

NORTH
Dakota | Transportation
Be Legendary.™



TRANSPORTATION
CONNECTION

NORTH DAKOTA'S LONG-RANGE TRANSPORTATION PLAN

June 16, 2021

Fellow North Dakotans:

The development of this Statewide Long-Range Transportation Plan, **Transportation Connection**, was a collaborative effort led by the North Dakota Department of Transportation (NDDOT). This Plan received input from numerous state agencies, Metropolitan Planning Organizations (MPOs), local governments, community organizations, trade associations, and Tribal Nations, as well as the general public. In total, thousands of North Dakotans from around the state made their voices heard in every aspect of the plan.

Now, **Transportation Connection** presents a vision for the future of transportation in North Dakota, including the day when Vision Zero becomes a reality. Only when there are no more fatalities on North Dakota's roadways can transportation completely fulfill its critical role in connecting communities and markets, creating opportunities for growth, and enabling North Dakotans to thrive. This policy plan defines a strategic direction for NDDOT and our planning partners to make decisions and improvements to transportation infrastructure and programs over the next 25 years.

North Dakota has seen profound changes in recent years, growing faster than almost every other state. The years ahead will likely see just as much change, and NDDOT is preparing for that dynamic future with an adaptable framework that considers the role played by every mode of transportation – from roads, trains, buses, airports, and sidewalks to emerging technologies, such as drones and intelligent transportation systems.

NDDOT envisions **Transportation Connection** as a living document that will inform other statewide planning efforts as well as coordination and outreach activities with state, regional, tribal, and local partners. I encourage all North Dakotans to continue contributing their insights to work with NDDOT to help shape and deliver the transportation system of the future that *safely move people and goods*.



William T. Panos, Director
North Dakota Department of Transportation

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Transportation Connection is the State of North Dakota's long-range plan for the future of transportation. This federally-required plan provides the North Dakota Department of Transportation (NDDOT) the opportunity to gather stakeholder insights and develop strategic direction for making decisions and improvements over the next 25 years.

We involved thousands of North Dakotans in developing a plan that reflects your expectations and your interests in transportation. We thought about how technology disruptors and risks might change our state over time. We asked you how your needs and priorities might change in different future scenarios.

We coordinated with tribal, federal, state, regional, and local agencies and private and civic organizations to understand what matters to North Dakota's businesses, residents, and visitors. We looked at how we deliver the transportation services you depend on and how we build and maintain the transportation system you use every day. And we asked you how transportation should be funded and what your investment priorities are.

The result is an adaptable and comprehensive strategic framework for all things transportation across North Dakota through 2045. This document summarizes the common vision and goals of Transportation Connection and the actions that will be supported by NDDOT and our transportation planning partners.

Transportation Connection reflects a new approach to how NDDOT plans for the future because we recognize new solutions are needed to address emerging challenges. How you travel is likely to be very different in the future. How NDDOT helps make it more convenient for you to travel will also change.

Take a look
through
Transportation
Connection and
visit us online to
learn more, track
our progress, and
let us know how
transportation can
connect you.

www.DOT.ND.gov

From the food in grocery stores, to the energy that warms our homes, to the packages on our doorsteps, to the sidewalk down your street, to the bus stop on the corner, to your daily drive to work, to our visits across the state... transportation moves North Dakota.



Transportation by the numbers...

We often take our transportation system for granted and we only notice its importance when things don't go right. NDDOT works hard to provide a safe and reliable system that provides you the freedom to travel and supports our economy and our communities.

779,094

residents rely on our highways, county and local roads, airports, bus lines, community transport services, sidewalks, and bike paths for everyday travel.

58.2 Million

tons of products were carried by North Dakota's railroads, including the significant outputs of the state's energy and agricultural industries. Oil and gas production contributed \$32.6 billion dollars to the state's economy and our agricultural industry produced over \$7.7 billion in crops and livestock and returned over \$35.2 billion to local economies.

9.8 Billion

miles were driven on North Dakota's roadways in 2019.

22 Million

visitors travel to North Dakota each year and spend over \$3 billion in local economies across the state.

