

# BLAIR, NEBRASKA

*BLAIR SOUTH BYPASS*  
2020 BUILD APPLICATION

STP-DPS-3854(1); CN 22508

MAY 2020





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# 1. COVER PAGE

## Project Name: Blair South Bypass

|   |   |
|---|---|
| Project Description                         | The Blair South Bypass project will construct a new connection between US Highway 75 and US Highway 30 in Blair, Nebraska, to bypass the community's existing downtown. The proposed corridor will be a three-lane section, configured as a "Super 2" with passing lanes constructed in the uphill direction to reduce conflicts between passenger vehicles and trucks. The project will also provide a critical, east-west bicycle connection for the community. The Blair South Bypass is an existing federal-aid project and the BUILD grant will fund construction activities for the corridor. |
| Urban/Rural                                 | Rural   |
| Urbanized Area                              | Not located in an Urbanized Area  |
| Capital or Planning                         | Capital   |
| Project Type                                | Road - New Capacity   |
| Primary Project Location Zip Code           | 68009   |
| Project Previously Submitted?               | Yes - BUILD/TIGER and INFRA   |
| Prior BUILD/TIGER Funds Awarded to Project? | No  |
| FY20 INFRA Application?                     | Yes   |
| Amount Requested                            | \$7,560,000   |
| Total Project Cost                          | \$14,444,040  |
| Total Federal Funding                       | \$9,734,000   |
| Total Non-Federal Funding                   | \$4,710,040   |
| Tribal Government?                          | No  |
| Tribal Benefits                             | No  |
| Private Corporation Involvement             | No  |
| Private Corporation Name(s)                 | N/A   |
| TIFIA/RRIF?                                 | No  |
| Department Financing Program?               | No  |

### **BLAIR SOUTH BYPASS**

# I. PROJECT DESCRIPTION

The Blair South Bypass is a project proposed by the City of Blair, Nebraska. The project addresses congestion on Washington Street, which serves as the City’s central business district and has dual designation as US Highway 30 (US-30) and US Highway 75 (US-75). The City of Blair is requesting \$7,560,000 of BUILD funding to allow for timely completion of this critical transportation project. This project addresses an immediate and growing traffic safety problem, supports economic growth in the region, and improves the economic development potential of Blair’s downtown. The purpose of the Blair South Bypass is threefold:

1. Enhance local mobility through downtown Blair, specifically along Washington Street between 13th and 19th Streets;
2. Improve the efficiency of through traffic (whose origin and destination is not Blair) between US-30 and US-75, most notably truck traffic with destinations to the Blair Industrial Park and Cargill Campus; and
3. Improve pedestrian and bicycle connectivity.

The concept of a bypass around the City has been discussed formally since 1994 and was identified officially in the Blair Bypass Study (2001), Long Range Transportation Plan (LRTP) (2004), and the City’s Comprehensive Plan (2015).

The full proposal for the bypass included a four-lane roadway consisting of three segments extending around the south, east, and north sides of the City, with the intended purpose of relieving congestion and safety concerns on Washington Street in downtown Blair. Through the NEPA process, a “Super 2” concept emerged as the preferred alternative to accommodate through-traffic and provide a passing lane to reduce conflicts with freight traffic.

The project is an existing federal-aid project programmed currently in the FY2020-2023 State Transportation Improvement Program ([Control Number, 22508](#)). The project has a variety of federal funding sources from both the US Department of Transportation and US Department of Housing and Urban Development. The estimated total project cost is projected to be \$14.4 million for construction, preliminary engineering (including environmental documentation), right-of-way (ROW) acquisition, construction engineering, and utility relocation costs. The Environmental Assessment process is complete, and construction is scheduled to begin in FY2022.

## BLAIR SOUTH BYPASS

## PROJECT NEED

### IMPROVE SAFETY

A tragic pedestrian fatality in 2019 highlights the urgency to reduce the mixing of local and through traffic with conflicting traffic tendencies in the downtown business district. This project reduces highway crash rates on several segments in downtown Blair that exceed the statewide average for Urban Four-Lane Highways.

### REDUCE CONGESTION

Four major highways (US-30, US-75, Nebraska Highway 91 [N-91], and N-133) converge in Blair and ultimately direct traffic onto Washington Street, which is designated as both US-30 and US-75. Washington Street serves as the only east-west major highway through Blair.

### IMPROVE THROUGH TRAFFIC & TRUCK TRAFFIC EFFICIENCY

Heavy traffic on Washington Street has caused through traffic to use other streets not conducive to safe neighborhood or travel. Proposed improvements address and alleviate this safety hazard.

### PROVIDE PEDESTRIAN & BICYCLE CONNECTIVITY

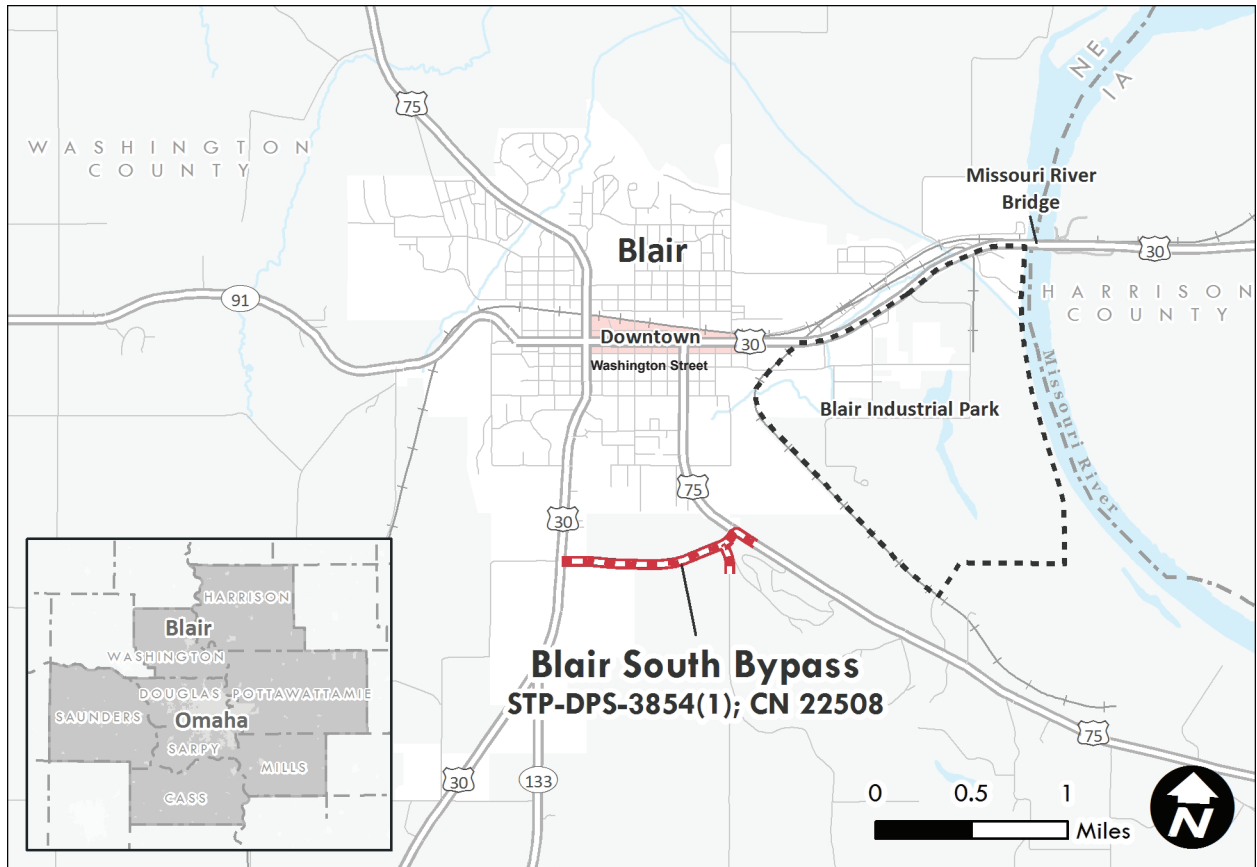
The south side of Blair has limited east-west pedestrian/bicycle connectivity. The project would include construction of a new east-west trail along the bypass, extending between US-75 and the existing trail along the west side of US-30. The City will ultimately extend the new trail to the north along the east side of US-75 to tie into the existing trail on the north side of Wilbur Street.



