Attachment #3A

Belle Fourche Industrial & Rail Park

Rail Ready for Business!

Belle Fourche DEVELOPMENT CORPORATION

PO Box 344 Belle Fourche, SD 57717 Phone: (605)892-5065
www.bfdcsd.com email: director@bellefourchedevcorp.com

Belle Fourche Economic Development Corporation Rail Park Improvements

Project Overview and Need

This project is to construct two tracks into the BFEDC rail park. The first track is to provide rail service to a new customer – Albany Farms. Albany Farms just completed the purchase of the Permian Tank facility. Albany Farms will use the existing building as a Phase 1 facility to make and package ramen noodles. Phase 2 will be to build another manufacturing and packaging facility within 24 months. Phase 3 will be to construct a flour mill.

During Phase 1 Albany Farms will use two rail cars per day of flour, once Phase 2 is operational that will increase to four cars of flour per day. After the flour mill is built Albany will use six cars per day of wheat and rail out three to four cars per day of wheat byproduct. Weekly traffic will be 45 to 50 cars per week.

The rail being proposed to the Albany Farms facility will be owned by BFEDC. As the owner of the rail park, it is BFEDC's goal to attract and retain as many rail served businesses as possible. There is available property on the north and east of the Albany Farms property. The spur can be used to access these properties and we will market the properties as having direct rail access.

The second proposed track is to provide service to an area to be used for a laydown yard for the Sanford Lab Long-Baseline Neutrino Facility (LBNF) project in Lead. Fermi Research Alliance/South Dakota Services Division issued a Request For Information on September 1, 2021 asking respondents to discuss how they would receive, store, inventory and transport the components for two cryostats. The structural steel components for these cryostats weigh 10 million pounds – or about 50 carloads. The RFI states that the Fermi Research Alliance prefers the laydown area to be within 100 miles of Lead.

State Rail Plan Goals

Support Economic Growth and Development

The Albany Farms project will initially employ 50 people, increasing to 150 once the flour mill is operational. 150 jobs in western South Dakota are significant and will greatly stabilize the economy of the area in and around Belle Fourche. This project represents real growth for Belle Fourche.

Albany Farms plans to mill South Dakota wheat (phase 3) and to obtain as much wheat locally as possible. It is likely that much of the wheat will come the Pierre or Onida areas, offering those elevators and producers an additional market.

The structural steel for the LBNF project is coming from Europe. The parts will need to be stored inside; an inventory maintained then transported to Lead as needed. This warehousing effort will likely continue for additional components and for many years. The RFI includes this statement:

> This RFI is specific to the storage of the cryostat structural envelope steel. The eventual contractor will be required to provide all personnel, equipment, tools, materials, weather protection, dunnage, supervision, and the necessary services to provide the receipt, handling, storage, and loading for delivery of the

structural steel. The LBNF/DUNE-US project will also require accommodation for their QA/QC team at the storage facility to provide QA/QC services. Materials will consist of prefabricated and pre-painted steel beams. It is up to the service to provide an adequately sized secure storage (laydown) area and equipment to handle the steel. Some space will have to be set aside for possible paint and chip repair of the steel.

The number of employees needed to accomplish these tasks has not been determined but will likely be several at least.

Ensure Connectivity for Critical Industries

Rural South Dakota industries have traditionally been related to agriculture and the extractive industries (mining and logging) and these industries are still important today. However, expanding upon those traditional industries provides for economic stability and growth. The rail to the Albany Farms facility provides support to a traditional major industry in South Dakota (agriculture) and provides significant added value to the wheat grown in South Dakota.

The State of South Dakota established the Sanford Underground Laboratory and still owns the facility. The cutting-edge experiments taking place in the former Homestake Mine are not a traditional industry in South Dakota but represent an effort to expand the states economy into a different direction. It's fitting that the supporting facilities are in South Dakota in order for South Dakotans to take advantage of the work going on in Lead.

Maintain State RR Assets in a State of Good Repair

The tracks proposed for the Belle Fourche Rail Park do not directly maintain existing mainline track. However, the additional rail traffic provides RCP&E with additional revenue to maintain the track and additional car counts support the viability of the line.

Reduce Highway Impacts

For the first two years when flour is being brought in by rail, the savings in trucking miles is significant. It is likely that flour coming in will originate in the Twin Cities Area. Minneapolis is 620 miles from Belle Fourche – a 1240-mile round trip. Four rail cars per day equates to 20 trucks per day, or 100 trucks per week. By railing the flour in, at initial quantities, means that over 3 million truck miles per year are avoided. As the second facility is build in phase two that truck mileage savings is doubled to 6 million miles per year.

