

## 2. PURPOSE AND NEED

### A. Purpose

This project is intended to develop an improved transportation corridor connecting the junction of US 385 and L62A, with the City of Alliance. This highway has been identified as part of the Heartland Expressway, a High Priority Corridor on the National Highway System (NHS). The improved corridor is intended for the following transportation purposes:

- To **provide an improved north-south highway on a NHS High Priority Corridor that increases the efficiency and safety of commerce and travel** as included in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA calls for the development of High Priority Corridors on the NHS, including the Heartland Expressway.
- To **fulfill legislative intent** of the ISTEA; the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21); the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which have provided federally “earmarked” funds for the development of the Heartland Expressway; and the Moving Ahead for Progress in the 21st Century Act (MAP-21), which continued authorization of funding as deemed necessary in SAFETEA-LU.
- To **fulfill legislative intent of the Build Nebraska Act**; the State has identified this project as one of the high priority projects to receive funding under this act. The bill does not specify which projects are funded under it, but allows NDOR to determine this based on need and safety concerns.
- To **address roadway and operational deficiencies** along this segment of the Heartland Expressway corridor.

In addition to the above purposes, an additional goal for the project, beyond the transportation issues, is:

- To **improve the highway infrastructure in order to facilitate economic development** by enhancing the efficiency and mobility of Nebraska Panhandle regional commerce for residents, businesses, visitors, and interstate travel.

### B. Need

#### B.1 Roadway and Operational Deficiencies

Overall Condition. The existing roadway is classified as a Principal Arterial and is on the NHS. The existing segment of US 385 consists of two 12-foot wide asphalt lanes and 10-foot wide shoulders, of which 8 feet is surface with asphalt; the roadway is generally in “fair” condition. The existing segment of L62A consists of two 12-foot wide concrete lanes and 10-foot wide shoulders, of which 8 feet are surfaced with asphalt. There is approximately 1 mile of L62A with a climbing lane for eastbound traffic, consisting of an extra 12-foot wide concrete lane and no surfaced shoulder. The roadway is generally in “fair” condition. Between the logical endpoints of the project are three shorter stretches characterized by different land uses and terrain, resulting in different traffic and transportation issues. These are described below.

Northern Segment: Alliance to the Box Butte/Morrill County Line. This segment extends south from the City of Alliance to approximately the Box Butte-Morrill County line. This portion of roadway was last resurfaced with 3 inches of asphalt in 2001 and is experiencing stripping and

rutting. The segment is characterized by the highest traffic levels and the highest incidence of crashes. It is the most highly developed, with at least 20 residences and businesses with driveways with direct access to US 385. The portion outside the City of Alliance is dotted with center pivots to irrigate the crops of sugar beets, beans, and potatoes. This area is relatively flat with typical existing road grades of less than 1 percent.

Central Segment: Sandhills Region. This segment extends south from approximately the Box Butte-Morrill County line to approximately the unincorporated community of Angora. This portion of roadway was last resurfaced with 4 inches of asphalt in 1992 and is experiencing severe stripping and rutting. Traffic and transportation issues in this area are related to the topography of the sand dunes. The shorter sight distance leads to problems when agricultural trucks pulling out of farm roads and through traffic must either brake sharply (as these trucks are slow to accelerate) or pull into the lane of oncoming traffic. This area is relatively hilly with typical existing road grades as high as 4.5 percent.

Southern Segment: Angora to L62A. The segment near the sweeping curve may need to be reconstructed on a new alignment to make the expressway the priority movement. This change in alignment would include connecting L62A to US 385 as the free-flow movement and realigning the southern leg of US 385 as a stop controlled movement. This area is generally flatter with typical existing road grades in the 0.5 to 2.7 percent range, except at the extreme southwest end where the road descends into the North Platte River Valley below, reaching a 4.9 percent grade. It is possible that the reconstruction of the L62A/US 385 Junction would traverse some deep gullies depending on the alternatives chosen. Portions of this segment of existing roadway are in need of panel replacement, while other portions were resurfacing in 2006 and are currently experiencing deep rutting.