## II. PROJECT LOCATION

Blair is the county seat of Washington County, NE, and is a growing community of 7,815 residents located along the state’s eastern border. Approximately 20 miles north of the City of Omaha, Nebraska’s largest city, Blair is within the Omaha-Council Bluffs, NE-IA Metropolitan Statistical Area (MSA), which has a total population nearing one million people. Blair is well located along numerous major transportation routes due to its proximity to Omaha. US Highways 30 and 75 and State Highways 91 and 133 converge within Blair’s corporate limits; Highways 30, 75, and 91 interconnect and traverse through Washington Street, the City’s downtown commercial corridor (See Figure 1).

Figure 1: City of Blair & Proposed Bypass Location



Blair’s location along strategic transportation corridors has aided in attracting national and global companies to the community, such as Cargill, Evonik, and Novozymes. Cargill began construction of an expansive corn milling and ethanol production facility in the 1990s, which at the time was the largest single corporate capital investment in the State of Nebraska. The presence of the Cargill Campus and subsequent Blair Industrial Park has transformed Blair into a significant industrial and value-added agriculture hub within the State and region; the 2017 Nebraska Freight Plan prepared by the Nebraska Department of Transportation (NDOT) identifies Blair as a freight cluster.

The presence of Cargill and related industries results in a daily flow of heavy truck traffic that is uncharacteristic of most cities the size of Blair. Furthermore, there are other industrial and large commercial operations throughout the City where truck traffic arrives and departs, such as Concrete Equipment (CON-E-CO), Kelly Ryan Equipment Company, Woodhouse Auto Family, and various grain and ag-related facilities.

### **BLAIR SOUTH BYPASS**

Blair has a stable and growing economy that benefits from both commercial conveniences and heavy industry. However, these economic nodes and land uses are disconnected largely due to the lack of adequate east-west access other than the four-lane road - Washington Street (US-30/US-75) - that has served traditionally as the City's downtown commercial corridor. The lack of such access has put a significant strain on the downtown corridor and adjacent residential streets.

## CARGILL - BLAIR, NE



This proposed project will provide a new south connection between US-30 and US-75 with independent utility and logical termini. The area in which to locate a roadway connection has been defined as a corridor extending from US-30 on the west to US-75 on the east, and from South Street on the north to the N-133 intersection on the south.

The location of the bypass was selected from other alternatives due to the compatibility with the LRTP and the City's current comprehensive plan. Also, this alternative avoids the relocation of homes and minimizes impacts to environmental resources. The project is not located in an Opportunity Zone.

### III. GRANT FUNDS, SOURCES & USES OF PROJECT FUNDS

The proposed Blair South Bypass has been a priority for the community at large for nearly 20 years – demonstrated by the City's current Comprehensive Plan and letters of stakeholder support included with this application (See Attachment B). The City has assembled financial support in the form of a Congressionally-directed earmark of \$974,000 from US Housing and Urban Development (HUD) and \$1.2 million from the Surface Transportation Block Grant Program (STBG), which was awarded originally in 2011. In addition, the City is committed to providing \$4,710,040 from local sales tax or a general obligation bond in addition to the \$7,560,000. Between the two referenced funding sources and local match, the City is capable of financing the project design, NEPA clearance, right-of-way compensation, and relocation of a utility main. This local commitment to funding supports the BUILD secondary criteria (#2) of leveraging federal funding with local and regional support. A review of the selection criteria can be found later in this application. The allocation of BUILD Funds towards the proposed bypass can help Blair fill a long-standing funding gap by transitioning the project from concept to completion. In the absence of BUILD funding, it's likely that developing additional local funding would delay the project's implementation as other sources of local revenue would need to be developed. Funding sources for the proposed Blair South Bypass project are outlined in Table 1 on page 7.

### **BLAIR SOUTH BYPASS**

Table 1: Grant funds, sources, and uses of project funds

| Funding Category | Funding Source  | Funding Use(s)   | Amount       | Percent of Total |
|------------------|---|--|--------------|------------------|
| Non-Federal      | City of Blair   | - Final Design<br>- ROW Acquisition<br>- Construction    | \$4,710,040  | 32.61%           |
| Other Federal    | US Housing and Urban Development (Congressionally Directed) | - Preliminary Engineering<br>- NEPA<br>- ROW Acquisition | \$974,000    | 6.74%            |
|                  | Federal Surface Transportation Block Grant (STBG) Program   | - Construction   | \$1,200,000  | 8.31%            |
| BUILD            | BUILD Grant Funds   | - Construction   | \$7,560,000  | 52.34%           |
|                  |   |  | \$14,100,000 | 100%             |

Blair is prepared to commit the necessary \$4.7 million local funding for the proposed bypass based upon the overwhelming public support for this project. The City has identified the following options/sources to match federal and other funding resources:

- **Sales Tax Increase** – This is the preferred option. The City would put to the voters a proposed ½ cent sales tax initiative to expand the City’s sales tax to 2% for 10 years with the additional funds being used to match any federal grant funds issued to the project;
- **Existing Sales Tax** – The City currently receives approximately \$2 million a year in sales tax revenue with \$500,000 unobligated from year to year; or
- **General Obligation Bond** – A bond would be issued in the necessary amount of local match.

As a rural community with a population of 7,815 residents, the City of Blair has limited funding resources and tax base from which additional revenue for funding infrastructure projects can be generated. Furthermore, the population of Blair could be burdened easily by the full costs of major infrastructure investments that help secure the economic future of the community. Notably, the median household income (\$48,511) is about 82% of the statewide average, and about 80% of the national average (\$60,293). Additionally, nearly 13.7% of Blair’s residents fall below the poverty line—a figure well above the statewide and national averages. These population characteristics underpin the City of Blair's approach to this project and the commitment of resources above the mandated cost-sharing requirements.



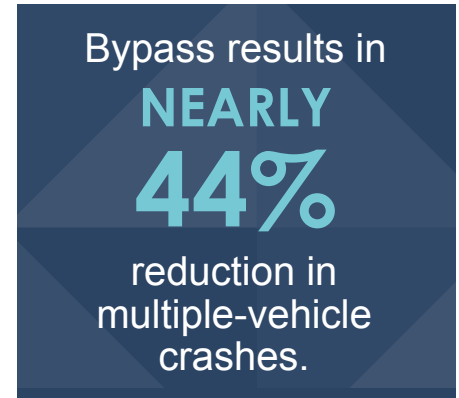
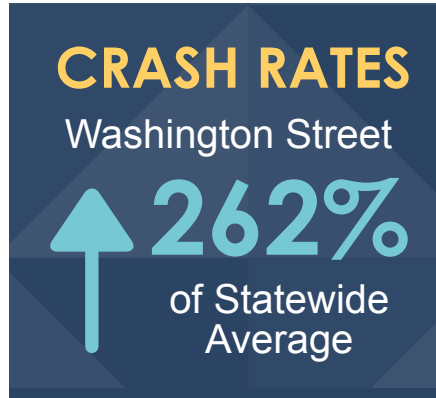
## IV. PRIMARY SELECTION CRITERIA



### CRITERION #1

### Safety

Based on NDOT data, the crash rate for Washington Street exceeded the statewide average for a five-year period from December 2014 through November 2019. This crash rate represents 262 percent of the statewide average. NDOT traffic counts show more than 2,000 trucks per day travel along Blair's Washington Street. With this high volume of truck traffic, safety



concerns are paramount for pedestrians, bicyclists and other motorists and emphasize the need for the Bypass project. Rural communities like Blair bear a disproportionate amount of the burden associated with goods movement to urban communities. This increased truck traffic poses a safety issue.