Once the flour mill is built the rail transportation of flour will cease and the rail transportation of wheat will begin. It's likely the wheat will originate in the Pierre, Onida, Midland area. If we assume the wheat is coming from Pierre (200 miles) 6 rail cars of wheat a day equates to 30 truckloads per day or 150 per week. By transporting the wheat from Pierre by rail 3 million truck miles per year will be avoided, assuming the trucks return to Pierre empty.

For the laydown area: The structural steel will be transported to the east coast by ship. From there it will be transported to a facility closer to Lead. If there is not a rail facility close – the steel will be transported by truck. It is 1700 miles from port facilities in New Jersey to Belle Fourche. 250 truckloads transported from the east coast to Belle Fourche is 425,000 miles – If

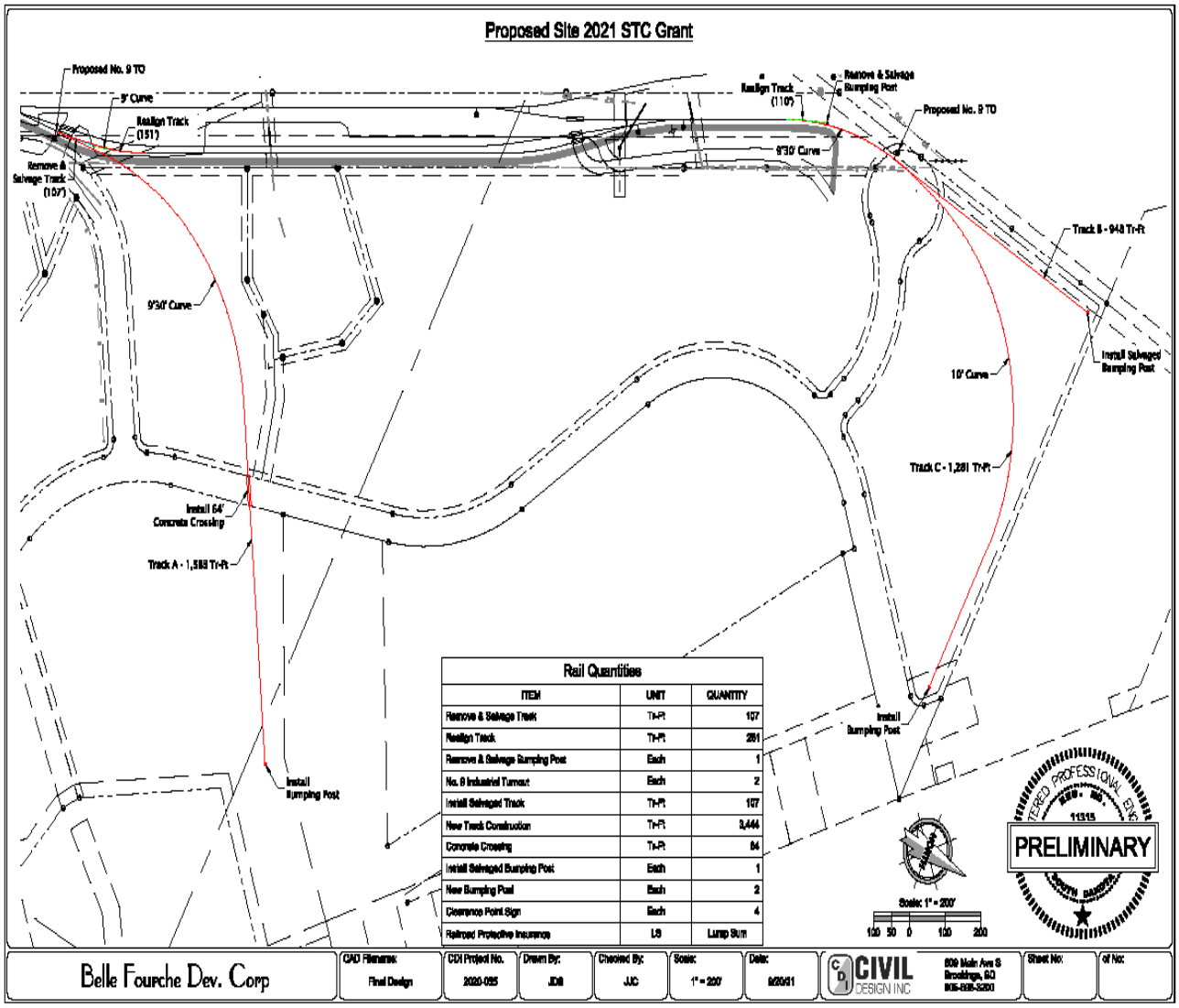
this facility is built the steel could arrive in Belle Fourche by rail, at a considerable cost savings to the LBNF project.

