

Next Steps

Regional meetings are being held July 13 through July 19 across the state. After those meetings, NDOR will review the input received and begin selecting the next round of capital improvement projects.

While this new project prioritization process is important in helping the Department select projects, it isn't the deciding factor. In addition to looking at how a project scores based on engineering performance, economic performance, and stakeholder input, NDOR has to balance many other important considerations, such as geographic inclusion, corridor completion, and the availability of supplemental funding.

Having some measure of flexibility is important to maximize transportation investments. Recognizing transportation needs and technology change over time and many factors like the state's economic condition, material costs, inflation rates and revenue also change over time, NDOR plans to announce an initial set of selected projects this fall. It is likely that less than \$1 billion in projects will be selected so that some funds will be available in future years to address evolving capital improvement project needs. This allows NDOR to create an ongoing evaluation process to identify sets of projects that are best suited to address Nebraska's needs.



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WE WANT TO HEAR FROM

You.

Growing Nebraska: Prioritizing Capital Improvement Projects

Welcome, and thank you for being here. The focus of today's meeting is to provide an update on our project prioritization process, share information on the analysis of the candidate project list and, most importantly, hear from you about your priorities for transportation investments in the region.

Today's Agenda

Welcome & Overview (5 min)

Overview (3 min)

Project Prioritization Process (10 min)

Candidate Projects, Investment Ranges, and Performance (10 min)

Exercise Overview (10 min)

Facilitated Discussion in Breakout Groups (40 min)

Report Out (40 min)

Next Steps (5 min)

Expanded Candidate Project List Reflects Input and Choices

NDOR is continuing to use engineering performance in its project prioritization process for capital improvement projects and is expanding the process to better reflect the connection between transportation investments and the economy and to include more stakeholder input. Capital improvement projects are those projects that most impact our economy and allow us to grow Nebraska. Examples include adding new lanes, building new interchanges or viaducts, and improving the expressway system or federally designated high priority corridors.

In January, NDOR conducted meetings across the state and heard clearly that stakeholders support including economic impact analysis and more stakeholder input in the prioritization process. Stakeholders also supported keeping engineering performance as a part of the prioritization process. We also discussed candidate improvement projects:

- NDOR presented a list of about 60 candidate capital improvement projects, totaling more than \$3 billion.
- As a result of public input, that list grew to more than 100 projects, totaling more than \$8 billion.
- Recognizing it's more important to build a great highway system for the state rather than a few great projects, NDOR Director Kyle Schneweis instructed the Department staff to develop project scope options (or choices) so that improvements could be better targeted to specific needs and more improvements could be delivered across the state. By creating new options and breaking corridor projects into constructible segments rather than only evaluating long corridors, more than 160 project options are ready to be discussed. For more information on scope options, see the next page.