This challenge falls squarely into the focus area of the Rural Opportunities to Use Transportation for Economic Success (R.O.U.T.E.S.) initiative. And addressing the safety issues of large volumes of truck traffic on a small town's main street is the focus of this effort to address safety, economic competitiveness, and quality of life challenges posed by inadequate rural transportation infrastructure. Origin-destination studies completed for this project determined that through traffic makes up 29 to 45 percent of volume on the highways in Blair. Therefore, the safety benefits from this bypass impact a wide range of travelers—including freight haulers, Blair residents, and other travelers through the community.

Those concerns and the need for the project became more urgent last year when 11-year-old Jaycoby Estrada of Blair was struck and killed by a semi-tractor-trailer while riding his bicycle across Washington Street. This crash, in many ways, realized the community's fears about the level of safety for non-motorists along this section of Washington Street. The fundamental drivers of truck traffic along this corridor are not changing and the City of Blair will continue to bear these disproportionate burdens unless the South Bypass Project is constructed.

Improvements to safety can be measured by calculating the crash rates along Washington Street after the Blair South Bypass is constructed. Typically, crash rates require a three to five-year analysis period in order to provide enough data to be significant statistically. The project benefit cost assessment (Attachment A) shows that changes in traffic patterns could reduce the crash rate along Washington Street to a level below the statewide average.



## BLAIR SOUTH BYPASS



## CRITERION #2

### State of Good Repair

At current traffic levels, NDOT estimates that substantial pavement investments are anticipated by 2025 for portions of the Washington Street corridor. This high-level of truck traffic through downtown requires higher levels of maintenance and will require an advanced schedule for reconstruction—increasing the life-cycle costs of maintaining the existing facility significantly.

The way Washington Street operates has a direct impact on surrounding streets and neighborhoods. Truck traffic often seeks a more direct route on parallel Minor Arterial roads such as South Street, where the City has been forced to install “No Trucks” signs to dissuade cut-through traffic in predominantly residential neighborhoods. Increasing the alignment between vehicle type and roadway use can vastly improve the long-term resilience and compatibility of the City’s entire transportation network with the character of Blair’s neighborhoods.

The following section describes the plan for the City of Blair to address full lifecycle costs and to implement accountability measures for the project. This plan includes (1) an estimate of the lifecycle costs of the project; (2) an identified source of funding that will be sufficient to pay for operation and maintenance of the project; and (3) a description of controls in place to ensure the identified funding will not be diverted away from operation and maintenance.

#### *Lifecycle Cost Analysis*

A lifecycle cost analysis (LCCA) assessed the total cost of constructing, maintaining, and operating the Blair South Bypass over 50 years beginning in 2022, or completion of the project. The analysis was conducted using RealCost 2.5, published by the USDOT and FHWA in October 2010. Although the pavement determination has been established to be 10” doweled concrete pavement, the LCCA requires comparison to an alternative. For purposes of this analysis, an asphalt equivalent pavement depth of 12’ was assumed.

Since the LCCA focuses on mainline pavement only, the quantity and cost estimate for the three-lane section from US 30 to the west intersection with US 75 were used. The Blair South Bypass will exist along a new roadway alignment, so there would be negligible user costs associated with the initial construction. The user costs calculated are associated with the ongoing maintenance and repairs of the facility for each pavement type.

A summary of the LCCA by the RealCost 2.5 software is shown in Table 2. Results of that analysis indicate the Undiscounted Sum of the Agency Costs and User Costs are less for the doweled concrete pavement alternative. When converted back to the present value, assuming a discount rate of 4.0%, the present value of the asphalt alternative is slightly less than the doweled concrete pavement. Asphalt requires more frequent maintenance activity than concrete pavement. This maintenance is more than double the amount of the concrete pavement alternative. This analysis confirms that the use of 10” doweled concrete pavement will provide a long lasting driving surface that will require less maintenance and; therefore, less disruption to traffic for maintenance activities.

## **BLAIR SOUTH BYPASS**

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Table 2. Lifecycle Cost Analysis: PCC vs. HMA

| Total Cost       | Alternative 1 - PCC |           | Alternative 2 - HMA |           |
|------------------|---------------------|-----------|---------------------|-----------|
|                  | Agency Cost         | User Cost | Agency Cost         | User Cost |
| Undiscounted Sum | (\$1000)            | (\$1000)  | (\$1000)            | (\$1000)  |
| Present Value    | \$1,478.00          | \$19.53   | \$1,811.00          | \$56.35   |
| EUAC             | \$65.87             | \$0.55    | \$59.91             | \$1.21    |

### Source of Funding for Operations and Maintenance

Funding for the operations and maintenance of the Blair South Bypass will be provided through the Nebraska Highway Trust Fund. The Highway Trust Fund collects taxes on motor vehicle, diesel, compressed and alternative fuels, along with fees and excises on registration, operation and use of vehicles on public highways. A portion of the funds collected are allocated to counties and municipalities for construction, reconstruction, maintenance and repair of public roads, streets and bridges.

The City of Blair will be responsible for operations and maintenance of the Blair South Bypass. The City will use its allocation of the Highway Trust Fund disbursements to maintain the facility with regard to signing, striping, pavement repair or any other operational or maintenance activities necessary to provide for the safe and efficient operation of vehicles using this roadway.

### Funding Controls

The establishment of the Highway Trust Fund, along with the identified funding sources, was created by the Nebraska Legislature in Statute 39-2215, which also includes the formula for distribution to the state, counties and cities. The permitted allowed use of the funds distributed is specified in State Statute 39-2520, which limits the use to the construction, operations and maintenance of public highways and bridges by the State of Nebraska, and county, city, township, and village roads, streets, and bridges, and all facilities, appurtenances, and structures deemed necessary in connection with such highways, bridges, roads, and streets.



**CRITERION #3**

**Economic Competitiveness**

Blair’s proximity to the Omaha-Council Bluffs Metropolitan Area and access to major transportation corridors—including the main line of the Union Pacific Railroad—put the City in a competitive and strategic location for agribusiness. US-30 in particular is a key economic corridor through Blair for the movement of freight to and from facilities in Iowa and Nebraska. These agribusiness facilities have large operations that generate hundreds of millions of dollars in economic activity for the region.

Production facilities for Cargill, along with grain terminals and production facilities in Blair provide a convenient and optimal location for numerous agricultural-related processes and freight movements. These movements are crucial to this sector of the Blair and Nebraska economies, and must be facilitated when making transportation decisions. Furthermore, the Blair South Bypass project aligns with the priorities of the City’s current comprehensive plan and the 2017 NDOT Freight Plan, which maintains that capital infrastructure investments that support economic growth (such as the Blair bypass) will be important to ensure a balance between growth in freight traffic from business activity and the needs of surrounding communities. Table 3 below shows the two primary segments of Washington Street benefited by the South Bypass project continuing to experience low Levels of Service and continued congestion—impeding the flow of goods and people in the community.