Improve RR Safety, Security and Resiliency

The project will help the RCP&E in terms of Safety, Security and Resiliency by providing additional traffic and therefore revenue that helps the railroad become more economically stable and more able to weather economic downturns that may occur.

Project Summary (Location, Scope, Schedule)

The project is located at the Belle Fourche Economic Development Rail Park in Belle Fourche, South Dakota.



Attachment #3A

Belle Fourche Development Corp
Industrial Rail Park Expansion
Preliminary Opinion of Probable Cost

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 100,000.00	$ 100,000.00
2	Remove & Salvage Track	Tr-Ft	107	$ 20.00	$ 2,140.00
3	Realign Track	Tr-Ft	261	$ 20.00	$ 5,220.00
4	Remove & Salvage Bumping Post	Each	1	$ 1,000.00	$ 1,000.00
5	Grading	LS	1	$ 135,000.00	$ 135,000.00
6	Subballast	LS	1	$ 230,000.00	$ 230,000.00
7	Drainage Structures	LS	1	$ 10,000.00	$ 10,000.00
8	Erosion Control	LS	1	$ 10,000.00	$ 10,000.00
9	No. 9 Industrial Turnout	Each	2	$ 75,000.00	$ 150,000.00
10	Install Salvaged Track	Tr-Ft	107	$ 125.00	$ 13,375.00
11	New Track Construction	Tr-Ft	3,444	$ 175.00	$ 602,700.00
12	Concrete Crossing Panels	Tr-Ft	64	$ 350.00	$ 22,400.00
13	Install Salvaged Bumping Post	Each	1	$ 5,000.00	$ 5,000.00
14	New Bumping Post	Each	2	$ 8,000.00	$ 16,000.00
15	Clearance Point Sign	Each	4	$ 250.00	$ 1,000.00
16	Railroad Protective Insurance	LS	1	$ 5,000.00	$ 5,000.00
				Total:	$ 1,308,835.00

Contingency:	$ 196,325.25
Engineering:	$ 150,000.00
Environmental	$ 55,000.00
Total Project Cost:	**$ 1,710,160.25**

CDI CIVIL DESIGN INC

Scope

The scope of the project is to construct two leads into the Belle Fourche Industrial and Rail Park. The project will include 3,444 feet of track construction, two turnouts, grading, ballast and other miscellaneous work.

Schedule

Upon confirmation of award by USDOT, BFEDC will commence the environmental work and preliminary engineering. Assuming grant awards are announced by May of 2022 BFEDC will begin the environmental work and preliminary engineering right away. BFEDC believes time is of an essence for this project and will request pre-award authority for the environmental and preliminary engineering. BFEDC will consider requesting pre-award authority for material purchases and final engineering to speed up the project delivery time. Anticipated construction will be during the 2023 season.

Funding

Total project cost is estimated to be $1,710,160.25. BFEDC is requesting a STC grant of 80% ($1,368,128.20). BFEDC will provide the 20% match ($342,032.05).

Project Readiness

The project is located in a purpose-built Rail Park. The engineering and construction of this project is well understood, and the project will be constructed to RCP&E standards in accordance with AREMA standards.

Environmental Readiness

Another STC project at the BFEDC was recently approved. The environmental work done for that project can be used as supplemental information for this new project. We anticipate this project will qualify for a Categorical Exclusion.

Project benefits

The benefit as normally considered in USDOT discretionary grants is usually found in the cost savings related to the modal diversion from truck to rail. These costs are truck operating cost savings, emissions cost avoidance, safety improvements related to less miles of trucking, and avoided wear and tear on the highways.