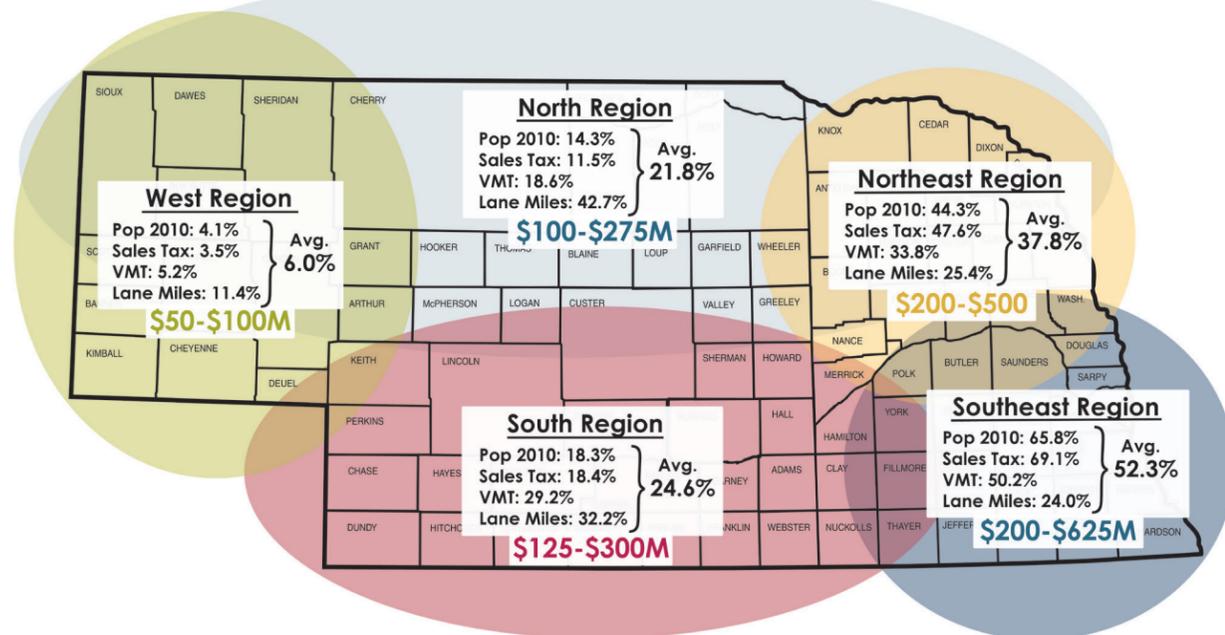
Regional Approach and Investment Ranges Help Discussions Be More Real

Recognizing that transportation investments and benefits don't stop at a line on the map, NDOR is taking a regional investment approach. An illustration of those regions is shown on the map below. You'll notice overlap between regions, which underscores the system or network approach NDOR is taking.

As part of this regional approach, and to help guide discussions about project priorities, NDOR created a spending or investment range for each region. These ranges are based on an average of the region's population, sales tax generated, vehicle miles traveled, and lane miles. The averages exceed 100 percent because some counties are included in more than one region.

Although the upper limit of the combined investment spending ranges exceeds the current investment budget of roughly \$1 billion in Build Nebraska Act and Transportation Innovation Act funds – that should not become a distraction. The purpose of the ranges is to add realism and encourage the next step in stakeholder discussions: prioritizing candidate projects.

Investment Ranges for Creating Conversation



About the spending ranges: Spending ranges have been developed for discussion purposes only. These ranges are not intended to indicate program levels for specific regions. Instead, these spending ranges will help NDOR better understand regional priorities.

Scope Options

The estimated cost of candidate projects far exceeds the budget available. To expand our ability to provide more transportation improvements, NDOR staff developed scope options for projects where choices could be made available. For example, several long corridors are included on the list, so we've broken those long corridors into smaller segments for analysis. There are also a lot of 4-lane highway improvements on the list, so we're looking at alternatives, like Super 2 highways and 2 + 2 options that provide improvements without having to build a more expensive standard 4-lane highway. That's not to say we aren't looking at building longer corridors or 4-lane highways; rather, it means we're expanding options for engineers and communities to consider. Options include:

- **4-lane divided highway** - A 4-lane highway where access is controlled. Intersections may be at-grade or have on- and off-ramps.
- **4-lane expressway** - Same as the 4-lane divided highway, but on Nebraska's designated expressway system.
- **Bypass** - A highway that goes around a populated area, allowing traffic to maintain highway speeds.
- **Super 2** - A 2-lane roadway with better paved shoulders and additional passing lanes.
- **2 + 2** - A highway that uses the existing two lanes of highway and adds two more lanes to make a 4-lane divided highway.

Project Prioritization Process

The updated project prioritization process includes three primary components:

1. Engineering Performance – The updated process continues to use the same engineering factors as the previous prioritization process, including: safety, the amount of traffic, percent of cars and trucks, congestion, travel time savings, vehicle operating costs, cost of improvement, and maintenance and operation costs of the roadway.