Downtown business districts are a major catalyst of economic vitality in rural communities. Historically, Blair’s downtown has been the center of government, banking and professional businesses, and service and retail. The current configuration and freight traffic levels on Washington Street present major challenges to local business and pedestrian safety. Though Blair retains the physical characteristics that make for a strong downtown, the full economic development potential of the commercial area is stifled by the disruptive flow of daily truck traffic. Downtown business districts should be inviting and accessible freely to automobile drivers, pedestrians, and cyclists. The presence of truck traffic disrupts the overall connectivity and "sense of place" that downtown areas should provide. Blair’s vision of an accessible and vibrant downtown district has been nearly impossible to implement while truck traffic is directed through the downtown’s main corridor. Diverting truck traffic via a bypass was referenced heavily throughout City’s 2015 Comprehensive Plan as a means to foster a more walkable, pedestrian-friendly environment that fosters more economic growth and sense of place.

“Freight congestion in and around Blair, along U.S. 30 is a growing problem, especially as the Cargill campus expands. This and other areas with freight-related growth need special attention by NDOT to ensure that the infrastructure can support freight traffic with minimal impacts to residents.”

**- NDOT NEBRASKA FREIGHT PLAN**

**BLAIR SOUTH BYPASS**

Implementation of the Blair South Bypass project will reduce the volume of truck traffic significantly on Washington Street in the City’s downtown business district. The diversion of truck traffic with the south bypass may aid ultimately in the jurisdictional transfer of the Washington Street corridor from state to local control. The City of Blair would then be able to control the dimensions and character of Washington Street, opening other opportunities for economic development which are not practical currently.

Table 3: Washington Street Current and Future Level of Service (LOS)

| Location                                 | Facility Type   | 2016 AADT      | 2016 LOS | 2040 AADT      | 2040 LOS |
|--|-----------------|----------------|----------|----------------|----------|
| Washington Street - 16th St. to 19th St. | Four-Lane Urban | 13,295 (2,210) | C        | 16,555 (2,505) | D        |
| Washington Street - 13th St. to 16th St. | Four-Lane Urban | 16,800 (3,995) | D        | 20,075 (2,995) | D        |

Local automobile traffic coupled with regional truck traffic along Washington Street creates a tenuous environment. Local traffic is characterized by slower speeds and a greater number of turning movements related to on-street parking, roadway intersections, and access driveways, while through traffic requires higher speeds and limited access. The Blair South Bypass project addresses many of these issues by reducing conflicts between passenger vehicles and freight vehicles in the downtown area.

Washington Street has limited capacity and is built out currently to its physical limits. In 2000, Washington Street was reconstructed from a four-lane street with diagonal on-street parking to a four-lane street with a two-way left-turn lane, and on-street parallel parking stalls. Despite reconstruction, traffic still operates at a reduced speed with long delays and noticeable congestion. This configuration has led to a less pedestrian and business-focused corridor, and is even less safe for pedestrians.

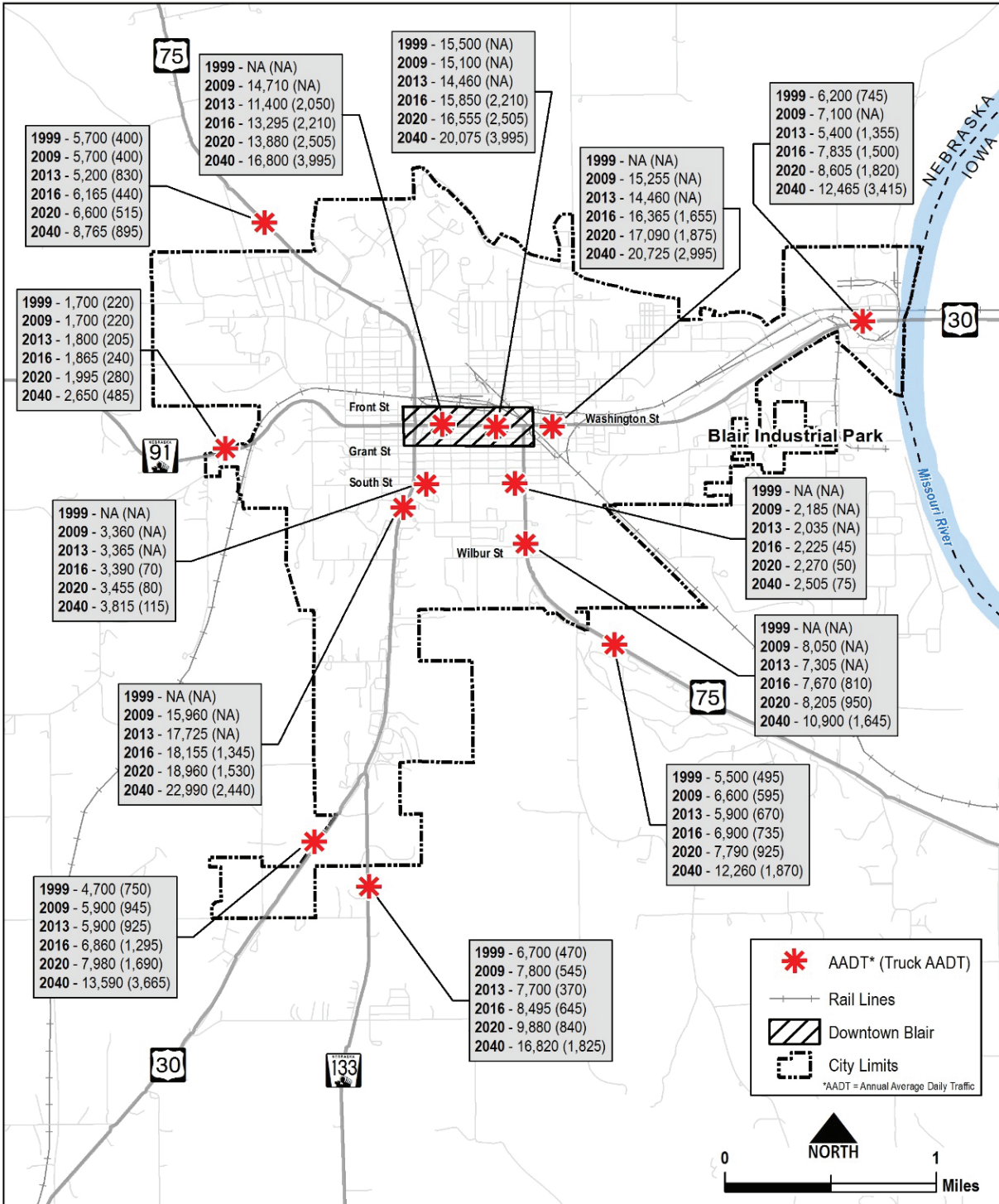
Traffic conflicts occur in downtown Blair because Washington Street funnels a mix of users with varying (and often conflicting) trip purposes. Washington Street is the only highway arterial in Blair with direct east-west access to US-30 and US-75, and also serves as Blair’s Main Street– the central corridor in the community’s downtown. A heavy volume of through traffic traveling on Washington Street has an origin and destination (O&D) outside downtown Blair. Through vehicles use Washington Street to connect to other major highways, including external destinations such as Omaha and Iowa. Much of the traffic on Washington Street flows to and from the Missouri River bridge, which is located approximately two miles east of downtown Blair. This bridge that connects into Iowa provides access to Interstate 29 and Interstate 80. The O&D study determined that through traffic entering Blair ranged between 29 and 45 percent of the total, depending on the highway. Based on historic and projected

**BLAIR SOUTH BYPASS**



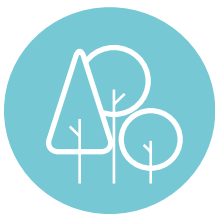
annual average daily traffic (AADT) volumes, a trucking company survey, an O&D study, and peak hour counts, a large amount of downtown traffic consists of through traffic. In 2016, more than 2,000 trucks per day utilized the central portion of Washington Street – a figure that is expected to grow to 3,995 trucks per day in the year 2040 (See Figure 2).