As discussed above for the first two years the business will make ramen noodles with flour as opposed to making their own flour. The flour will likely be trucked to Belle Fourche from the Twin Cities area, a distance on 620 miles or 1240 miles round trip. 50 trucks per day, for 50 weeks results in 3.1 million miles the first year. For the second year the volume of flour used doubles as does the truck miles to 6.2 million miles. For the first two years, if the flour is trucked, 9.3 million miles will have accrued. At 60 mph that is 155,000 hours of driving time. According to USDOT the value of a truck drivers time is $30.80 per hour and the operating costs

of a commercial truck is $.93 per mile. At $30.80 per hour drivers time that is $4.77 million. The operating cost for that distance is $8.65 million. The carbon cost is 6.3 million miles divided by 6 mpg - 1,050,000 gallons of fuel. The amount of carbon emitted is 22.46 pounds per gallon – 23.583 million pounds or 10,695 metric tons. At $53 that amounts to $566,835. The total benefit for the flour move the first two years is $14 million.

Albany Farms estimates they can use 30 rail cars per week of wheat. That is equal to 150 truckloads of wheat per week. Pierre to belle Fouche is 200 miles one way – 400 miles round trip. Trucks will be traveling 60,000 miles per week – assuming 50 week year that comes to 3 million miles per year at 60 mph is 50,000 hrs of time. Truck drivers wages for a year would total $1,540,000. The operating cost avoided of trucks moving wheat from Pierre to Belle Fourche is $2,790,000 per year. Of course, the train uses fuel and employees too – but those moves are incremental to the railroads operation. Diesel fuel emits 22.46 pounds of CO2 per gallon burned. At 3 million miles and 6 mpg that 500,000 gallons of fuel and 11,230,000 pounds (5092 metric tons) of CO2. The 2023 value of carbon is $53 per metric ton – the modal shift for inbound wheat results in a $269,876 per year. Benefits of using rail instead of truck, just for Albany Farms is $4.6 million per year. Over 18 years the total benefit is $83 million. We have not considered other possible savings like less truck accidents, other emissions savings, reduction of wear and tear on the road.

The benefit will last for as long as Albany Farms is operating, or the life of the track. If we assume the track will be used for 20 years, the total benefit (in constant dollars) including the first two years of flour transportation is ($83 +$14) $97 million.

The structural steel for LBNF will be transported to the east coast by ship. From there it will be transported to a facility closer to Lead. If there is not a rail facility close the steel will be transported by truck. It is 1700 miles from port facilities in New Jersey to Belle Fourche. The 425,000 truck miles equate to 8,500 hours of trucking time at $30.80 ($260,000), 425,000 miles at $.93 ($395,000), 70,833 gallons of diesel fuel not used with 1.59 million less pounds of CO2 emitted – (721 metric tons) for a benefit of $38,238. The benefit of this portion of the project will be $700,000 for the structural steel. This will be a one-time benefit.

Adding all the benefits results in a total of $97.7 million. This figure should be decreased by the operational costs of the train and the environmental impact of rail operations. Since rail transportation of flour/wheat/steel cars is incremental the entire cost of the train is not considered. We can assume the benefits will be reduced by 25% when adjusting that provides a benefit of $73.2 million for a positive benefit. The benefit cost ratio is 43:1. This benefit number does not consider the discounting for future benefits or costs and does not include other benefits such as other classes of pollutants, safety benefits and wear on the roads.

It is our understanding that other material will be shipped in by rail, such as the Argon needed for the detectors. The benefit of the rail side will increase as more components for the LBNF are shipped in by rail.

There is another transportation alterative to evaluate. We discussed the logistics of transportation of flour and wheat into Belle Fourche by rail with Nick Smith who is a marketing person at RCP&E. Nick confirmed that the flour would likely originate in the Minneapolis area, and wheat would likely originate from the Pierre or Onida elevators. When asked about transloading he indicated the best location would be Belle Fourche. He said that flour is unloaded and loaded by pneumatic systems and wheat would be loaded and unloaded by conveyor. When asked about the volume and interference with other cars trying to use the same track he said they would move the cars around to make them all fit. Nick did not have a time estimate for unloading cars using a pneumatic system. He did indicate that conveyor systems tend to be slower than pneumatic systems.