1 in 2

jobs in North Dakota rely on transporting goods or people as a core daily business function.

\$1.6 Billion

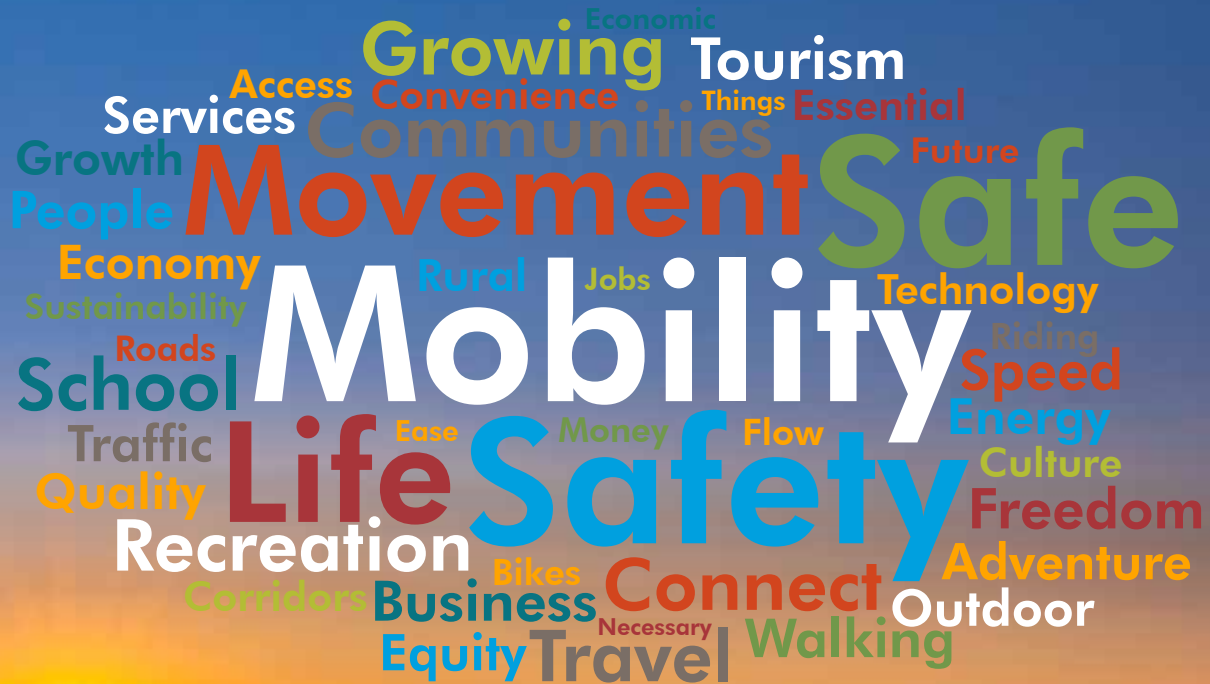
in economic activity was generated by the state's airports which connect businesses and visitors across the globe.

\$3.1 Billion

in consumer spending was supported by North Dakota's outdoor recreation industry, including cycling, parks, hunting, boating, off-roading, and sports equipment.

Transportation Matters to North Dakota

We asked 1,000 North Dakotans what transportation means to their everyday lives. This is what you said...



Transportation Connects Us

These are our stories...



More than 562,000 drivers are licensed in North Dakota. The State Highway Patrol issues hundreds of thousands of commercial motor vehicle permits and completes tens of thousands of safety inspections each year.

Amy clicks her seatbelt into place for the very first time in her very first car. The reminders about traffic safety she learned through her 4-H club are firmly in her mind as she begins to drive to the Dickinson motor vehicle services branch. The self-service kiosk in the lobby makes it easy to print a registration sticker and soon she is back out on the road to meet up with friends.