2. Economic Performance – NDOR is analyzing the economic performance of proposed projects for three important reasons:

- To make sure transportation investments support the state's goal to grow Nebraska
- To help differentiate between seemingly similar projects
- To better understand how transportation investments are experienced in the wider economy

NDOR is using TREDIS, a nationally recognized economic model for transportation planning, to analyze the economic performance of candidate projects. Performance is measured by growth in jobs, income and gross state product.

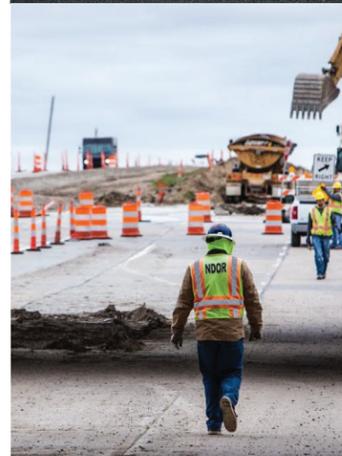
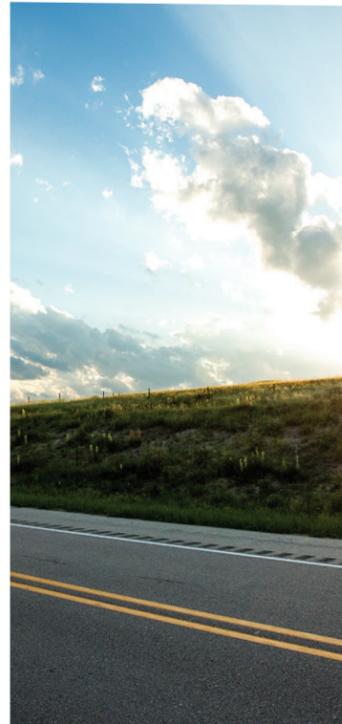
3. Stakeholder Input – Stakeholder involvement leads to better and more informed decisions. NDOR is actively engaging stakeholders across the state in discussions about project prioritization and how projects support communities' visions for growth and safety. The new process follows NDOR's model for increased public input.

Overall Performance Better Informs Investment Decisions

As you'll see on the candidate project list, overall performance reflects engineering performance and economic performance. NDOR will consider performance and stakeholder input, as well as other factors outlined on the back page when selecting capital improvement projects.

Accounting for Urban and Rural Differences

NDOR knows there is a difference in economic growth in urban and rural areas, and we're taking differences into account in the prioritization process in several ways. First, we look at data specific to each county, such as what industries are located in each county and how those industries respond to transportation investments. We are also applying urban growth patterns to urban areas and rural economic growth patterns to rural areas. Cass, Douglas, Lancaster, Sarpy, Saunders, Seward, and Washington counties are considered urban areas, and the remaining counties are considered rural. Most importantly, because we recognize the differences in urban and rural areas – engineering and economic performance scores were developed separately for urban and rural projects, based on where the project is located.



Super 2 Highways in Nebraska

What is a Super 2?

A Super 2 is a two-lane highway that has wider paved shoulders and passing lanes about every five miles, or as needed based on the specific conditions of the highway. Determining the length and spacing of the passing lanes requires considering many different features of the roadway, including the traffic volume, the number of trucks, the terrain, and the types of access points along the highway. The passing lanes generally alternate between the two directions of traffic.

Super 2s are most often found in more rural areas and have some level of access control, which means there are a limited number of driveways and roads directly connected to the highway.

Why consider a Super 2?

Improved traffic operations. Upgrading a two lane highway to a Super 2 provides more convenient passing opportunities that weren't there before. A Super 2 can be a major improvement for roadways where there are limited opportunities to pass or there is a lot of slower moving traffic.

Improved cost effectiveness. Super 2s provide an alternate solution to address the transportation challenge. In many cases, constructing a Super 2 can provide substantial improvements for a community or region at a reduced cost. When looking at the many needs across the state, building a Super 2 can maximize the transportation improvements that can be made across the state.

