A public perspective on highway safety

Presented to the House Transportation Committee
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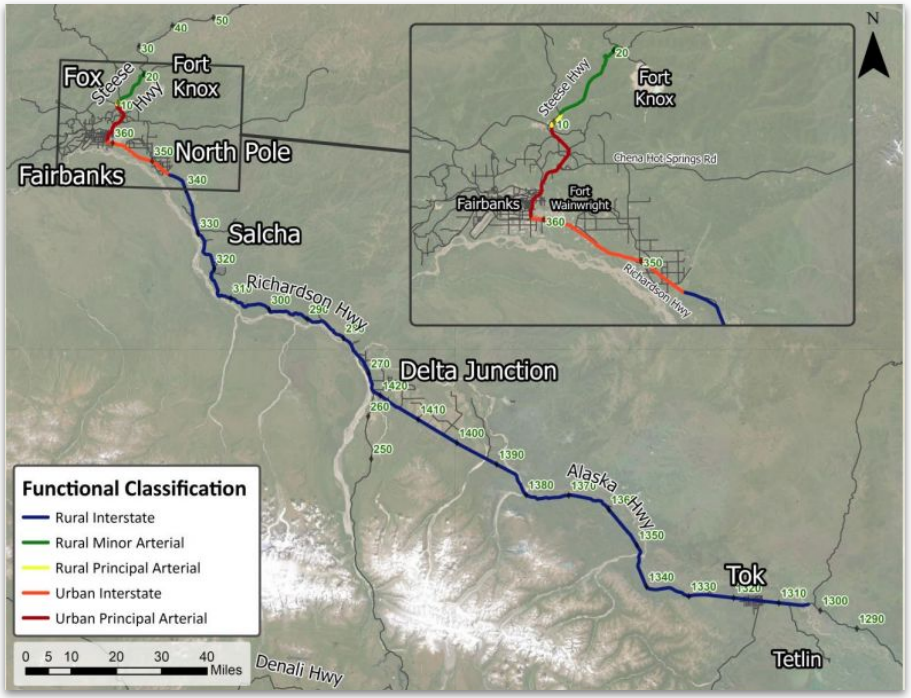
Who is ASAH?

Advocates for Safe Alaska Highways (ASAH) is a grassroots volunteer group of long-time Interior Alaska residents with a diversity of backgrounds and experiences. Together we are committed to ensuring that the health and safety of all Alaskans traveling our public highways is not jeopardized by industrial ore hauling.

What is the ore haul?

- ★ 60 ore haulers (B-Trains)
- ★ 95-feet long
- ★ Approx. 162,000 lbs
- ★ 99% industrial waste
- ★ 240 miles of public highway from Tetlin mine to Fort Knox mill
- ★ Operating 24/7/365 for minimum of 4.5-5 years



Timeline of Alaska-Richardson-Steese Highway Corridor Action Plan (ARS-CAP)

2022

AKDOT orders independent safety analysis of ore haul route, forms a Transportation Advisory Committee (TAC), and periodic work sessions begin in May

2023

October

Small number of B-Trains began operating along corridor

AKDOT rejects TAC request to pause ore haul until ARS-CAP study completed and recommendations implemented

November

AKDOT unexpectedly shuts down TAC meetings

2024

April-May

Draft of study presented for public comment

June

Ore haul now operating at scale studied in ARS-CAP

October

Five of eight passing lanes completed

December

Final 457-page ARS-CAP published

What is the Alaska-Richardson-Steese-Highway Corridor Action Plan?

“AKDOT is taking immediate steps to enhance highway safety along the Alaska, Steese and Richardson Highways in preparation for the planned Tetlin to Ft. Knox ore haul, scheduled to start in January 2024.