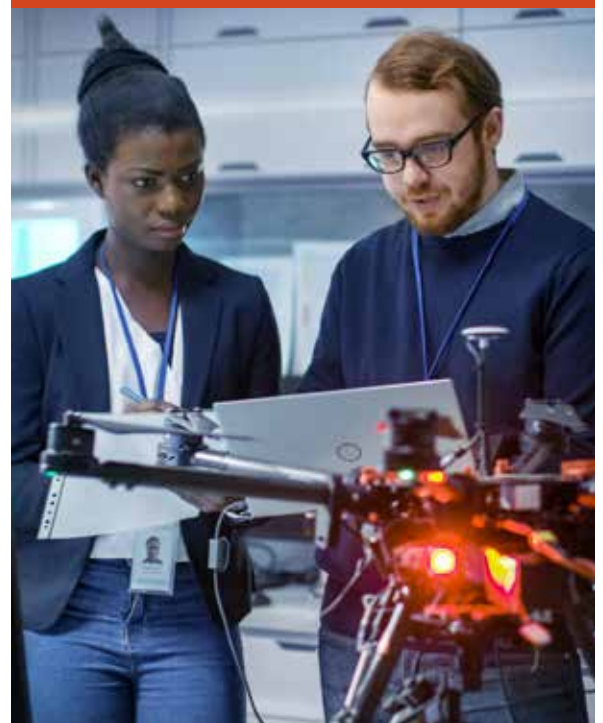
North Dakota produces a lot of food and energy for consumption around the country and around the world. Over 700 million bushels of grains and oilseeds are moved through the state by rail and by truck every year.

On a beautiful August morning, third-generation farmer Andy walks his crop rows and watches as grain trucks haul his durum wheat harvest to the local elevator. From there he knows it is likely to be shipped by regional and national railroads to ports for export overseas. Some of today's harvest is also bound for a processing plant in Carrington ready to be transformed into tonight's pasta dinner.



North Dakota is a leader in Unmanned Aerial Systems (UAS) - commonly known as drones - with more and more businesses and resources helping lift this innovative and growing industry.

Rebecca is excited to put her degree in UAS Operations from UND to work on the first day of her new job working for a wholesale distributor in Bismarck. As a systems engineer she's excited about the potential for drones to transform how packages are delivered, how infrastructure like bridges are inspected, how disaster damage assessments to rural roads are conducted, and how agricultural and extraction operations can be improved.





There are 5,250 miles of public roads located on tribal land in North Dakota. Five federally recognized tribes and one Indian community are located within our state.

Darrien climbs into his car thinking about the long drive ahead of him to get to work. He's thankful for the improved roads that make his commute much safer and much easier on the springs of his truck than it used to be.

Every county in North Dakota supports transit service. Transit provides over 2.2 million trips to our citizens annually. A higher percentage of workers in North Dakota – roughly 3.5% - commute to their jobs by walking or biking compared to the rest of the country.



Fowsia checks her phone to see that her bus is on time and soon settles into a seat as she heads to Lindenwood Park to meet friends. Sometimes the bus doesn't run frequently enough or sometimes it is too cold to wait, but most days the city's bus system gets her where she needs to go. From her bus stop, it's an easy bicycle ride down the shared use path along 42nd Street to home.

With more than 7,000 active military personnel and over 50,000 veterans living in North Dakota, shared transportation to medical appointments and assistance for daily travel is critical for many.

Retired Sergeant Russell travels from Surrey to the Veterans Administration medical facilities in Fargo every other month for doctor visits. He calls the local county office to reserve a spot on the scheduled van service that leaves from Minot in the morning and returns from Fargo at noon the following day. It's a long trip, but with a good book to occupy the time, the van trips are much easier and safer than driving himself.





570

Interstate miles

7,400

state highway miles

15,600

county road miles

65,200

local roads

1,700

state bridges



89

public-use
airports



Thousands
of miles of sidewalks

3,330

track miles
operated by
freight railroads



32

urban and rural
transit providers

More than

100

miles of bike
lanes and 280
miles of trails



North Dakota's Transportation System

We all rely on a transportation system of multiple, interconnected modes no matter where we're going or how we're getting there. Our state's transportation system includes Interstates, State Highways, County Roads, Local Streets, Sidewalks, Bike Paths, Bus Routes, Train Tracks, and Air Routes. NDDOT is directly responsible for the State Highway System, including Interstates, highways, and state routes. The state system carries over 60 percent of all daily traffic, but accounts for less than 10% of the roadway miles in North Dakota.