Figure 2: Existing and Projected Traffic Volumes for Project Study Area



The amount of traffic diverted from Washington Street through downtown can be measured by conducting annual traffic counts along that segment of roadway. The traffic study conducted for the Environmental Assessment determined the amount of anticipated traffic diversion for the Year 2020 and the Year 2040. Since the current construction schedule anticipates that the roadway would be open to traffic by the end of 2023, the traffic forecasts were updated to establish the forecast traffic volumes on Washington Street and the Blair South Bypass upon completion of construction. Based on these calculations, it is anticipated that there would be approximately 8,080 vehicles per day on the new bypass, of which approximately 1,808 would be single unit and heavy commercial trucks, representing 22.4% of the total traffic.

The NDOT Freight Plan documents roadways with speed inconsistencies throughout the State, which are often at intersections of major corridors or in urbanized areas where trucks encounter multiple mobility barriers. Segments of US-30 and US-75 near the Blair/Omaha area are identified as having low speed performance. The freight plan references a speed difference between 21 and 30 mph on both US-30 and US-75 around Blair. Furthermore, the freight plan finds that speed is highly unreliable on US-30 within five miles west of Blair, and US-75 is the worst performing key freight corridor in the Omaha region.



#### CRITERION #4

### Environmental Sustainability

In addition to the economic and safety benefits described previously, the South Blair Bypass project also provides environmental benefits. The benefit cost analysis (detailed in Attachment A) shows a benefit from CO<sub>2</sub> emissions for both truck and car traffic throughout the 30-year analysis period. This benefit was determined by considering the saved distance by vehicles traveling on the bypass. It does not directly consider the benefits of reduced congestion along Washington Street and the existing highway connections within Blair, with the subsequent local benefits to air quality. The reduced travel distance also provides a benefit in fuel and travel time savings as well—reducing the consumption of fossil fuels by residents and other travelers.

The Draft Environmental Assessment (DEA) also assessed project overall impact to air quality. Due to low traffic counts—under 100,000 vehicles per day throughout the project 20 years—an air quality analysis for all National Ambient Air Quality Standards (NAAQS) was not required. With respect to Mobile Source Air Toxics (MSATs) analysis was required, and the South Blair Bypass was categorized as level 2 or “projects with low potential MSAT effects”. Furthermore, the DEA stated that the project is not anticipated to create a potential for meaningful differences in MSAT emissions for the following reasons:

- As a new roadway on a new alignment project, there will be a decrease in delay and congestion associated with stopped vehicles and idling on existing roads.
- This project would allow better pedestrian and bicycle mobility and access.
- Bypass traffic volumes will be relatively low, and the projected design year traffic will not reach 140,000 ADT.

## **BLAIR SOUTH BYPASS**

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The subsequent changes to the DEA in the Final Environmental Assessment provide additional, updated, discussions on the benefits for the residents of the City of Blair. Specifically, the MSAT analysis finds that under the No-Build Alternative, approximately 15 percent truck traffic on Washington Street is through traffic not originating or destined for the Blair urban area. This through traffic now contributes to increased congestion and higher diesel PM emissions within the City of Blair that would expose more of the population to MSAT emissions. However, the Blair Alternative would provide a new route for through traffic and MSAT emissions of the Build Alternative could be offset somewhat by two factors:

- The diversion of regional truck traffic from a populated urban area to the Blair South Bypass resulting in few traffic stops and delays on Washington Street (i.e. reduced idling times) and increased travel speeds on the bypass; and,
- Reduced travel time through the City of Blair and area highways due to the redistribution of truck traffic throughout the roadway network.

As described in the draft Environmental Assessment, the preferred alternative is located such that it would have no wetland impacts. For the one instance of channel impact--a 2- to 4-foot-wide perennial channel in an agricultural field--permanent impacts resulting from the installation of a box culvert include 93 feet of channel impact. There will be no loss in channel length, and the channel does not include wetlands in the impact area. Impacts from the proposed project appear to fall under a Nationwide Permit 14 for Linear Transportation Projects (82 FR 1860).



## CRITERION #5 Quality of Life

### *Transportation Choices*

Freedom of transportation is limited along Main Street in Blair due to many safety concerns (listed above) related to truck traffic and the subsequent hazard that poses to pedestrians and cyclists most notably. The lifeblood of many communities (and their quality of life) is often their Main Street corridor or district, and the lifeblood of those businesses is pedestrian traffic.

Adjacent neighborhoods to Downtown Blair also see increased traffic as a result of backups along Main Street. These neighborhoods are home to families and children who bike and play in their front lawns, and on neighborhood streets. Moving truck traffic away from these areas together provides better cohesion between neighborhoods and the central business district, along with ensuring more neighborhood tranquility.

The project includes the construction of a 10' pedestrian/bike trail to be located on the south side of the new roadway. The construction of this trail will satisfy the need to provide a new east-west pedestrian bicycle route in this part of the community.

## **BLAIR SOUTH BYPASS**

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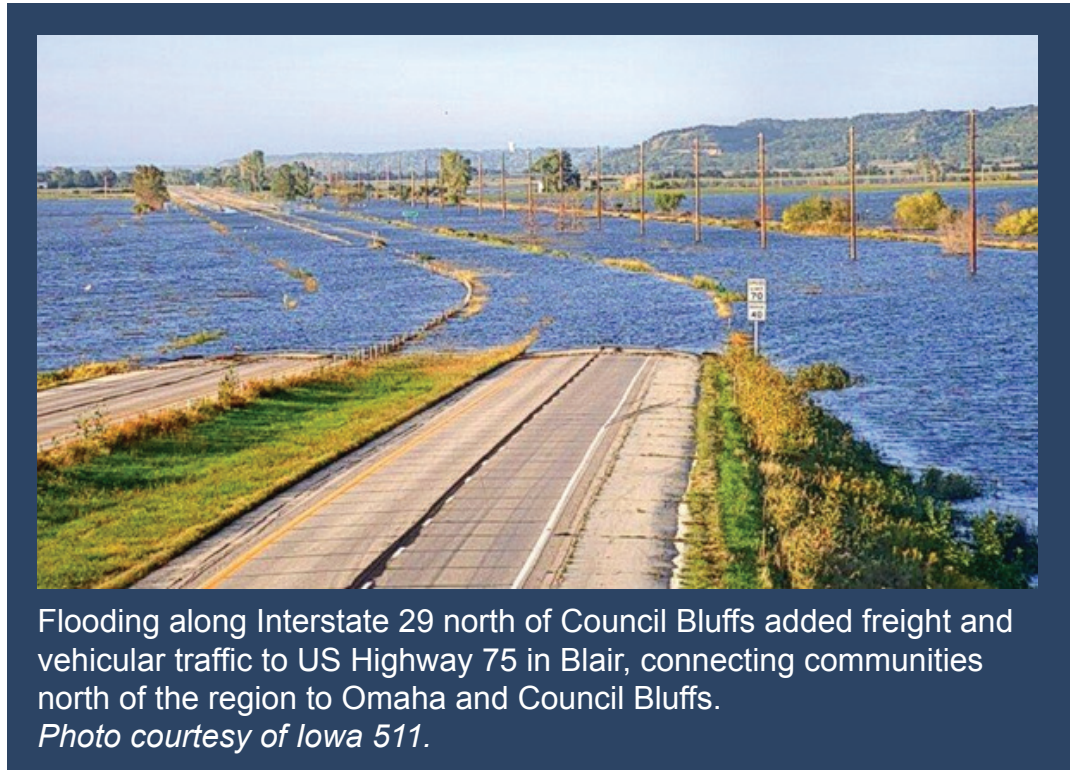