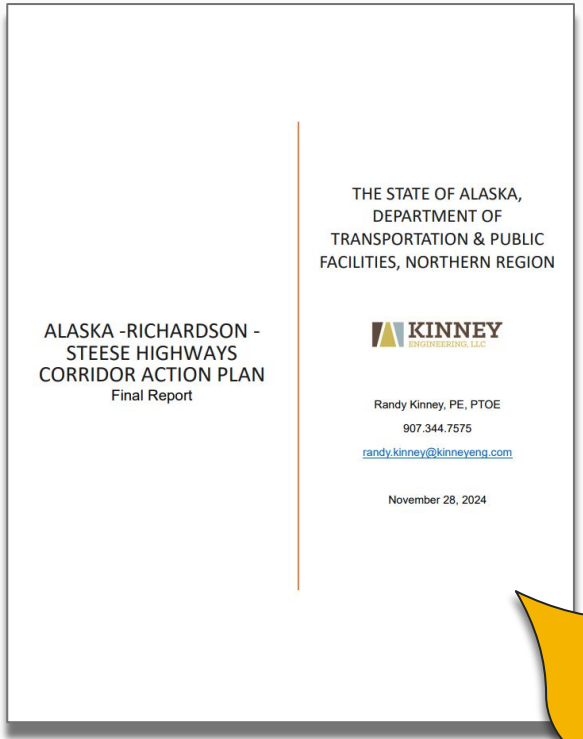
Safety improvements include short and long-term actions that will:

-Improve visibility for drivers and pedestrians
-Increase enforcement of commercial vehicle regulations
-Educate new drivers about driving near commercial trucks
-Connect emergency responders with funding for training and equipment
-Enhance vehicle and roadside technology
-Build long-term infrastructure upgrades

“We are launching a multidisciplinary approach that maximizes safety for all highway users,” said AKDOT Commissioner, Ryan Anderson. “It's important to take steps now, before the ore haul starts, to enhance safety.”

The ore haul remains of high interest to Interior Alaskans, many of whom have expressed concerns about safety. The urgency of AKDOT’s safety measures comes at a time when Kinross has indicated that the ore haul will start in early 2024.”

October 11, 2023 Press Release



Our concerns: Safety and its cost

- The ore haul is creating a “new normal” of frequent, heavy industrial traffic on public highways. The current haul has been fully operational for 9 months and issues are observed on a regular basis.
- Inadequate response to:
  - Deficient highways, bridges, and maintenance
  - School buses with bus stops sharing the lane with B-Trains
  - Prediction of increase in severe crashes
  - Overweight trucks
  - The state’s obligation to provide for the safety of all users
- The state budget cannot afford to subsidize industrial operations on our public roads.

Safety impacts:
Underpowered ore haulers (B-Trains)

- B-Trains, weighing in at 162,000 pounds, have high weight-to-power ratios, are slow to accelerate and have trouble keeping speed on hills.
- Speed differentials of 10 mph or greater contribute significantly to higher crash rates.
- They will impede and delay following vehicles, causing capacity issues in certain areas along the route.
- ASAH is aware of at least three rear-end collisions where drivers did not recognize how slow the B-Train was moving (two in north Fairbanks and one in Tok).

Estimated cost to the state: $50,600,000.

ARS-CAP p 166-172

Safety impacts:
Increased severe or fatal crashes

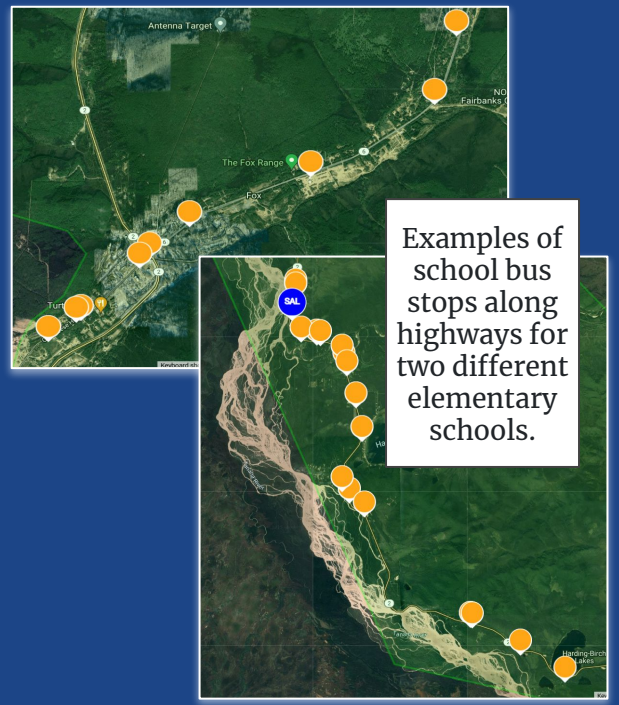
The result of a collision with a B-Train, June 2024. Photo by AKST.