There is a wide variety of different types of systems and capabilities. It appears that a higher capacity system would be able to unload at a rate of 40 tons per hour. An average system operates at about 20 tons per hour. Most rail cars have a 100 ton capacity meaning to unload a flour car into trucks would take 2.5 hours per rail car at 40 tons per hour of unloading time. To unload an entire car would take five truck loads. Four cars per day would take 10 hrs per day (of unloading equipment time) just to unload into 20 short distance truck trips. The truck of flour would be driven a short distance where it would unload – which would take between a ½ to an hour per truck. Assuming the higher capacity unloader at 40 tons per hour and 20 trips from the rail car to the noodle facility. At the higher rate to load a truck would take ½ hour, to unload it would take ½ hour and assuming hookup and driving time takes another ½ hour each 20 tons takes 1.5 hours. However, regardless of how the flour gets to the facility it still must be unloaded, so the ½ hr per truck time to unload should not be counted as an extra cost. The 400 tons of flour would take 20 hours of truck time meaning that the facility would need two to three trucks every day to unload. The American Transportation Research Institute in 2017 said it costs $66.65 per hour (including driver) to operate a truck. Using that number and 20 hours of operating time per day will cost $1,333 per day, $6,665 per week, $346,580 per year. For two years until the flour mill is built that adds up to $693,160.

Nick indicated that unloading wheat will be slower – and Albany farms will be using 6 cars of wheat per day. 50% more rail cars (6 vs 4) means that the time needed to unload the cars is increased by 50% - so now it takes 30 truck hours per day. If unloading by conveyor is 20% slower than pneumatic then the hours per day are 36. This would require four or five trucks on site moving wheat. At $66.65 per hour this trucking effort costs $2,399.40 per day, $11,997 per week, $599,850 per year. If we assume the facility will have a 30 year life, with the first two years being flour transloading at $693,160 and the remaining 18 years at $599,850 ($10,797,300) per year the total amount expended over and above the rail transportation move is $11,490,460.

This is not a complete analysis. The facility will need to purchase 2 sets of pneumatic unloading and loading systems – whereas with rail to the facility they will need to purchase 1 unloading system. The costs of these systems vary so much by specification a comparison in this case is difficult to determine. Additional costs will continue to reoccur as systems wear and need to be repaired or replaced. With a rail unloading system the wear still happens, but there is half the amount of equipment to maintain.

Another unquantified cost is the cost of moving cars around. If cars are in the way and need to be moved – the railroad charges for that switching service. That cost is also difficult to quantify. If Industrial Park increases its base of customers, the conflicts will become more frequent and more difficult to resolve – costing additional switching fees.

Another uncertainty is the ramp up to operating for Albany Farms vs the construction schedule for the project. It may be that Albany Farms starts production before the project is completed, meaning the flour will need to come to Belle Fourche by truck or a combination of truck/rail. In that case over the same 20 years of analysis the benefit increases slightly because all if not most of the transportation savings are related to the wheat move instead of the initial flour move.

Since the cost to rail the products to Belle Fourche are the same in either case the benefits are not reduced because of rail transportation for the transloading evaluation. The cost structure for the systems needed to unload a rail car at the facility vs unloading railcars and transloading to trucks is uncertain. The systems for unloading a truck vs unloading a rail car may be different with different capacities, capabilities, maintenance, purchase costs, installation, and operating costs. The cost and capability of a system installed in a facility will likely be different than a system designed to load trucks. It is difficult to make a meaningful comparison. This benefit discussion reinforces the common assumption that transloading increases costs. The cost of the project is $1.7 million and the calculated benefit is $11.5 million so the benefit cost ratio is 6.7:1. This benefit number does not take into account the discounting for future benefits or costs and does not include other benefits such as pollutants, safety benefits and wear on the roads.

Please note this analysis is for 20 years instead of the usual 30 – while the track structure will be in place and useable for 30 years or more, it is less certain if the business model for the ramen noodle factory will remain static for that long. Since the cost remains the same – for a 30 year case the benefits would increase by 50% to $17.25 million and a BCR of 10.1:1.

Proposed Responsible Party Tasked with Developing the Application

Belle Fourche Economic Development Corporation will be responsible for developing the application to be submitted to the USDOT.

Proposed Funding for Creating the Application

Belle Fourche Development Corporation will fund the development of the application to be submitted to USDOT