## *Flooding - Limited access to certain amenities*

Significant and wide-spread flood events occurred along the Missouri River in Nebraska and Iowa in 2011 and 2019. In both instances, large sections of Interstate 29, Interstate 680 and US Highway 30 in Iowa were closed for an extended amount of time. Closures of these interstate facilities in Iowa required all traffic to find alternate routes, including a detour through Blair on US Highway 75 and NE Highway 133.

Most notably, Interstate 29 serves as the primary north-south corridor within the region from Sioux City and the Dakotas to points southward in Missouri and Kansas. Locally, Interstate 29 serves as a primary corridor for many communities to access the Omaha–Council Bluffs Metropolitan Area. In 2019 most recently, portions of I-29 and I-680 were closed north of Council Bluffs, creating immediate traffic challenges on local roads along the Nebraska and Iowa sides of the Missouri River.

A large increase in traffic, coupled with the increased occurrence of flooding along the Missouri River, creates an increased need for enhancements to the flow of traffic in Blair. More specifically, a need to keep large quantities of freight and automobiles moving when major facilities are out of operation is paramount since these facilities serve the Omaha–Council Bluffs region with connections to Kansas City, Sioux City and beyond.



Flooding along Interstate 29 north of Council Bluffs added freight and vehicular traffic to US Highway 75 in Blair, connecting communities north of the region to Omaha and Council Bluffs.  
*Photo courtesy of Iowa 511.*

## *Access to Region*

US Highways 30 and 75 connect Blair with numerous destinations, both in the Omaha Metro Area to the south, along with numerous rural communities with the agricultural and industrial resources in Blair. These movements are crucial to the economy of the region; however, they have posed a huge safety threat as noted above.

Americans living in rural areas and on Tribal lands continue to lack access and connectivity disproportionately. The Winnebago and Omaha Tribes are located roughly an hour north of Blair on US Highway 75. This connection through Blair connects them to economic, health and other crucial resources in the Omaha - Council Bluffs Metropolitan Area.

## **BLAIR SOUTH BYPASS**

## IV. SECONDARY SELECTION CRITERIA



### CRITERION #1 Innovation

#### *Innovative Project Delivery*

The Blair South Bypass has benefited from many project delivery improvements championed by NDOT and the Federal Highway Administration Nebraska Division. In 2016, NDOT undertook significant streamlining efforts to improve project delivery, maintain compliance with environmental standards, and to improve the coordination between state and federal partners. These process improvements continue to provide benefits, including: standardized review schedules, consultant scopes of work, and improved guidance on addressing numerous environmental considerations for federal-aid projects. These efforts continued as the NDOT pursued NEPA assumption – a process which has fostered the development of new partnerships to develop and implement projects effectively.

Furthermore, upon submittal of a Draft Environmental Impact Statement (EIS) for the Blair Bypass Project, the Federal Highway Administration Nebraska Division recommended that the project be carried forward in the NEPA process with an Environmental Assessment. This shift reduced the level of review substantially and provided a clearer path for the Blair South Bypass project to reach its current status. The Final Environmental Assessment was completed in August of 2019, with a subsequent Federal Highway Administration Finding of No Significant Impact (FONSI) on August 15, 2019. These streamlining efforts have been essential to the momentum that the Blair South Bypass has currently, and its status as a shovel-ready project ready for implementation.

#### *Innovative Project Delivery*

In 2015, the Nebraska legislature passed LB 610– increasing the gas tax by 6-cents over a four-year period and distributing the additional revenues between state and local jurisdictions for roadway projects. This increase to funding has provided a much needed boost to local operations and maintained projects, but is one aspect of the approach that the City of Blair is taking to fund this project. As described in the discussion of **Section III. Grant Funds, Sources and Uses of Project Funds**, the City of Blair will utilize its Local-Option Sales Tax revenue as another supplement of funding for this project.



### CRITERION #2 Partnership

The City of Blair is the sole project party for this project. The Blair South Bypass is supported by a variety of private and public partners that have championed the project since its inception. Stakeholders providing letters of support are listed below.

Copies of all sponsor letters are located in Attachment B.

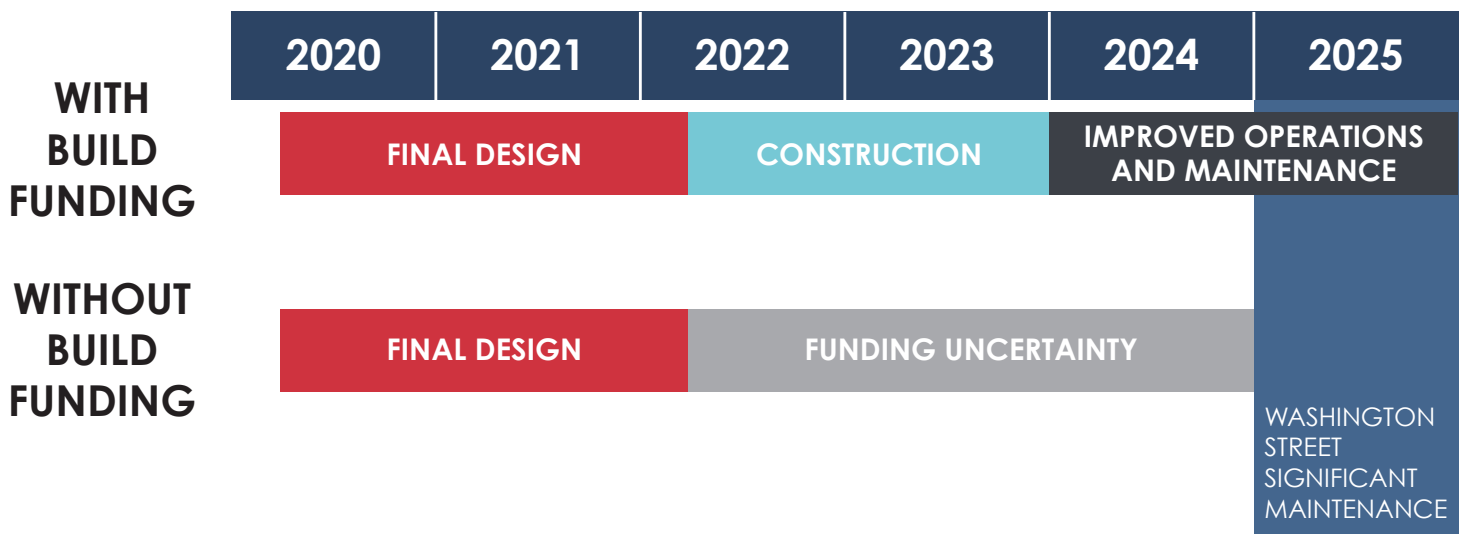
## **BLAIR SOUTH BYPASS**



## V. ENVIRONMENTAL RISK

### *Project Schedule*

The proposed Blair South Bypass project has been in development since the early 2000s and completed the NEPA review process recently. The project is programmed currently in the FY2020-2023 State Transportation Improvement Program for Construction in FY2020. This programming was established initially in anticipation of BUILD funding in 2019. The STIP will be updated as appropriate following a decision on 2020 BUILD Grant funding. Final design will be completed in 2022 to accommodate an November 2022 letting – ample time to obligate funding in advance of the September 30, 2023 deadline for FY2020 BUILD funds. With BUILD funding, construction would begin in March 2022 and be completed substantially and open to traffic by December 2023. Without additional funding to close the existing gap, securing additional local revenues may cause scheduling delays in the project.