High Volumes of Truck Traffic. The segment of the NHS is particularly important to truck traffic; traffic numbers indicate that an average of 19 percent, or about one in every five, of the vehicles on the project route is a truck. This compares to a state-wide average of 13 percent for comparable roads. The current daily volume of heavy trucks on US 385 from Angora to Alliance is 400 to 500 per day according to recent NDOR counts. During harvest season (July to February), the number of heavy trucks on the project route increases by approximately 50 percent.

Longer and Heavier Trucks. The majority of US 385 on the current alignment from Angora to Alliance was built in 1958 as a 2-lane rural roadway to support small farms moving grain and root crops in single axle trucks. Resurfacing over the last 20 years has maintained the surface and added paved shoulders. However, the existing roadway presents challenges when trying to serve the kinds of trucks and commercial vehicles now moving through the region.

Changes in the agricultural industry have resulted in the use of longer and heavier trucks, including tankers and semi-trailers often pulling pup trailers. . Furthermore, under Nebraska state law, sugar beet trucks in this area are allowed by permit the flexibility to exceed legal length and legal weight coming out of the fields. Improvements in agricultural production have also increased the total volume of produce being transported from farm to market, and to temporary storage areas.

The number of larger trucks with trailers primarily hauling sugar beets during harvest season can create conflicts with other vehicles using US 385. In the segment of US 385 from Angora to Alliance, there are approximately 70 field access drives where trucks access the highway. Due to the nature of the harvest operations, there are up to six truck movements leaving and entering US 385 for every load of beets. (Empty trucks slow down and leave the highway at field access points as the harvest begins, are loaded, and enter the highway to deliver their load to a temporary staging area. The full truck then leaves the highway at the temporary staging area, unloads, and re-enters the highway to return to the field for another load of beets. After the peak harvest season ends, a new cycle begins where empty trucks leave the highway to access the temporary staging area to get a load of beets and re-enter US 385 to travel to the Western Sugar Refinery in Scottsbluff just off US 26. This process can continue for several months after harvest is complete.)

Recent national emphasis on “green” energy has resulted in an increase of trucks carrying wind turbine blades in the region. Trucks carrying wind turbine blades from the manufacturing plant to the wind farm location are approximately 120 feet long. Industry sources indicate planned future turbines will have even longer blades, up to 180 feet in length. In comparison, the average mid-size sedan car is 13 ½ feet long. These larger and longer trucks accelerate slower and thus often travel at slower speeds. As a result, these types of trucks may need to encroach into oncoming traffic lanes when entering and exiting the highway and require longer passing lengths for faster moving vehicles to safely pass.

Encroachment by Turning Trucks. Turning vehicles currently encroach on opposing lanes to accomplish left and right turns. This is a potential hazard as vehicles heading in the opposite direction may not be able to stop in time to avoid a slow-moving truck. The trucks that use US 385 are large, and many have “pup” trailers as well as semis. Turning without running off the pavement can be challenging for these vehicles. There are a total of 70 existing access points on the project where this can happen.

Longer Passing Distances. The longer length of trucks can increase the required distance for a passenger vehicle to complete a pass of the truck. In this case the use of 120-foot long sugar beet trucks may warrant such consideration. Based on *NCHRP Report 505*, the length required to complete the pass of such a sugar beet truck can be 400 to 500 feet longer than a standard pass. This additional length for sugar beet trucks would eliminate three areas where passing is allowed (1.62 miles), and lengthen many other No Passing Zones.

Seasonal Tourist Traffic. Seasonal increases of vehicles and campers occur along the project route as US 385 is designated as a scenic byway and is a direct connection to many regional tourist destinations, including Mount Rushmore National Park, Scottsbluff National Monument, Chimney Rock National Historic Site, Chadron and Fort Robinson State Parks. The summer tourist season overlaps with the local wheat harvest, and corresponding increase in harvest trucks.