Imagine if these systems were not easily connected. What if your local street ended before the main road, or if you couldn't take a bus to the airport, or if you couldn't get on the Interstate? North Dakota's transportation system works together to get you where you want to go.

This system carries a lot of people and goods every day of every year, including:



949,000

registered cars,
trucks, and motorcycles



9.8 billion

miles driven
by vehicles

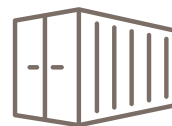


2.2 million

transit trips



1.2 million
commercial airline
passengers



484.4 million
tons of freight

We work for you. NDDOT's 982 employees work every day to preserve the state's roads and bridges to keep our roadways clear of ice and snow, and to get you the real-time travel information and drivers services you depend on. NDDOT also provides support to airports, transit providers, and railroads as well as biking, walking, and safe routes to school infrastructure.



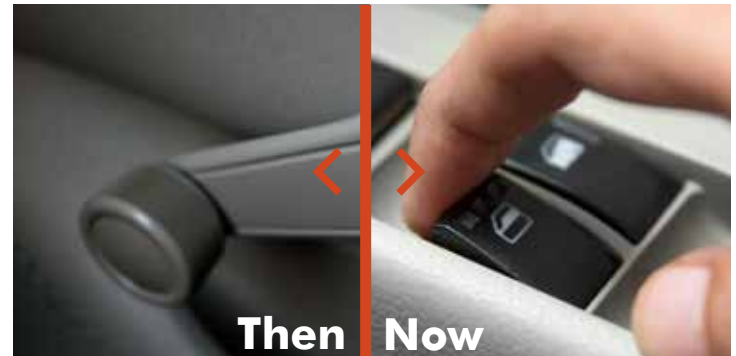
The future, like the weather, can be difficult to predict.

**NDDOT forecasts trends, makes adjustments,
and remains nimble to keep you moving**

A lot has changed in North Dakota in the past 25 years and new innovations in technology and transport will continue to transform how we get around.

North Dakota's Transportation Future

- Remember 'rolling' down the window? Turning the 'dial', 'cranking' the heat or 'mashing' the gears? On-board technology in our vehicles is changing rapidly and offers significant improvements to safety and efficiency.
- What would we do today without navigation on our smartphones? Remember trying to refold paper maps and printing out directions? Mobility as a service is expanding quickly and now with a touch of a button you can find your destination, order food, or get a ride.
- Cars, pickups, semis, trains, and planes are all larger and heavier today. At the same time they are more automated, more fuel efficient, and safer than ever before. Innovations in vehicle technology hold significant promise to improve safety and efficiency.





How might technology advances continue to transform North Dakota?

- Industries like agriculture, logistics, and manufacturing are already developing and testing fully automated equipment and transport vehicles which could become the norm by 2045.
- Vehicles will be increasingly connected to other vehicles and to sensors embedded in roads and in traffic signals to provide real time safety, traffic, and weather condition information.
- NDDOT is already using drones to conduct survey and inspection work. These systems, and entirely new air space uses may transform logistics and distribution and even personal travel.
- Where and how we work is changing. Remote and gig work may open up opportunities for smaller and historic communities and require renewed investment in rural transportation.
- Entirely new roles may open for communities and private transport providers may open to help better connect you to where you need to go with a touch of a button.

We can't predict exactly what will happen, but we can prepare.

Alternative Future Scenarios

RURAL RENAISSANCE



Rural areas become communities of choice

CITIES & CENTERS



Urban areas grow quickly and become the centers of the state

SMART & CONNECTED



Innovation accelerates and we live in a tech-driven future

GHOST TOWNS



Economic downturns greatly reduce quality of life for North Dakotans

Planning for Uncertainty

We don't know what the future will hold. But we recognize that North Dakota is changing. Between now and 2045, we may see shifts in the places we live, the jobs we work, and the ways we choose to get around. Innovations in transportation will change our vehicles, our infrastructure, our information, and NDDOT's business model.

Through this planning process, we explored different alternative futures for North Dakota. These scenarios looked at what might happen should the future bring renewed opportunities for rural communities, continued growth in city centers, or rapid technological transformations in our daily lives.