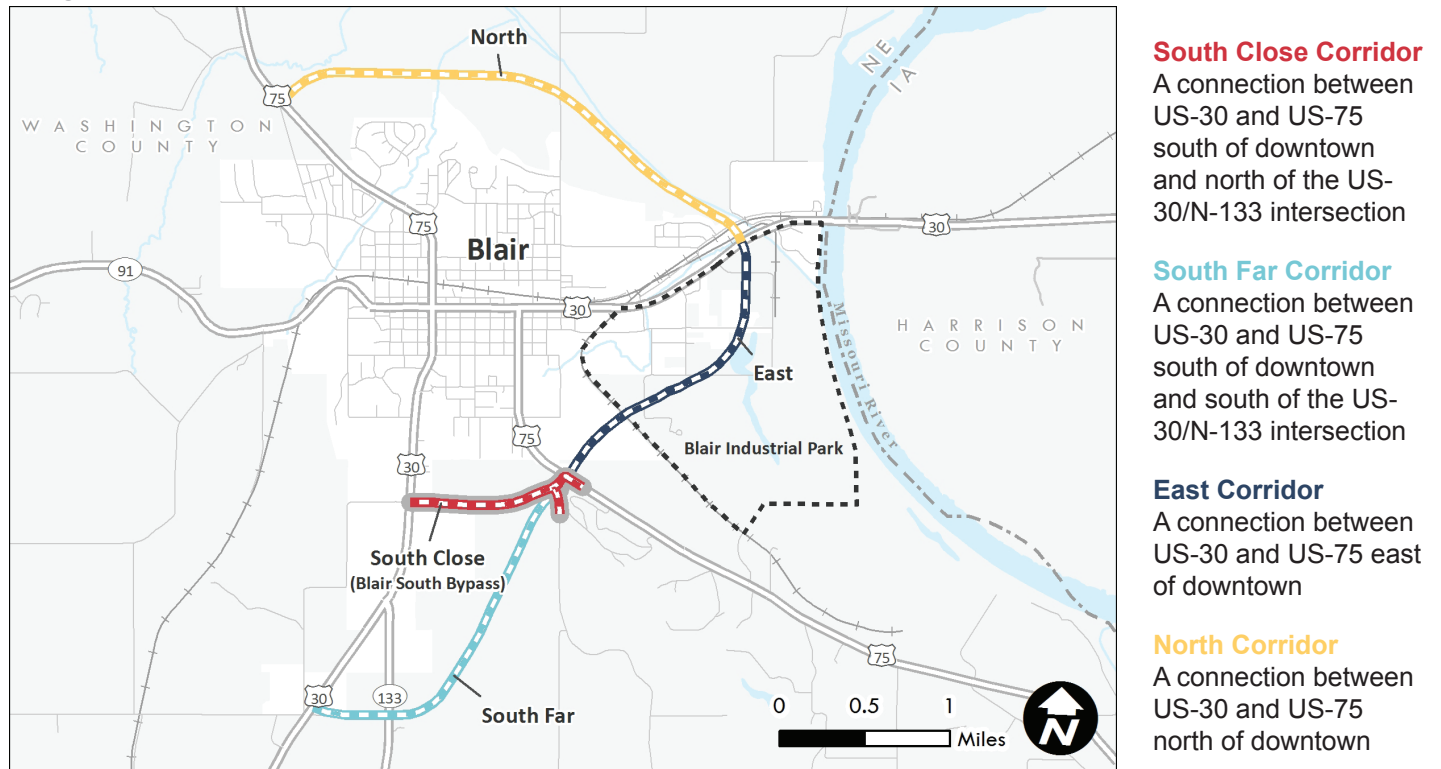


The Blair South Bypass project is an existing federal-aid project that has completed the Environmental Assessment process. The current project design is the result of decades of community and stakeholder input. In addition to detailed feasibility studies, final design will begin with the anticipated Notice to Proceed of March 2, 2020. Due to limited right-of-way impacts of the project, the project will be shovel ready by early 2022.

## Technical Feasibility

For more than 20 years, four corridors have been considered for connecting the roadway network in and around Blair. These were general locations on the south, east, and north sides of the citywide swathes in which a connecting roadway could be placed. The corridors were identified as:

Figure 3



Past studies have shown that all the corridor alternatives have logical termini, operate with independent utility, and complement other planned transportation improvements. However, these studies have also shown that the “South Close” corridor has the highest projected traffic volumes, truck traffic volumes, and through traffic volumes. Thus, a 2014 traffic study estimated that the construction of this corridor would reroute more than half the truck volume from downtown Blair. Furthermore, the “South Close” corridor has been shown to be compatible with construction of the other three connections should they be pursued in the future.

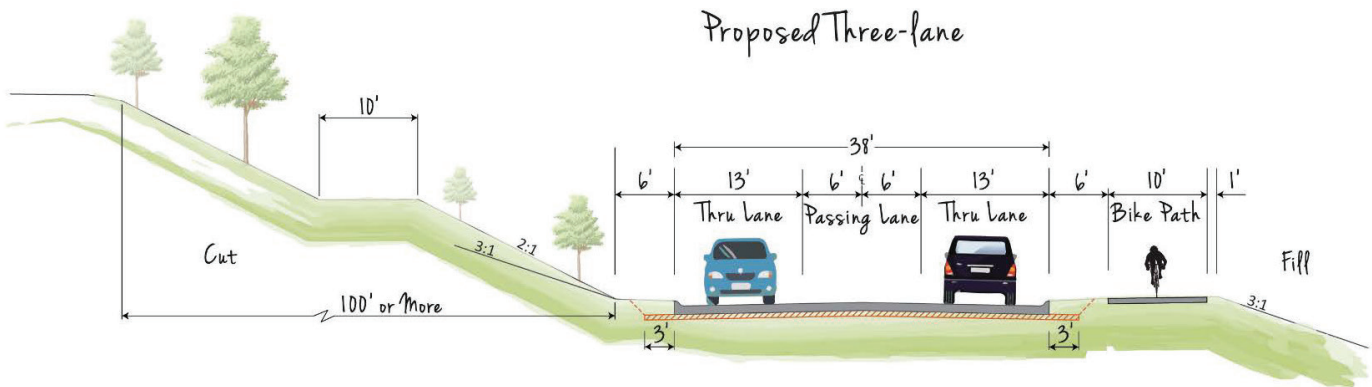
Therefore, the “South Close” corridor has been shown to be the most effective in relieving congestion and addressing safety concerns on Washington Street in downtown Blair. This corridor is more effective than the others because it connects directly to the Cargill Campus, Blair Industrial Park, and points south with the Missouri River bridge, Interstate 29, and points east. None of the other corridor alternatives provide as many options for truck and through traffic. For these reasons, the “South Close” corridor was carried forward through the environmental process and was named the Blair South Bypass.