Truck Collisions. The current rate of truck involvement in collisions is 14.7 percent in the most recent three years of data. The concern with truck collisions is the potential for more severity and personal injuries. Future improvements to US 385 would better enable passenger cars and oversize trucks to share the road safely and efficiently.

## **B.2 Need for an Improved North-South Highway on a NHS High Priority Corridor that Increases the Efficiency and Safety of Commerce and Travel**

### *National Highway System High Priority Corridor*

As discussed earlier, the Heartland Expressway has been planned for many years. Currently, it is a 4-lane divided highway from the City of Minatare west past Scottsbluff and south to I-80, and from the South Dakota line northward (**Figure 1.4**). This leaves one 2-lane gap between the existing 4-lane sections, extending from the Nebraska to South Dakota line to Minatare. As funding becomes available, and the transportation needs increase for the route, this gap would be closed by constructing a 4-lane expressway, which would provide an improved transportation network that connects not only the cities within the Heartland Expressway corridor, but others throughout the Great Plains (**Figure 1.5**).

The Great Plains International Trade Corridor Assessment (Cambridge Systematics, 2008) indicated the need for an improved north-south route including the Heartland Expressway. The study also showed that the project roadway carries a high volume of trucks, and that traffic on the project route was likely to increase in the range of 81 to 140 percent by the year 2030.

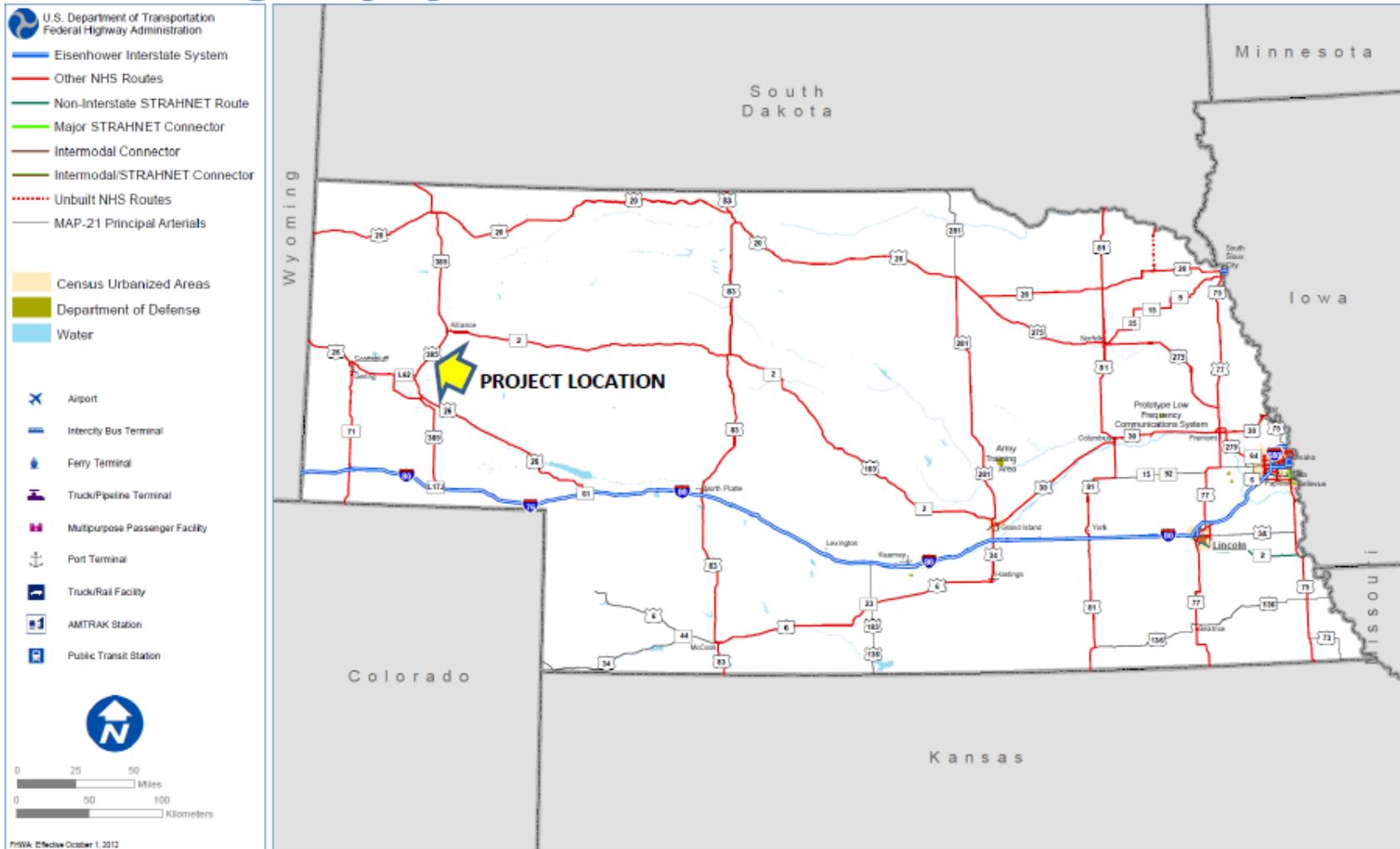
From a transportation standpoint, the segment of the Heartland Expressway between L62A and the City of Alliance is the reasonable next segment to improve, for several reasons. First, traffic volumes drop both to the north and the south of the project limits. At the north end of the project, traffic splits with 55 percent to the north on US 385, 35 percent to the east on N-2, and 10 percent to the west on 10<sup>th</sup> Street; at the south end, traffic splits with 54 percent to the west on L62A and 46 percent to the south on US 385. Second, this segment is the only part that passes through the Nebraska Sandhills, which have many short dunes requiring frequent climbs and turns. As a result of Sandhills topography, many areas on this route do not meet design standards: 9 crests or sags do not meet AASHTO standards for the speed limit, and 21 areas have grades that do not meet NDOR standards. The combination of traffic volumes and frequent climbs and turns results in decreased operational efficiency of this facility.

