SB 2142

Testimony – SB 2142 – ND STATE SENATOR TERRY M WANZEK- District 29

SB 2142 is a Big Ask. But there is a Big Need.

- Most ND's wealth is produced in rural ND. Our major industries, Energy, Agriculture and tourism depend heavily on a system of good roads and bridges. They are vital to getting our inputs to the production sites, whether that's an oil well or a corn field, and also for delivering our production commodities efficiently to market. The condition of our rural infrastructure is impactful to the success of our major industries. The economy that this state, ND depends on, runs on rural roads.
- The ask is not a number grabbed out of nowhere. The ND legislature funds a rural infrastructure needs based study by the Upper Great Plains Transportation Institute-that is updated biennially . The ask is based on data generated by engineering experts in this field, not by just any random source. What purpose do we, this body, have in funding this study if we do not take heed to its findings?
- This bill is funded by ND's Motor Vehicle Excise Tax. Why the Motor Vehicle Excise Tax? This tax has a history of going back and forth between Transportation needs and the General Fund. I feel its time to dedicate the MVET to Transportation needs to fund our state's road infrastructure. Just like the Gas or fuel Tax and the motor vehicle registration funds go to the highway distribution fund. MVET is a tax on motor vehicles. Where do we operate motor vehicles? On our roads. There is a connection. We have already taken half of the MVET and appropriated last session to the NDDOT, placing it into the popular flexible fund. This tax can offset some of the SIIF funds in the DOT budget, if necessary.
- This bill will move the other half of the MVET from the general fund to 2 different funds. The end result will be 75% of the MVET will go to the NDDOT Flexible fund. The remaining 25% of the MVET will go to a new fund, the Township Road and Bridge Sustainable fund administered by the State Treasury. The state treasure will allocate the Township Road and Bridge Sustainable Fund to non-oil Counties who will distribute the funds to townships based on a prorated share of certified road miles compared to total state certified road miles. The 75% appropriated to the NDDOT flexible fund are flexible discretionary funds and can also be used in collaborative projects with political subdivisions.(Counties and Cities)
- This bill will provide funds of approximately $85 million to the townships based on road miles or needs and $85 million to the NDDOT Flexible fund. That results is an estimate of $85 million/54000 or $1574 support per mile. The UGPTI needs study for unpaved and paved roads needs is approximately $15534/mile needs.

- While townships appreciate the one time funding and Prairie Dog funding over the past few years from the State Legislature, there is no certainty or continuity in funding to count on and plan ahead with. This bill's action is intended to provide more sustainability and a bit of certainty in funding allowing forward planning.
- I understand it's a big ask and realistically I know we are not going to fund the rural infrastructure at 100% of the UGPTI. I also understand this bill is a work in progress. It is an effort to put the issue in front of the ND Legislature to discuss and seek solutions and point out that our infrastructure needs are valuable and important to our State's Economy!

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

Infrastructure Needs: North Dakota's County, Township and Tribal Roads and Bridges: 2024-2043

Report to the North Dakota Legislative Assembly

October 2024

Executive Summary

This report is the response to the North Dakota Legislature's request for a study of the transportation infrastructure needs of all counties, townships and tribes in the state.

In 2019, the North Dakota Legislature advanced HB 1066 which had a provision for funding distributions to non-oil producing counties based on the most recent version of this study. HB 1066 also stated: "If the data compiled by the upper great plains transportation institute includes more than one twenty-year estimate for the total needs of each county, the state treasurer shall use an average of the twenty-year estimates for each County."

In this report, the Upper Great Plains Transportation Institute (UGPTI) estimated infrastructure needs using the most current production forecasts, traffic estimates, and roadway inventory and condition data available. Agricultural- and oil-related traffic are modeled in detail at the sub-county level. Oil-related traffic is predicted for individual spacing units, whereas agricultural production is estimated at the township level.

A significant data collection effort provides the most complete and current data on the condition of the state's county and township roadway system. In 2023, UGPTI acquired a portable road profiler to collect pavement condition data which replaced smartphone-based accelerometer condition assessment. Traffic counts were collected on the county and township road system across the entire state since 2021. The effort was a combination of additional counts requested of NDDOT along with vehicle classifications conducted by NDSU-UGPTI students and a consultant. The data was used to calibrate a statewide travel demand model, which was used to forecast future traffic levels. The GRIT (Geographic Roadway Inventory Tool) was used to gather and verify county roadway inventory information such as base thickness, pavement age, and pavement thickness, directly from local road authorities.

An enhanced county-level survey was developed to assess unpaved roadway component costs such as blading, gravel purchasing, hauling, and placement costs for each of the 53 counties in North Dakota. Training on how to accurately complete the survey was provided to counties via a live and recorded webinar. A secondary analysis of survey results was performed to identify significant variations from county to county by region within the state.