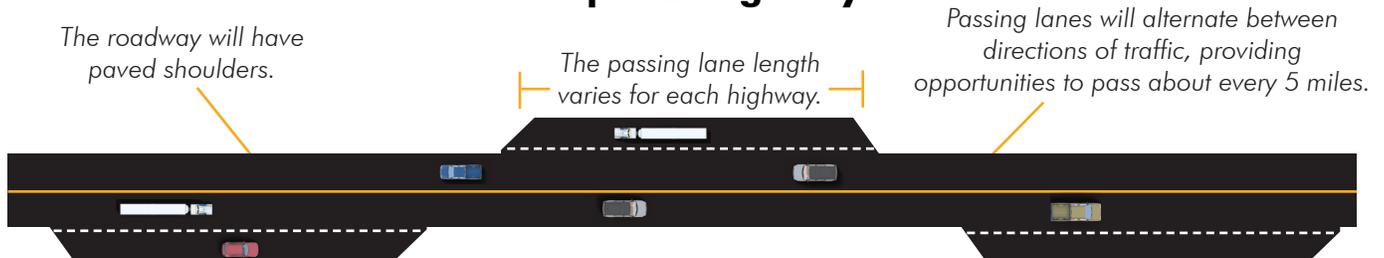
| Highways At A Glance | |
|---|--|
| Super 2 Highway | 4-Lane Highway |
| Passing lanes ≈ every 5 miles, or as needed | 2 lanes of traffic in each direction |
| Variable width paved shoulders | Paved shoulders that are 3-8 feet wide |
| \$15M to build 10 miles | \$40M to build 10 miles |

Over twice as many miles of highway can be constructed for the same investment.

For example, for about \$10 million:

- You can build approximately **2.5** miles of 4-lane highway.
- You can build approximately **6 to 7** miles of Super 2 highway.

A Super 2 Highway



For illustration purposes only. Each highway will be evaluated for its specific needs based on terrain, access points, and other site-specific conditions.

2+2 Highways in Nebraska

What is a 2+2 highway?

A 2+2 highway project involves using the existing 2-lanes of highway and adding two new lanes to make a 4-lane divided highway. The existing 2-lanes are resurfaced to give all 4-lanes a smooth ride.

Why consider a 2+2 highway?

If the existing infrastructure is in good shape and has the geometrics to serve as a 4-lane, it's a way to get the benefit of a 4-lane divided highway at less cost. It also can reduce construction time, which is more convenient for travelers.

Heartland Expressway Example

NDOR recently had success implementing the 2+2 project on part of the Heartland Expressway. This included an approximately 25-mile stretch on U.S. Highway 385 from just south of Angora north to Alliance. It would have cost \$87 million to build a brand new 4-lane on this stretch of road, which NDOR's revenues would not allow. However, NDOR staff determined that since the existing 2-lane roadway was still in good shape a 2+2 approach could be a possibility. By utilizing the existing 2-lane, the project would cost \$56 million or a savings of \$31 million. And it reduced construction time by two years. Thanks to practical design, this project, which will improve mobility and promote economic development across the state, was able to move forward.

Heartland Expressway Example

| 2+2 Highway | All new 4-Lane Highway |
|----------------------------|----------------------------|
| 25 miles of 4-lane highway | 25 miles of 4-lane highway |
| \$56 million to build | \$87 million to build |
| 4 years to build | 6 years to build |

When is a 2+2 not an option?

Sometimes the infrastructure won't allow for this approach. Here are a few reasons why:

- The existing roadway pavement is deteriorated and needs to be replaced.
- There's development on one-side of the roadway that would make the area too narrow for a 2+2 highway.
- There's an intersection where a difference in elevation would create issues.

What comes after 2+2?

A 2+2 approach can often be used as a transition phase to a 4-lane highway. When the pavement of the existing roadway eventually needs to be replaced, NDOR would then convert the 2+2 segment to a 4-lane highway.