The final Environmental Assessment evaluated the implementation of a southern bypass against no-build conditions anticipated for 2040, and evaluated multiple lane configurations for the build

## BLAIR SOUTH BYPASS

scenario. The preferred alternative proposes a three-lane arterial roadway with curb and gutter, referred to as a “Super 2.” This configuration (shown in Figure 4 below) would include two lanes in the uphill direction and one lane in the downhill direction. The two lanes would merge to one lane near the crest of the hill. The project would include construction of a storm sewer and a 10-foot-wide pedestrian/bicycle trail along the south side of the roadway. The pedestrian/bicycle trail, sidewalks, crosswalks, and ramps would be constructed according to the Americans with Disabilities Act (ADA) requirements. Certain areas would require significant grading to maintain at a maximum grade of five percent to meet the current ADA and Public Rights-of-Way Accessibility Guidelines for pedestrian access along the proposed trail. The project would include signage on Washington Street to divert southbound through traffic to the bypass. Based on the proposed improvements, property acquisition for street ROW and/or temporary or permanent easements is expected. Relocations or acquisitions of structures are not anticipated under the Preferred Alternative. The project meets all NDOT standards and would have minimal construction impacts on the traveling public and freight users.

Figure 4



## Required Approvals

### Environmental Permits and Reviews

The Draft Environmental Assessment for the Blair South Bypass was completed in April 2018 and submitted to NDOT and the Federal Highway Administration (FHWA) for initial comments. Minor FHWA comments were received in June 2018 and the comments were addressed and submitted as a final Draft Environmental Assessment in August 2018. A public hearing and 30-day public comment period on the project were also completed as part of the NEPA process. Completion of all work related to the environmental review and a Finding of No Significant Impact was received August 15, 2019. A summary of the environmental review process is below.

|   |   |
|---|---|
| <b>Draft Environmental Assessment</b>           | Final Submittal: August 2018<br>Public Hearing: January 2019<br>Approved: August 2019 |
| <b>Final Environmental Assessment</b>           | Initial Submittal: January 2019<br>Final Submittal: August 7, 2019                    |
| <b>Finding of No Significant Impact (FONSI)</b> | August 15, 2019   |

An agency scoping meeting and bus tour of the previous bypass concepts for the City of Blair was conducted on June 10, 2003. That meeting presented the concept of a bypass to local, state, and federal agency representatives, utilities, and the project sponsors and solicited input from these groups. Project information packages were also sent to regulatory and review agencies, local government entities, utilities, businesses, and Native American tribal governments. Periodically, during the last decade, project briefings have been presented to the City Council and Washington County Board. In 2015, a presentation on the project was made at the quarterly interagency meeting between FHWA, NDOT, NDEQ, NGPC, USACE and USFWS. The City of Blair and engineering firm Felsburg Holt & Ullevig presented information on the project history, alternatives analysis, roadway design, and drainage design considerations for discussion. Agencies raised no concerns at the time of this meeting. In 2016, NDOT discussed with FHWA the need for a future interagency meeting for the Blair South Bypass. It was determined that an additional meeting was not necessary due to the history of the project and because it had been presented to various agencies in the past.

Several technical studies and detailed investigations were conducted to support the development of a Draft Environmental Impact Statement (DEIS) for the complete bypass around three sides of the City of Blair. The relevant portions of these technical analyses were incorporated into the Environmental Assessment subsequently approved by FHWA.

The Blair South Bypass project has been a local priority for more than 20 years and has been the topic of discussion at public meetings related to the Long Range Transportation Plan, Comprehensive Plan, and Blair Bypass Study. The local newspaper, the Washington County Pilot-Tribune & Enterprise, has reported on the proposed project during the past several years, with several articles tracking the project's progress. Additionally, a public hearing on the project and the Environmental Assessment was held in January 2019 as part of the final environmental requirements related to this project with the Finding of No Significant Impact (FONSI) on August 15, 2019.

## **BLAIR SOUTH BYPASS**

## State and Local Approvals

The table below summarizes the relevant state and local approvals related to this project, including the State Transportation Improvement Program. NDOT’s State Freight Plan does not identify locally-sponsored projects, but the plan highlights the importance of goods movement around the City of Blair—particularly with regard to the potential for future economic development opportunities at Blair’s Cargill Bio-Technology Campus.

|  |  |
|--|--|
| <p><b><u>FY2020-2023 State Transportation Improvement Program (STIP)</u></b><br/>         Project Number: STP-DPS-3854(1)<br/>         Control Number: CN22508</p> | <p>Blair South Bypass<br/> <a href="https://dot.nebraska.gov/media/2827/project-listing.pdf">https://dot.nebraska.gov/media/2827/project-listing.pdf</a></p>   |
| <p><b><u>FY2020 Blair One and Six Year Plan -</u></b><br/>         Project Number: M-157 (Y-157)</p>   | <p>Bypass Corridors: US-30 at Hollow Road Intersection to US-75: M-157 (Y-157)<br/>         Attachment C</p>   |
| <p><b><u>NDOT Nebraska Freight Plan</u></b></p>  | <p>Key Take-Aways: Page 2-1<br/>         Freight-Related Development Opportunities: Page 8-48<br/> <a href="https://dot.nebraska.gov/media/10761/nebraska-freight-plan.pdf">https://dot.nebraska.gov/media/10761/nebraska-freight-plan.pdf</a></p> |
| <p><b><u>Blair Comprehensive Plan</u></b></p>  | <p><a href="http://mail.ci.blair.ne.us/weblink/0/edoc/105265/Blair%20Comprehensive%20Plan%202015.pdf">http://mail.ci.blair.ne.us/weblink/0/edoc/105265/Blair%20Comprehensive%20Plan%202015.pdf</a></p>   |

## Federal Transportation Requirements

As noted in the Environmental Permits and Reviews and State and Local Approvals sections above, this project has complied with all federal transportation planning requirements included in the State of Nebraska STIP and Washington County’s 1- and 6-Year Plan. Additionally, environmental clearance was received August 15, 2019.

## Assessment of Project Risks and Mitigation Strategies

Below is a summary of anticipated risks related to the delivery of this project and the associated risk mitigation strategies to be used by the project team.

| Risk                                    | Mitigation Strategy   |
|---|---|
| US Army Corps of Engineers Permit       | Continued coordination in NEPA;<br>Early coordination in Final Design |
| Utility Relocation - Black Hills Energy | Early coordination in Final Design                                    |

## BLAIR SOUTH BYPASS



## VI. BENEFIT COST ANALYSIS

The following section provides additional details regarding the Benefit-Cost Analysis, a full copy of which is included in **Attachment A**. The benefits included in this analysis are user benefits resultant from the implementation of the project. These benefits include travel time benefits, vehicle fuel savings, reduction in crashes, and reduced vehicle emissions. These benefits were compared to the costs of the project including initial construction costs and excess operations and maintenance costs. The **Life-Cycle Cost Analysis (LCCA)** utilized to derive these costs is included under the discussion of **Primary Selection Criterion #2: State of Good Repair**.

Table 5. Benefit Cost Ratio Summary

| 7% Discount Rate on 2018\$      |              |
|---------------------------------|--------------|
| Present Value of Total Benefits | \$32,356,128 |
| Present Value of Total Costs    | \$16,236,407 |
| Benefit Cost Ratio              | 1.99         |

## X. ATTACHMENTS

**Benefit Cost Analysis - ATTACHMENT A**

**Letters of Support - ATTACHMENT B**

**FY2020 Blair One-And-Six Year Plan - ATTACHMENT C**