- Predictive modeling shows an **increase of ten (10) severe or fatal crashes per year due to ore hauling**.
- The model likely under-predicts crash frequency and severity because it does not account for vehicles with such high weight-to-power ratios and poor operating performance being on public highways.
- The model shows that on a two-lane highway with "moderate oncoming traffic, the odds of failure to pass a 120-foot LCV versus a 65-foot standard truck are about 2–6 times greater."
  https://www.sciencedirect.com/science/article/abs/pii/S0965856404000795

ARS-CAP p104-109

Safety impacts:
School buses directly on route

- There are eighty-six (86) school bus stops directly on the two-lane highway along the route.
- Thirty-five (35) of them do not have adequate Stopping Sight Distance when roads are icy.



Examples of school bus stops along highways for two different elementary schools.

Estimated cost to the state for improvements: $200-300K

ARS-CAP p184-191

Safety impacts: Bridge integrity

- Kinney Engineering relied 100% on AKDOT data to determine bridge safety and integrity.
- Internal AKDOT communication shows fifteen (15) of the thirty-four (34) bridges along the route are undersized and should be load posted (FOIA response 3/2023).
- **The public doesn't know what is true and if the bridges are actually safe.**

ARS-CAP p149

Bridge load posting along route

Bridge Number	Bridge Name	Load Posting Weight Recommendation
506	Tok River	No Post
507	**Yerrick Creek**	**73 Tons**
508	**Cathedral Rapids No 1**	**75 Tons**
510	**Cathedral Rapids No 2**	**75 Tons**
511	**Cathedral Rapids No3**	**75 Tons**
509	**Robertson River**	**70 Tons**
513	Bear Creek	No Post
514	Chief Creek	No Post
515	Berry Creek	No Post
516	Sears Creek	No Post
517	**Dry Creek**	**68 Tons**
518	**Johnson River**	**59 Tons**
519	Little Gerstle River	No Post
520	**Gerstle River**	**56 Tons**
521	**Sawmill Creek**	**76 Tons**
524	**Tanana River at Big Delta**	**69 Tons**
525	Shaw Creek	No Post

Bridge Number	Bridge Name	Load Posting Weight Recommendation
526	Banner Creek	No Post
527	Salcha River	No Post
528	Clear Creek	No Post
529	Munson Slough	No Post
530	Little Salcha River	No Post
2133	Eielson Access undercrossing	No Post
531	**Moose Creek East Bend**	**69 Tons**
1832	**Moose Creek West Bend**	**69 Tons**
2123	Moose Creek OH SB	No Post
2124	Moose Creek OH NB	No Post
1364	**Chena Flood Control NB**	**49 Tons**
1866	**Chena Flood Control SB**	**48 Tons**
2147	Dawson Road Undercrossing	No Post
1767	**Badger Loop Rd Undercrossing**	**50 Tons**
1959	Badger Loop Undercrossing	No Post
231	Chena River (Steese Hwy)	81 Tons
1342	**Chena Hot Springs Undercrossing**	**44 Tons**

Total number of bridges along route = 34	
Total number of undersized bridges = 15	* The CHSR bridge has a bypass so was not counted here
Weight of each loaded B-Train = 81 Tons	

Financial impacts: Safe roads cost money

Bridge replacements

- AKDOT has fast-tracked critical bridge replacements and added them to the current STIP:
  - Robertson River Bridge
  - Johnson River Bridge (was in at least one previous STIP cycle)
  - Gerstle River Bridge
  - Northbound Chena Flood Control Bridge