After this project would be constructed, there would still be a 13-mile-long two-lane section between the junction with L62A and the City of Minatare, and that section would likely be the next to be improved. Environmental documentation and preliminary design work have already been done in anticipation of future funding for the Minatare to Scottsbluff segment. These two projects together would complete a substantial portion of the Heartland Expressway, as well as providing improved system linkage between two economic hubs in the Panhandle, Alliance and Scottsbluff, and between Alliance and I-80.

In general, the number of central and western United States north-south highways proposed as High Priority Corridors (see **Figure 1.2**) illustrates the need for improved north-south highways in these regions, as existing ones are few and far between. In particular, this project's segment of US 385 is vitally important to the transportation network in the Panhandle region because this region has so few north-south links in the NHS. Currently, although US 71 is a NHS highway south from Scottsbluff, there are no NHS roads that cover the north-south extent of the Panhandle further west of US 385 in Nebraska (**Figure 2.1**). The closest through north-south NHS highway to the west is US 85 in Wyoming, approximately 65 miles from US 385 (not shown on **Figure 2.1**). The closest north-south NHS roadway to the east is US 83, approximately 125 miles from US 385.

Figure 2.1 – Map of the National Highway System (in Nebraska)

## National Highway System: Nebraska



Source: <http://www.fhwa.dot.gov/planning/nhs/> (accessed 21 January 2013)

Furthermore, as seen in **Figure 2.1**, the proposed project is more than a north-south highway on the NHS. It is also the connection between two east-west highways on the NHS: N-2 and L62A. Thus, this roadway is a crucial component of the regional transportation network. If this two-lane road were closed, for example due to a serious accident, traffic would require a detour route that would add at least 80 miles to the approximately 26-mile route, which would not only result in serious inconvenience and safety concerns for traveling public, but also could result in enormous delays for emergency vehicles attempting to reach businesses and residences along the route. If the accident damaged critical part of the highway such as a bridge, it could take weeks or longer for the road to reopen.