What is happening in North Dakota already?



Growing, aging, and more diverse populations



Shifting industries and workplaces



Emerging technology and transportation innovations



Changing travel patterns and expectations



Increasing e-commerce and goods movement

Transportation Connection provides a flexible framework to guide transportation decisions and investments that will shape North Dakota over the coming decades. NDDOT and our transportation planning partners will remain nimble, modernize how we operate, and invest in our data and our organizations in order to deliver a safe, innovative, and connected future.

Our Transportation Vision

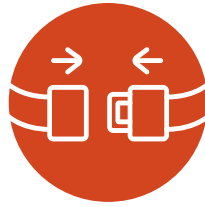
**Delivering a safe,
innovative, and
connected future**



Your Action Plan

Transportation Connection provides a roadmap to guide us toward North Dakota's future transportation vision.

This framework enables NDDOT and our partners to keep headed in the right direction while allowing us to change speeds, shift lanes, or take another path in response to emerging opportunities.



KEEPING YOU SAFE

*Safety is reflected in
everything we do.*

We are continually innovating and improving what we do to make sure you are safe and secure whether driving, biking, or walking.

- Implement data-driven and proven safety improvements for all users
- Provide comprehensive safety education and information with transportation partners
- Encourage adoption and implementation of safety technologies
- Deploy infrastructure technology with proven safety benefits
- Anticipate future risks and security threats
- Support effective emergency response and disaster mitigation efforts



CARING FOR WHAT WE HAVE

*Fixing what we have
is our priority.*

We are maintaining our existing infrastructure in good condition to save money down the road and we're addressing risks to keep that system working for you.

- Preserve the condition of all transportation infrastructure to serve critical functions
- Focus on routine and preventative maintenance activities aligned with customer expectations
- Reduce risk to transportation infrastructure from extreme weather events
- Enhance maintenance activities that support future technology deployment



CONNECTING NORTH DAKOTA

*Transportation
matters.*

We are leveraging transportation investments to enhance economic competitiveness and improve the quality of life in communities across the state.

- Connect people, businesses, and communities across the state and to the world
- Improve and expand interregional and interstate trade and commerce transport
- Enhance North Dakota's natural resources and expand recreational access to natural places for residents, businesses, and visitors
- Consider potential of infrastructure assets for future travel alternatives and technology deployment



HELPING YOU GET THERE

*Transportation
should be easy.*

We are helping make it more convenient for you to get where you want to go by improving data and information, travel choices and options, and operations and maintenance.

- Provide travel reliability and performance on state roads
- Improve seasonal maintenance and response times
- Provide easier transportation options and access for all travelers
- Improve access to and ease of traveler services
- Expand availability of travel and transportation information and resources
- Collaborate with transportation planning partners at the tribal, federal, state, regional and local levels



INVESTING FOR THE FUTURE

*We work
for you.*

We are making smart investments in how we deliver services and are looking for responsible ways to fund our transportation system well into the future.

- Invest in future transportation workforce, data, and technology
- Focus on customers by modernizing services, travel information, and business functions
- Make strategic operational and infrastructure investments to increase efficiency, capacity, and performance
- Ensure sustainable and responsible funding for future transportation improvements that maximize return on investment
- Evaluate collaborative grant and partnership opportunities to advance community and economic transportation improvements
- Align investment strategies to deliver on customer expectations

Engagement by the numbers



3,832
reactions and
clicks on social
media

1,913
views of
online tools



1,356
unique website
visitors

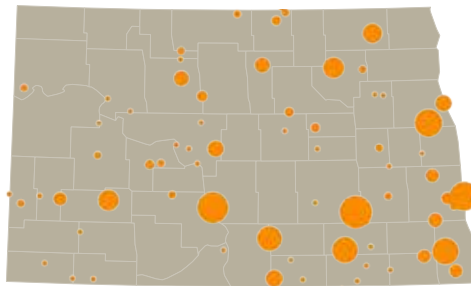
1,741
online survey
respondents



170
virtual meeting
participants

Developing Transportation Connection

NDDOT led the development of Transportation Connection throughout 2020. Virtual input opportunities resulted in thousands of residents from every corner of the state participating in this planning process. Of those we heard from, nearly half weighed in on a transportation plan for the very first time. Through online surveys, interactive meetings, virtual townhalls, and social media you made your voice heard and let us know what you expect as everyday travelers and as customers of NDDOT.