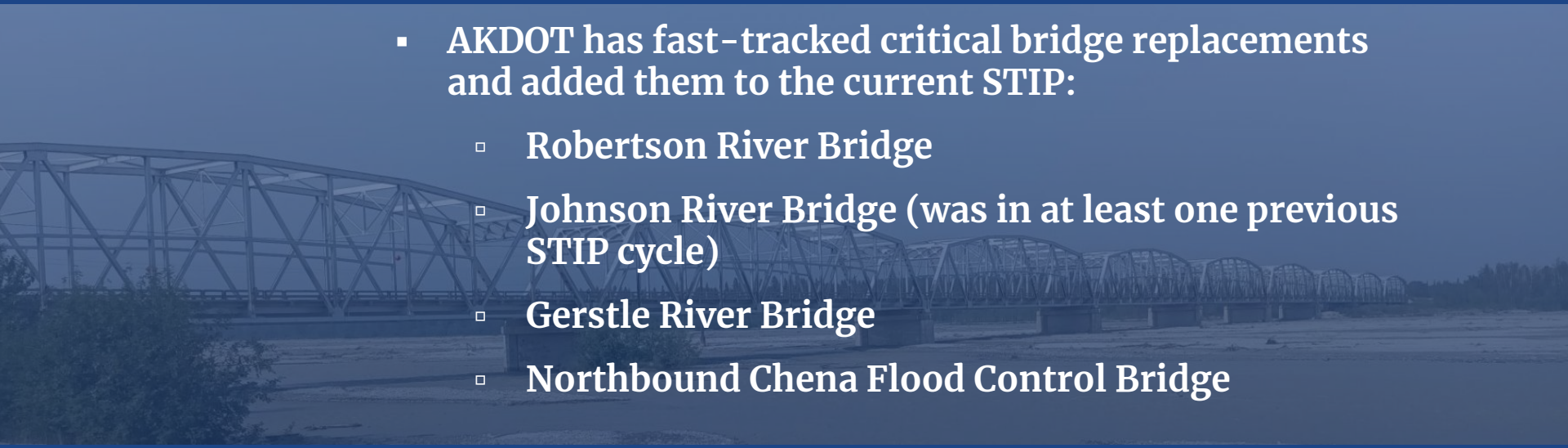


Photo: Gerstle River Bridge

Estimated cost to the state: $489,737,174

ARS-CAP p149

Financial impacts: Safe roads cost money

Significantly increased pavement damage

- Each B-Train imposes 250% more damage to the pavement than the largest class of truck currently on the highway.
- Calculation of pavement degradation assumes all 16 axles are in pavement contact at all times.
- To increase traction and reduce fuel use, B-Trains are raising up to 7 axles, thus imposing even greater stress to pavements.

Estimated cost to the state: $489 million

ARS-CAP p143-148

Financial impacts:
Safe roads cost money

Maintenance and Operations

- Summer M+O required increase = **$4M annually**
- Winter M+O required increase = **$3.5M annually**
- One-time M+O required increase = **$3.2M**
  - additional sand stockpile sheds
  - additional snow clearing equipment

Estimated cost to the state: $10.7 million

ARS-CAP p139

Total estimated costs to State of Alaska to accommodate this ore haul are **over one billion dollars**

PROJECTS	SOURCE	CONSTRUCTION YEAR(S)	COST ($) *	NOTES
Traffic Safety				
Climbing lanes required for >10 mph speed differential	Kinney Engineering	TBD	$50,600,000	Total of 15 locations throughout the route (18 total miles)
Bus stop improvements	Kinney Engineering	TBD	$200,000	Scope and cost estimates for lighting upgrades, bus pullouts, and signage at 35 bus stops with inadequate SSD on ice
Brush cutting to improve sight distances	AKDOT (9/23/23 Ch 11)	Ongoing	$1,600,000	Brush cutting, passing lanes signage, TBD location devices
Traffic Operations				
Additional state employee personnel required	AKDOT/ State of Alaska	TBD	TBD	Staffing of 24/7 weigh stations, EMS response and equipment, etc., still being determined
M+O Increases				
Summer maintenance and operations	Kinney Engineering/AKDOT	**Annual expense**	$4,000,000	
Winter maintenance and operations	Kinney Engineering/AKDOT	**Annual expense**	$3,500,000	
One-time expenditures	Kinney Engineering/AKDOT	TBD	$3,200,000	Additional equipment, sand sheds, personnel housing
Assets				
Robertson River Bridge 509 Replacement	DOT STIP Amendment #2	Post-2027	$135,251,000	STIP ID #34126
Johnson River Bridge 518 Replacement	DOT STIP Amendment #2	2025-2027	$120,014,402	STIP ID #33824 and 34445
Gerstle River Bridge 520 Replacement	DOT STIP Amendment #2	Post-2027	$128,672,826	STIP ID #22322 and 34447
NB Chena Flood Control Bridge 1364 Replacement	DOT STIP Amendment #2	2025-2027	$105,798,946	STIP ID #34130
Corridor Pavement Replacement	Kinney Engineering	TBD	$489,000,000	Significant Pavement Replacement and upgrades are required to accommodate the "new normal" weight of the ore haulers
* All costs are ROM estimates with the expectation that they will increase by as much as 50% at time of construction (Kinney Engineering at 9/14/2023 TAC meeting)				
		TOTAL COST TO STATE DUE TO ORE HAUL	**$1,041,837,174**	