Section 1105 of ISTEA, the original act in which NHS High Priority Corridors, including Heartland Expressway, were identified, stated that the High Priority Corridor highways were of national significance and allowed the states to give priority to funding the construction of these corridors and to provide increased funding for segments of the corridors that were identified for construction. In addition, ISTEA stated: "In approving programs of projects under this section, the Secretary may give priority of approval to, and expedite construction of, projects to complete construction of such segments."

The focus of ISTEA was on improving the efficiency and safety of the NHS network, which makes up 4 percent of the nation's roads, but carries 40 percent of the traffic and 75 percent of heavy truck traffic (<http://www.fhwa.dot.gov/publications/publicroads/96spring/p96sp2.cfm>, accessed 13 August 2014). The part of the National Highway System covered by this project is particularly important to truck traffic; traffic numbers indicate that an average of 19 percent, or about one in every five, of the vehicles on the project route is a truck. This compares to a state-wide average of 13 percent for comparable roads. During the wheat harvest (July to August) and sugar beet harvest season (September to February), the number of heavy trucks on the project route increases by approximately 50 percent.

Section 1105 of ISTEA spelled out the need for High Priority Corridors on the NHS as follows:

- The construction of the Interstate Highway System connected the major population centers of the Nation and greatly enhanced economic growth in the United States;
- Many regions of the nation are not now adequately served by the Interstate Highway System or comparable highways and require further highway development to serve the travel and economic development needs of the region; and
- The development of transportation corridors is the most efficient and effective way of integrating regions and improving efficiency and safety of commerce and travel and further promoting economic development.

#### *Ports-to-Plains Alliance*

The Heartland Expressway is also a part of the Ports-to-Plains (P2P) Alliance, a collaboration of three major highway corridors covering nine rural states. As of 2010, the combined efforts of the Alliance have resulted in more than \$1 billion in Federal funding to develop, build, and improve the Alliance's corridor (P2P Alliance, <http://www.portstoplains.com> accessed 6 October 2011).

The P2P Alliance is a non-profit, non-partisan, community-driven advocacy group led by mayors, councilpersons, economic development officials, business and other opinion leaders

from ten U.S. states served by a nine-state, 2,300-plus mile economic development corridor between Mexico and Canada. In the U.S. these communities reach from Texas on the south to North Dakota and Montana on the north. The corridor extends into the energy and agriculture rich areas in Canada. The Government of Alberta joins many communities in Alberta and Saskatchewan looking to expand infrastructure serving the economic needs of their regions and the whole of the Ports-to-Plains Corridor. In Mexico development is taking place connecting the Texas/Mexico border in communities along the corridor stretching to the Ports of Mazatlán on the west coast of Mexico.

The corridor serves North America's energy heartland, including the oils sands in Alberta, Bakken, Niobrara, Permian, Cline, Eagle Ford, and emerging Mexico energy plays. At the same time, we embrace America's new energy economy, and are capitalizing upon wind power, biofuels and other innovation sectors to renew one of America's greatest legacies, the rural heartland.

#### *Great Plains International Trade Corridor (GPITC)*

The Port-to-Plains Alliance is the U.S. domestic portion of an even larger trade corridor, which would extend into both Mexico and Canada. This trade corridor is known as the Great Plains International Trade Corridor (GPITC).