The bridge analysis underwent significant changes to accommodate the FHWA discontinuation of the bridge sufficiency rating (SR) in the previous study. In recent years, states have been developing a replacement index that fits their jurisdictions. The 2022 study advanced a new Bridge Needs Target (BNT) through use of a county expert panel. The analysis routine used the BNT for the first time in that study. Additionally, the North Dakota Department of Transportation (NDDOT) added consultant resources to the load rating of non-state bridges which resulted in more local bridges with a reduced load rating. In addition to major structures included in the National Bridge Inventory data, UGPTI estimated the needs for minor structures (less than 20 feet in span) which were not previously included due to data limitations.

For traffic forecasting, the UGPTI developed a travel demand model (TDM) for the entire state. The TDM network includes the origins of key inputs to the oil production process (e.g., fresh water, sand, scoria, gravel, and pipe), destinations for crude oil and saltwater shipments, and the capacities of each

source or destination. The origins of movements on the highway network include railroad stations where sand, pipe, and other inputs are transferred from rail to truck. The destinations of crude oil shipments include refineries and railroad and pipeline transfer facilities. In the model, the estimated capacities of transfer sites are expressed in throughput volumes per day, while the capacities of material sources are expressed in quantities of supplies available during a given time period. Similarly, an agricultural sub model was developed to model truck movements of agricultural production across the state from farms to elevators and processors. The nine largest commodities by volume were modeled explicitly as part of TDM process.

Using the TDM, inputs and products are routed to and from wells to minimize time and/or cost, subject to available supplies and capacities. A comparable model is used to predict the trips of each crop produced in each township to elevators and/or processing plants, subject to the demands of these facilities. When all trips have been routed, the individual movements over each road segment are summed to yield the total truck trips per year. Using truck characteristics and typical weights, these trips are converted to equivalent single axle loads (ESALs) and trips per day. These two factors, in conjunction with the condition ratings and structural characteristics of roads, are used to estimate the improvements and maintenance expenditures needed for the expected traffic. While the focus is on agricultural- and oil-related activities, other movements (such as farm inputs and shipments of manufactured goods) are also included in the analysis.

Total Statewide Needs

As shown in Tables E and F, the combined estimate of infrastructure needs for all county, township and tribal roads and bridges is $12.35 billion over the next 20 years. Unpaved road funding needs make up approximately 56% of the total. If averaged over the next 20 years, the annualized infrastructure need is equivalent to $618 million per year.

The values shown in Tables E and F do not include the infrastructure needs of Forest Service roads or city streets within municipal areas. The infrastructure needs of Indian Reservation roads are included for the paved roads and presented separately in the report.

Table E: Summary of All Road and Bridge Investment and Maintenance Needs for Counties, Townships and Tribal Areas in North Dakota (Millions of 2024 Dollars)

Period	Statewide
2024-2025	$1,471.70
2026-2027	$1,578.57
2028-2029	$1,481.77
2030-2031	$1,435.49
2032-2033	$1,391.95
2034-2043	$5,030.32
2024-2043	**$12,359.78**

2024-25 $1,471,700,000 ÷ 54000 miles = $27,253
1464 organized townships
611 Unorganized townships
2075 total townships
X .56
$15534.24/mile
on paved road needs per biennia

Table F: Summary of All Road and Bridge Investment and Maintenance Needs for Counties, Townships and Tribal Areas in North Dakota (Millions of 2024 Dollars)

Period	Unpaved	Paved	Bridges	Minor Structures	Total
2024-2025	$707.88	$433.82	$178.94	$151.06	$1,471.70
2026-2027	$694.93	$523.64	$178.94	$151.06	$1,578.57
2028-2029	$714.99	$436.78	$178.94	$151.06	$1,481.77
2030-2031	$716.56	$388.93	$178.94	$151.06	$1,435.49
2032-2033	$693.38	$368.57	$178.94	$151.06	$1,391.95
2034-2043	$3,443.71	$1,344.44	$192.45	$49.72	$5,030.32
2024-2043	**$6,971.45**	**$3,496.17**	**$1,087.16**	**$805.00**	**$12,359.78**

General Comparison with Recent Studies

The 20-year cost estimate for unpaved/gravel roads increased by $425 million or 6.5% from the previous study. These increases are driven by increases in aggregate hauling cost and regional increases in aggregate unit prices. This increase is consistent with prior studies.

The 20-year cost estimate for paved roads increased by $248 million or 7.6% from the previous study. Much of the increase is because of inflation of construction and maintenance costs for pavements but also due to routine pavement deterioration since the last study. Figure B presents the percentage of paved miles statewide by condition from 2019 to 2024. Significant investments in paved road improvements occurred in the mid-2010s resulting in a larger proportion of miles in the good category. Because of routine pavement deterioration, the percentage of miles in the good category fell from