Recommendations

Photo: Highway conditions in 2023, *before* ore hauling began.

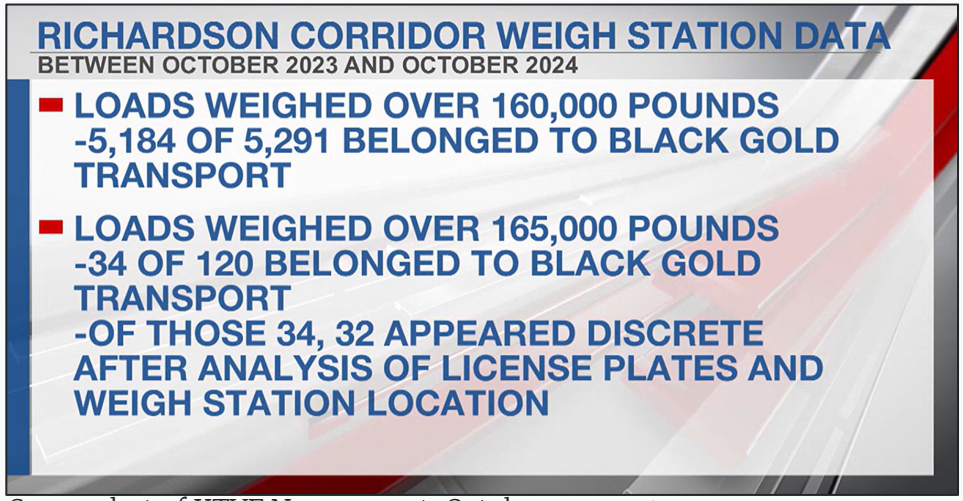
Weigh stations

- The ARS-CAP suggests increasing the weigh stations hours of operation.
- According to Kinney Engineering, “scale hours and operations impact both traffic safety and traffic operations, M&O and asset preservation.”
- In response, Carlos Rojas, Chief of Commercial Vehicle Compliance for AKDOT says they do not have the staffing or funding to do this.

Fox weigh station.

ARS-CAP p 205, 212

Overweight B-Trains



Screenshot of KTVF News report, October 31, 2024

- FOIA request for truck weights requested by KTVF found 17% of ore trucks were overweight between October 2023 and October 2024.
- DOT load-posted the Chena Flood Control Bridges with a maximum weight limit of 160,000 pounds on October 31, 2023.