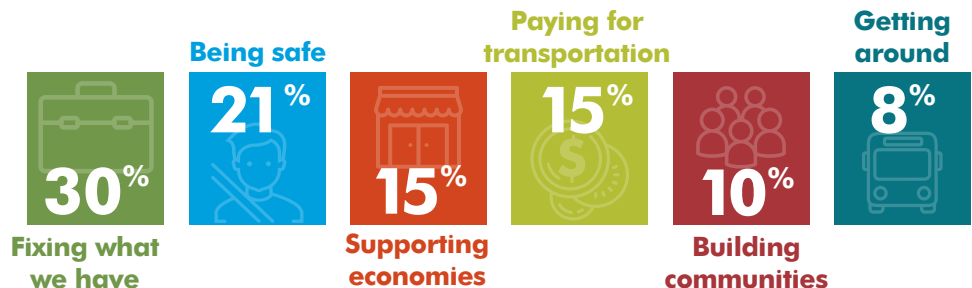


Total online responses by zip code, 2020

Your input and ideas led directly to the vision, goals, and strategies described in Transportation Connection. This is North Dakota's plan for our shared transportation future. As we work together to take action, NDDOT will continue listening to residents to understand expectations, priorities, and key issues. We're working to deliver a transportation system that works for you.

What are today's most pressing challenges?

North Dakota's transportation system is complex and our resources are constrained. We're focused on taking care of the system we have today and making that system safer for all travelers. You told us we should keep prioritizing those focus areas as well as looking for opportunities to support industries and communities through smart investments and making it easier to get around by walking, biking, taking a bus, driving, or whatever is most convenient for you.



What future opportunities excite you the most?

We heard from residents and businesses with great ideas and insights into North Dakota's transportation future. Transportation Connection sets an ambitious path to move our state forward and build our next generation transportation system. Here are some of the future opportunities you said we should be working to achieve over the next 25 years.



How do we pay for transportation?

On average, we each pay \$28 every month to support North Dakota's transportation system – far less than most of us spend on internet or electricity. With the rising costs of services and construction, and more and more travelers on our roads, transportation funding does not stretch as far as it used to. Most residents understand our funding challenges and support finding ways to sustainably and responsibly fund transportation for the next generation.

QUESTION:

Compared to what you get in return, does your monthly contribution seem fair to you?



IF NO:



Youth Opinions

The next generation of drivers in 2045 have not yet been born. How the transportation of tomorrow will look and work will be very different than today. Hearing from our youngest drivers is important. We surveyed North Dakota school districts to understand what future challenges concern youth the most. What our state's newest travelers value most will help us design and implement our future transportation system.

QUESTION:

What future transportation challenges in North Dakota concern you the most?





Our parents and grandparents built a valuable transportation foundation

**We must continue to look forward and leave
an even better legacy for the next generation.**

Thank You

NDDOT appreciates the insights and information provided by the thousands of residents and travelers who lent their voices to Transportation Connection. The logos below represent member organizations of the Director's Advisory Council. This group of public, civic, and private sector partners provided guidance to develop this plan and will continue to coordinate on critical transportation issues and opportunities for North Dakota. In addition, NDDOT is grateful for the contributions of planning partners including the North Dakota Department of Emergency Services, the North Dakota Department of Health, North Dakota School Districts, Metropolitan Planning Organizations, and tribal nations across the state.



Together we can connect North Dakota.



Transportation Connection is a federally-required plan that will guide transportation decision making across North Dakota. NDDOT and our partners will implement this plan through a continual and comprehensive planning process and commitment to assessing performance. Information on performance and implementation support activities can be found at www.dot.nd.gov

Delivering a **safe**
innovative and
connected future

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<http://www.dot.nd.gov/projects/lrtp/>