Attachment #3B

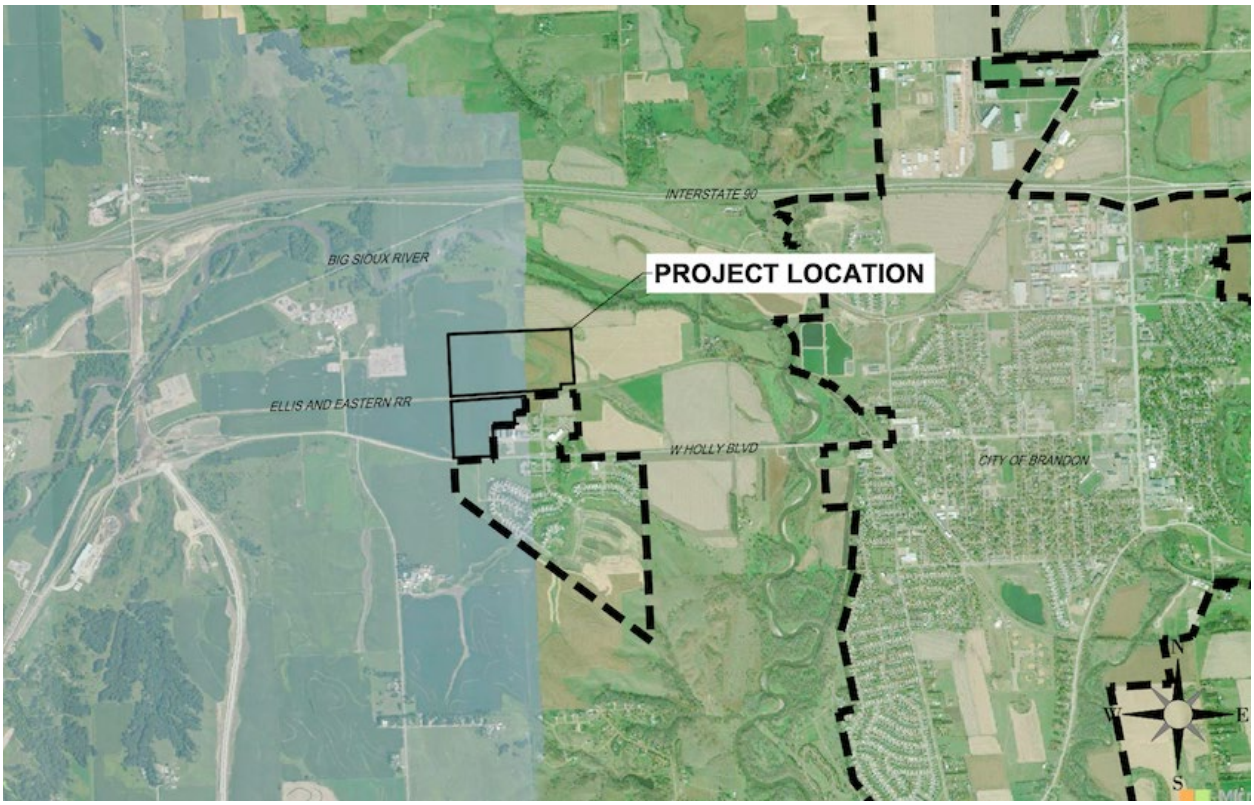
Encore Rail Park

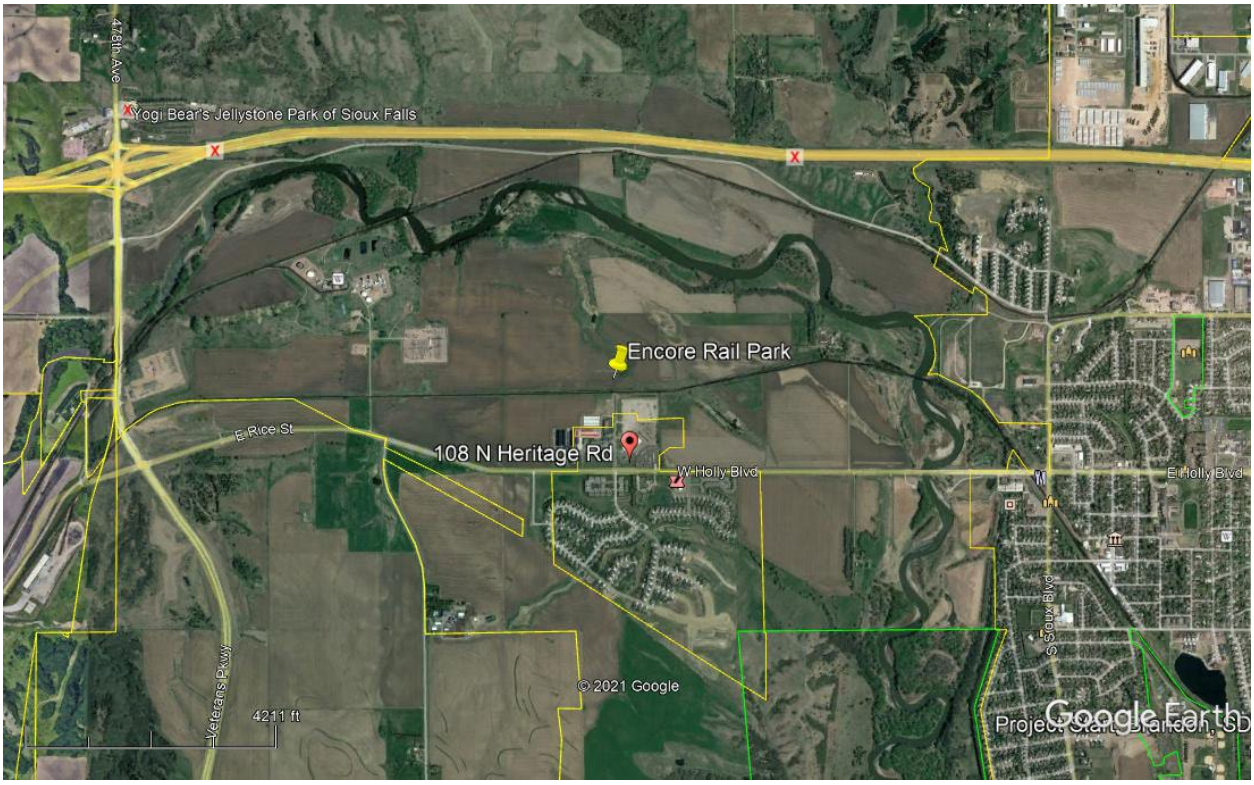
2021 SDDOT STC Grant Application

ELLIS & EASTERN CO. Sub-recipient

Project Summary, Location and Scope

This project will construct a 5121 ft siding along the Ellis and Eastern from MP 50.94 to 51.91, install 6 rail turnouts on the siding and a 948-foot siding into a new rail served industrial park. This is an all new industrial/rail park located on the West edge of Brandon, SD. Encore Rail Park was recently annexed into the City of Brandon. The location of the park is shown below:





State Rail Plan Goals

Support Economic Growth and Development

This project is a new industrial rail park located on the West edge of Brandon. The location will have great access off I-90 via Veterans Parkway Blvd. The presence of rail access will attract business that will use rail freight transportation. The Park itself supports economic growth and development and the rail sidings into the park add to that growth potential.

> "Once developed, this area will help increase our sales tax base and increase the real estate tax valuation for the school district, county, and city. The intended economic development of adding several industry rail users will boost the local economy by adding jobs and households." **Brandon Mayor, Jim Heinitz**

Ensure Connectivity for Critical Industries.

The project is located on the Ellis and Eastern Railroad. The Ellis and Eastern currently interchanges with the BNSF in Sioux Falls. Once the 2019 CRISI Grant construction is completed, Ellis and Eastern will be able to interchange traffic with the Union Pacific in Worthington, Minnesota and the BNSF at Manley, Minnesota. This ability to interchange with two Class I carriers is a huge benefit to potential shippers located in the Park and increases connectivity for both future and current shippers.