The Heartland Expressway, with two other High Priority Corridors (P2P, High Priority Corridor No. 38 on **Figure 1.2**, and Theodore Roosevelt Expressway, High Priority Corridor No. 58), form the central part of the GPITC route connecting Monterrey, Nuevo Leon, Mexico, to Regina and Saskatoon, Saskatchewan, Canada. The GPITC is the backbone of a north-south transportation system extending from Mexico to Canada, with direct connections to additional corridors, including SPIRIT (High Priority Corridor No. 51, extending from Wichita, Kansas, south to El Paso, Texas), La Entrada al Pacifico (High Priority Corridor No. 56, extending from the Permian Basin in southwest Texas through Presidio, Texas, to Topolobampo, Mexico), Route 50 High Plains (High Priority Corridor No. 48), and Camino Real (High Priority Corridor No. 27).

**Figures 1.2 and 1.3** show these connections.

As a key region in the Nation's "Energy and Agricultural Heartland," the Heartland Expressway serves a central role in the GPITC, which "produces most of America's energy and nearly a quarter of US commercial farm output, generates 14 percent of US GDP, and transacts 20 percent of US – Canada – Mexico trade" (P2P Alliance Press Release, 9 March 2009).

**B.3 Need to Fulfill Federal and State Legislative Intent for Designated Funding**

In keeping with the development of the High Priority Corridors and as a key part of the Heartland Expressway, the federal government in the 2005 SAFETEA-LU included funding to build the section between Minatare and Alliance, which is further divided into three smaller projects with logical termini: Minatare to the Bayard turnoff, L62A to the US 385 Junction, and L62A Junction to Alliance. The current project is the L62A Junction to Alliance segment.

Table 2.1 summarizes Federal earmarks to the State of Nebraska for the Heartland Expressway. Table 2.2 summarizes Federal earmarks to surrounding states for their segments of the Heartland Expressway.

2.1 – Nebraska Earmarks for Heartland Expressway

Description	Amount	Year	Legislation	State	Comment
Heartland Expressway Corridor Development and Management Study	\$475,000	2009	Omnibus Appropriations Act	Nebraska	Sponsor - Congressman Adrian Smith
Construction of the Heartland Expressway between Alliance and Minatare	\$5,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$8,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$6,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$2,500,000	2005	SAFETEA-LU	Nebraska	NA
Heartland Expressway Nebraska	\$855,000	2005	SAFETEA-LU	Nebraska	NA
Heartland Expressway Nebraska	\$1,500,000	2003	TEA-21	Nebraska	NCPD program

Source: <http://earmarks.omb.gov/earmarks-public/> accessed 5 August 2014

Table 2.2 – Other State Earmarks for Heartland Expressway

Description	Amount	Year	Legislation	State	Comment
Heartland Expressway South Dakota	\$1,968,000	2005	SAFETEA-LU	South Dakota	NA
Purchase critical conservation easements along the Heartland Expressway (Highway 79) adjacent to Custer State Park and Wind Cave National Park	\$2,000,000	2005	SAFETEA-LU	South Dakota	NA
Construct Exit 61 I-90 Rapid City (Heartland Expressway)	\$15,116,000	2005	SAFETEA-LU	South Dakota	NA
Heartland Expressway Improvements	\$5,000,000	2005	SAFETEA-LU	Colorado	NA

Source: <http://earmarks.omb.gov/earmarks-public/> accessed 5 August 2014

Further support for the use of the allocated funding for the Angora to Alliance segment came in a letter dated 8 April 2009 from Governor Dave Heineman and State Senators John Harms, LeRoy Louden, and Ken Schilz. This letter was in response to a letter dated 6 April 2009 from John Craig, former Director of the Nebraska Department of Roads (NDOR), which states NDOR support for the project and requests that Federal Highway Administration (FHWA) “support this change [shifting focus to the Angora to Alliance segment] to pave the way for spending the earmark funds on this segment.”

This project has been identified by the State to be included in the Build Nebraska Act, in the Tier II grouping (FY 2016–2019), showing further State support for the highway improvements. The act directs state funds to be used for the construction of high-priority highway projects.

#### **B.4 Goal to Improve the Highway Infrastructure to Facilitate Economic Development**

In addition to addressing the transportation problems (needs) of the area, economic development has been identified as a project goal. Goals and objectives are defined by FHWA under NEPA as a desired project outcome beyond the transportation issues.