Here's a look at a 2+2 highway in Nebraska.

Transportation and the Economy

A look at changes to the economy due to investments in transportation infrastructure

Assessing Economic Impact

NDOR aims to provide the best possible statewide transportation system for the movement of people and goods. The economic impact of a project is calculated based on which industries experience the improvements; such as tourism, agriculture, manufacturing, and commuters. These improvements could include saving travel time, fuel savings, or crash reduction.

In general, economic impacts from a highway project can help users of the transportation system by providing **Travel Benefits** that result in **Savings** that can be applied toward **Economic Growth**.



Investments in highway projects

A road widening project improves travel for a farm equipment manufacturer and its suppliers.



Highway Project Investment



Travel Benefits

Investments result in improved travel performance for things like traffic speed, congestion and safety which generates travel benefits:

The following year, the farm equipment manufacturer sees reduced transportation costs through time savings and reduced congestion.



Time savings



Lower vehicle operating costs



Increased reliability



Fewer crashes



Response to Savings

Those benefits result in transportation cost savings and can be redirected to other uses.

The manufacturer uses cost savings to invest in equipment, which leads to increased productivity. The savings also enables a price reduction which increases sales and helps grow the economy.



Households can spend more on housing, retail, food, entertainment and other discretionary items.



Business can either lower the cost of their product, keep the profits, or invest in the business – all of which increase the Gross State Product.



Economic Growth

The increase in sales triggers the purchase of more supplies and the hiring of new employees. These new employees spend their newly earned wages stimulating additional sales and economic growth.



Employees spend money locally and regionally



Business hires more employees



Business buys more supplies

Updating the Project Prioritization Process

The Nebraska Department of Roads is committed to incorporating stakeholder input and considering the economic impact of transportation enhancements. The updated project prioritization process reflects that commitment.

The updated process will have three primary components:

1. Engineering performance – The updated process continues to use the same foundation as the previous prioritization process.



2. Economic performance - Analyzing the economic performance of proposed projects will help ensure the state's transportation investments help grow the Nebraska economy.

3. Stakeholder Input – Stakeholder involvement leads to better and more informed decisions. The new process will follow NDOR's model for increased public input.

The new prioritization process is an important first step in selecting the next round of capital improvement projects. These are projects that add new lanes or build new expressways or viaducts. While this project prioritization process will be important in helping the agency select projects, it isn't the deciding factor. In addition to looking at how a project scores based on engineering performance, economic performance, and stakeholder input, NDOR has to balance many other important considerations, such as geographic inclusion, corridor completion, and the availability of supplemental funding.

Incorporating Economic Performance

NDOR's economic analysis of transportation improvements is location specific. NDOR uses county-level data for the analysis. This is not a generic assessment; each project is looked at individually.

NDOR is planning to use the following factors to measure a project's economic performance:

- Job and Income Growth: Estimating the growth of permanent jobs and income that result from the transportation project.
- Growth in Gross State Product: Estimates the net increase in overall business activity resulting in the state from the project.
- Differences between rural and urban areas will be accounted for.



What data is being used to analyze the economic performance of a project?

The data includes employment, business sales and wage income by industry as well as how much of a business' revenue is spent on transportation. The data comes from sources like the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, the U.S. Department of Commerce, the Federal Highway Administration, the U.S. Environmental Protection Agency, the U.S. Department of Energy and Implan.

That data is used in TREDIS, a nationally recognized economic model for transportation planning, to determine the economic performance of the proposed projects.



What other factors do businesses consider when deciding to relocate or expand?

While transportation investments certainly can encourage new development, it's only one factor. In addition, businesses are looking for things like an available workforce, a suitable location to build, access to markets, and access to other modes of transportation.

For more information on NDOR's efforts to update its project prioritization process, visit www.roads.nebraska.gov/projects/grow-ne