"The Sioux Falls Development Foundation works every day to build the economy and develop the region by helping to create new jobs and a strong tax base for the region. As the owner of the largest development park in the state, we realize the value of strong connectivity to major rail hubs and the importance of rail service to the region."
Bob Mundt, President/CEO, Sioux Falls Development Foundation

Maintain State Railroad Assets in a State of Good Repair

This is not a mainline rail improvement project. However, it will help the Ellis and Eastern maintain their railroad by increasing the business on the line. The increase in business increases revenue to the railroad which helps justify the capital expenditures needed to maintain and improve the railroad.

Reduce Highway Impacts

Shippers use rail because it is a less expensive alternative to truck transportation. We expect the rail park to attract industries that ship by rail. While we do not have an estimate of rail traffic generated by the Park, we expect it to be significant and to increase over time. Any traffic generated that can move freight by rail instead of truck will reduce highway impacts.

"An immediate added benefit will include having raw product brought in by rail and finished products shipped out by rail eliminating continuous heavy truck traffic through the City of Brandon."
Dennis Olson, Brandon Economic Development Director

Improve Railroad Safety, Security and Resiliency

Additional customers located on the railroad increase the traffic on the line helps justify the capital expenditures needed to improve the line. Keeping the line in good condition helps prevent service outages resulting from climate or weather events.