In keeping with the intent of the High Priority Corridors on the NHS, this project is intended to facilitate economic development by improving transportation infrastructure. The improved US 385 is seen as an investment to stimulate the region’s economy and to help the region’s communities better compete for new industries. The opportunity for economic development is directly linked to the accessibility of the Panhandle region. As this is the primary north-south route in the Panhandle, by improving US 385, and ultimately by completing the Heartland Expressway and connecting to other P2P Alliance corridors, there would be improved access between the rural Nebraska Panhandle and regional trade centers from Mexico to Canada, as well as increased economic and tourism opportunities within Panhandle communities.

The area of the Heartland Expressway is currently served by relatively indirect, two-lane roadways that were originally constructed for local farm to market traffic rather than for regional or interstate traffic, and there are no other north-south routes in this region. As indicated above, the closest NHS road is 65 miles to the west and 125 miles to the east. The closest north-south state highway is N 71, approximately 40 miles to the west. The closest north-south interstate highways are I -25, which is approximately 100 miles to the west, and I-29, which is more than 400 miles to the east.

#### *Heartland Expressway Economic and Engineering Feasibility Study*

The *Heartland Expressway Economic and Engineering Feasibility Study* (Wilbur Smith Associates, 1993) used a regional economic model to predict the economic impact of the Heartland Expressway on the region. The analysis considered four indicators of economic development impact:

- Value Added – The value of the firm’s outputs (products or services), minus the cost of the resources used to produce the products or services. The study considered this to be the most comprehensive measure of economic development impact and used this as the “benefit” in the benefit/cost analysis.
- Wages plus Income from Self Employment – Increases in wages and income.
- Employment – New jobs added as a result of the roadway improvements.

- Population – Additional population that is attracted to, or not lost from, the area as a result of the roadway improvements.

The economic feasibility analysis used four sources of economic benefits to determine the extent of economic development from the Heartland Expressway:

- Roadway construction and maintenance activities
- Changes in competitive position as a result of the roadway improvements
- Increased visitors and tourism as a result of the roadway improvements
- Non-business-related economic activity, including reduced travel times, improved fuel efficiency, and reduced crash rates

The Heartland Expressway economic feasibility analysis calculated economic benefits for two geographic areas:

- The corridor of the 13 counties immediately adjacent to the Heartland Expressway
- The two-state area of Nebraska and South Dakota

For the corridor, the proposed highway improvements for US 385 between L62A and Alliance were determined to have a Benefit to Cost ratio of 1.52. This means \$1.52 of benefit is projected for every \$1.00 invested in constructing the project. The proposed highway improvements were projected to have an internal rate of return of 13.5 percent. From a financial perspective, if the return was less than 7 percent, then the money would be better spent elsewhere. The analysis also determined that, over a 30-year period following construction, the corridor would have a positive, net present value of \$80.3 million (1993 dollars). These results indicate that the Heartland Expressway project would have a positive impact on the regional economy.

#### *Great Plains International Trade Corridor (GPITC)*

As mentioned earlier, this trade corridor serves an energy- and agriculture-rich area. With the quickly expanding renewable fuels, wind energy, and domestic energy independence industries, either outside or within the study area, and the need to have a reliable transportation network to support the development of these resources, an improved US 385 would serve as a direct route to regional trade centers further allowing Nebraska communities to gain economic benefits through the production and trade of these resources and through highway commercial businesses along the route. Indirect economic benefits would also be gained from the completion of the Heartland Expressway, through lower transportation costs and increased tourism (*Heartland Expressway Economic and Engineering Feasibility Study*, 1993, Executive Summary p. 9).

