt obligation increases from \$101M in 2018 to \$113M in 2020
2041	Final maturity of outstanding debt

FOR MORE INFORMATION VISIT: **EXPRESSTOLL.COM**

Adams County Support Letter

Mary Hodge
COUNTY COMMISSIONER
DISTRICT 5



Commissioners' Office
4430 South Adams County Parkway
5th Floor, Suite C5300
Brighton, CO 80601-8218
PHONE 720.523.6110
FAX 720.523.6120
www.adcogov.org

July 26, 2018

E-470 Board of Directors
Tim Stewart
Executive Director
22470 E. 6th Parkway, Suite 100

RE: E-470 Hazardous Material Route Designation

Dear E-470 Board of Directors and Mr. Stewart:

The purpose of this letter is to communicate and document Adams County's support for the designation of E-470 as a Hazardous Material Route. It is the County's position that E-470 is a safer and more efficient route for transporting hazardous materials than local arterial streets. Allowing this type of transportation on E-470 will minimize the number and severity of potential conflicting transportation movements and risks. Further, given the nature and character of these types of vehicles, the design and construction specifications of the E-470 transportation system is suited far better than the local transportation systems. Also, the physical proximity of E-470's traveling lanes are much further away from homes, schools and business than the local streets in the unlikely event of an emergency situation.

Please let me know if you have any questions about the County's position or rationale for supporting this designation.

Sincerely,

Mary Hodge
Adams County Commissioner

City of Thornton Support Letter



Thornton City Hall
9500 Civic Center Drive
Thornton, CO 80229-4326
www.cityofthornton.net

Office of the Mayor
PH 303-538-7200

February 15, 2018

E-470 Board of Directors
Tim Stewart
Executive Director
22470 E. 6th Parkway, Suite 100
Aurora, Colorado 80018

RE: E-470 Hazardous Material Route Designation

Dear E-470 Board of Directors and Mr. Stewart:

The purpose of this letter is to communicate and document the City of Thornton's support for the designation of E-470 as a Hazardous Material Route. It is the City's position that E-470 is a safer and more efficient route for transporting hazardous materials than the City's local arterial streets. Allowing this type of transportation on E-470 will minimize the number and severity of potential conflicting transportation movements and risks. Further, given the nature and character of these types of vehicles, the design and construction specifications of the E-470 transportation system is suited far better than the City's local transportation system. Also, the physical proximity of E-470's traveling lanes is much further away from homes, schools and business than the City's streets in the unlikely event of an emergency situation.

Please let me know if you have any questions about the City's position or rationale for supporting this designation.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Williams", written over a horizontal line.

Heidi K. Williams
Mayor

cc: City Council
Kevin Woods, City Manager

Commerce City Support Letter



January 7, 2019

Executive Director Tim Stewart
Board of Directors
E-470 Highway Authority
22470 E. 6th Parkway, Suite 100
Aurora, CO 80018

RE: E-470 Hazardous Material Route Designation

Dear Members of the Board and Mr. Stewart,

The purpose of this letter is to formally communicate the City of Commerce City's support for evaluating the designation of E-470 as a hazardous material route. With oil and gas operators looking at potential locations adjacent to E-470 within the city, this designation offers the opportunity to minimize the number and severity of potential conflicting transportation movements and risk on local arterials. The city believes any E-470 hazardous material route designation needs to be regional, extending beyond Interstates 25 and 76 to maximize local benefits.

The City believes advancing a criteria-driven review process will yield the necessary data to determine whether such a designation will improve safety and efficiency for transporting these materials as well as provide benefit to our local transportation network.

Please contact City Manager McBroom at 303-227-8814 with additional questions.

Sincerely,

Mayor Sean Ford
City of Commerce City