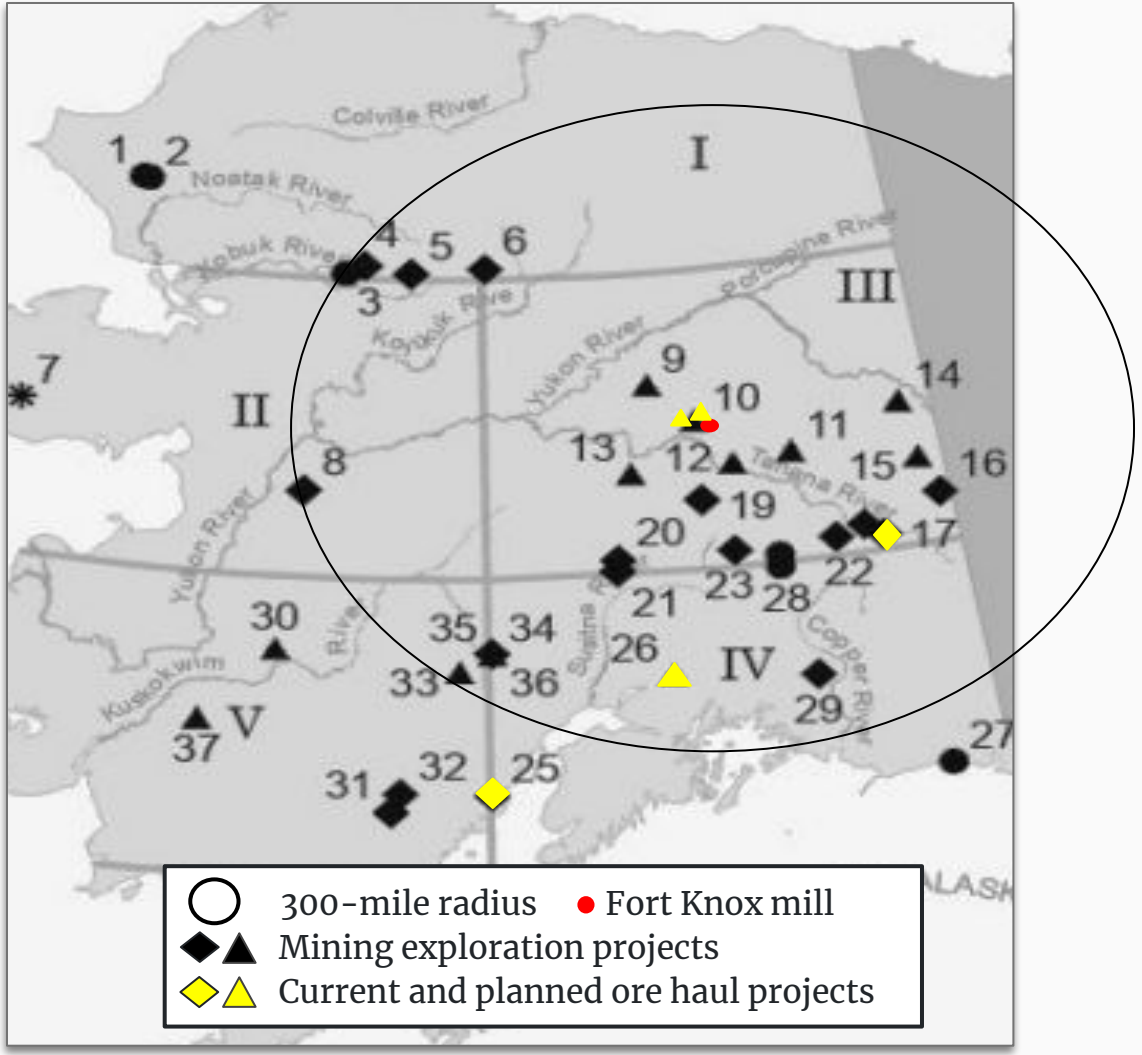
Requests to the Transportation Committee

- Short-term
  - Support funding of staffing in AKDOT's Commercial Vehicle Compliance Division.
  - Mandate full-time (24/7) operations of one weigh station along ore haul route.
  - Review Section 17 AAC 35.010 in the Alaska administrative code which deals with industrial use of highways to find a fair and equitable sharing of costs among heavy, industrial users.

Requests to the Transportation Committee

- Long-term
  - Support upper weight limit restrictions legislation.
  - Federal law (FHWA) states that maximum gross vehicle weight is limited to 80,000 pounds, however Alaska has an exemption and has no upper weight limit. B-Trains weigh 162,000 pounds.
  - Assist AKDOT in using the regulations and policies they already have in place to make our roads safer and preserve our infrastructure.

Can Alaska afford more than one ore haul?



Map: Szumigala, D.J., 2024, Alaska's mineral industry 2021: Alaska Division of Geological & Geophysical Surveys Special Report 77, 97 p. https://doi.org/10.14509/31272

Thank you!

Advocates for Safe Alaska Highways

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https://safealaskahighways.org/