#### *Natural Resources Tourism*

While the Alliance area would benefit from construction of the Heartland Expressway, other entities in the larger region also depend on the Heartland Expressway for economic development. Some of the most popular tourism destinations in the region are the Black Hills National Forest, Jewel Cave National Monument, Badlands National Park, Mount Rushmore National Memorial, Crazy Horse Monument, Buffalo Gap National Grasslands, Minuteman Missile National Historic Site, Fort Robinson and Chadron State Parks, Wind Cave National Park, and the Wounded Knee National Historic Site. These resources are located within an area

of northwest Nebraska and southwest South Dakota, approximately 100 to 200 miles north of Alliance.

In addition, agencies such as FHWA, South Dakota Department of Transportation, Bureau of Indian Affairs, Oglala Sioux Tribe, US Forest Service, and National Park Service have developed plans that rely on the construction of the Heartland Expressway for their visitor and economic development assumptions, and to meet their stated missions (*General Management Plan / Environmental Impact Statement for Badlands National Park/North Unit in Jackson, Pennington, and Shannon Counties*, South Dakota [2006]; "Transportation Investments and Tourism Development at the Pine Ridge Indian Reservation" [2003]; <http://www.fhwa.dot.gov/planning/econdev/majorissues.html>, accessed 13 August 2014).

## **B.5 Purpose and Need Summary**

The improved corridor is intended for the following purposes:

- To provide an improved north-south highway on a NHS High Priority Corridor that increases the efficiency and safety of travel
- To fulfill legislative intent of ISTEA and SAFETEA-LU
- To fulfill legislative intent of the Build Nebraska Act
- To address roadway and operational deficiencies

An additional project goal is:

- To improve the highway infrastructure in order to facilitate economic development

An improved roadway for the section of US 385, including the junction with L62A and extending to the City of Alliance, has been planned and designated as part of the Heartland Expressway, a High Priority Corridor on the NHS, for the past 20 years. The implementation of this project is consistent with the planning of the Heartland Expressway; the Nebraska Priority Commercial System; Federal highway legislation, including ISTEA, TEA-21, and SAFETEA-LU; and the Build Nebraska Act.

The need for the project, and the reason it is considered the next logical segment of the Heartland Expressway, is that (1) it has the highest traffic volumes, including high truck traffic; and (2) it traverses numerous short dunes requiring frequent climbs and turns resulting in a number of areas that do not meet AASHTO standards for speed limit and NDOR standards for grade.. The combination of traffic volumes and frequent climbs and turns results in decreased operational efficiency of this facility.

A new economic study conducted as part of the Heartland Expressway Corridor study shows that benefits of improvements to US 385 in Nebraska consisting of expansion to a four-lane facility would result in a benefit/cost ratio of at least 1.7 and an analysis of improving just the proposed Expressway component would have a benefit/ cost ratio of at least 1.2, indicating a positive impact on the regional economy. These types of improvements typically provide benefits that include travel time savings (which may occur as motorists experience reduced travel times), increased safety (which may occur as the number of accidents that take place on the corridor are reduced); and operating cost savings (that may occur as the distances driven by motorists are reduced).

Therefore, the project would provide an improved north-south access route in the western region of Nebraska, Colorado, and South Dakota, increasing safe and efficient travel, as well as the economic well-being of the region.

### **C. Conformance with Regulations and Land Use Plans**

The first construction project, Alliance South, programmed in NDOR's five-year State Transportation Improvement Program (STIP), would construct US 385 from the junction of N-2 to approximately the Morrill-Box Butte county line. The second construction project, L62A North, also programmed in the STIP, would construct US 385 from approximately the Morrill-Box Butte county line to the junction of US 385 and L62A. The third construction project, currently not programmed because it is more than five years in the future, would construct the segment of highway connecting L62A to US 385 via the long sweeping curve. This project would also require reconstructing the south leg of US 385 to connect to the new sweeping curve.

While the project is not included in The Alliance Plan; the project is compatible with potential future changes in both transportation and land uses. **Chapter 4, Section B, Land Ownership, Jurisdiction, and Land Use**, discusses these in detail.