Benefits of the Project

The project will help attract businesses to the area (and the Rail Park) that would not otherwise consider locating in South Dakota or the Sioux Falls/Brandon area. The project will help reduce truck miles due to a modal shift to rail. The modal shift benefits to rail are well understood and common with rail projects that seek to convert trucking to rail transportation.

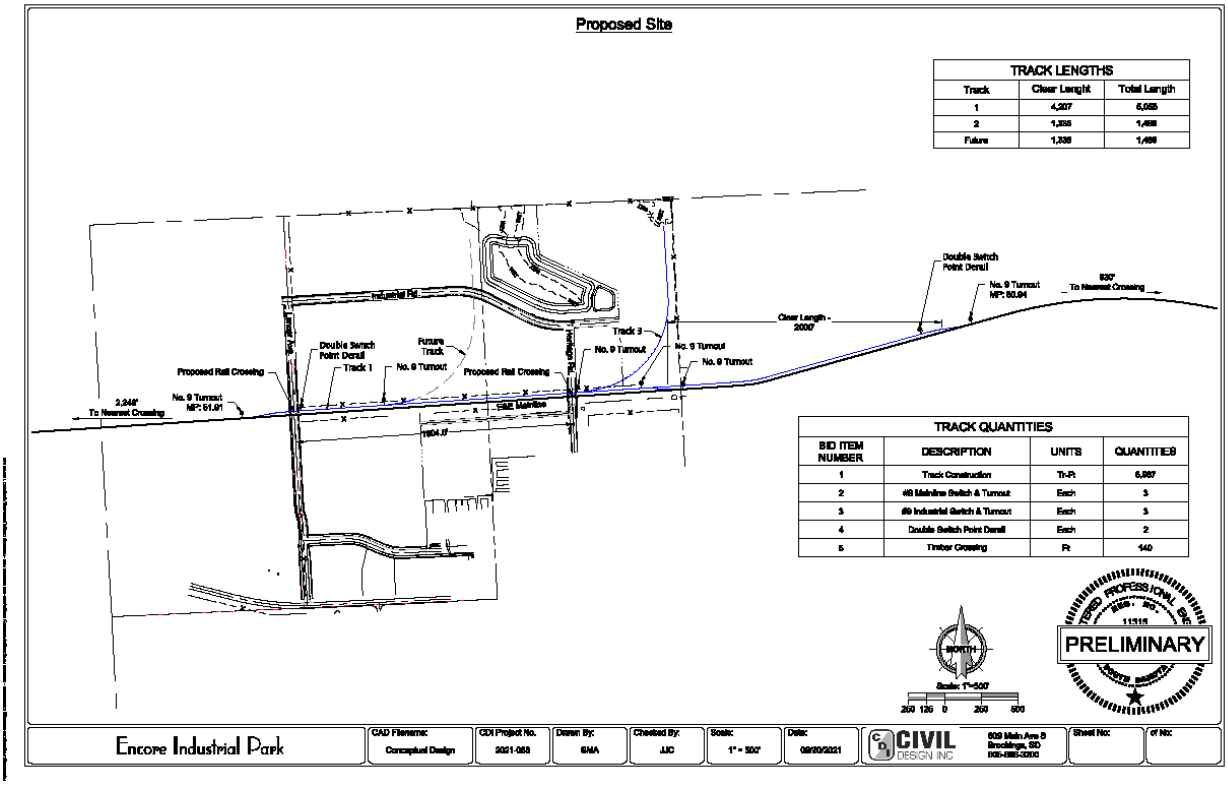
The project has wide local support. Letters of support were provided by the City of Brandon, neighboring business, Sioux Valley Electric, Brandon Economic Development Foundation, Sioux Falls Development Foundation, Sioux Metro Growth Alliance, and the City of Sioux Falls. Some letters are included in this submission – the rest will be provided at the Railroad Board meeting September 29, 2012.

The rail served business that is going into Encore Rail Industrial Park has requested any information that might identify them or the business they plan on pursuing remain confidential. This business indicated they will receive 5 cars per week from the upper Pacific Northwest. If this material is not shipped by rail, it will be trucked from the PNW. Assuming shipments come in 50 weeks out of the year that results in 250 cars per year. Those 250 railcars will replace 1000 trucks per year. The trucks will travel 1480 miles to Brandon from an assumed location in Seattle. It is unknown if the trucks can get a back haul or another load – we assumed that they will not return empty. We further assumed that the rail cars of incoming material will be attached to a longer train for much of the distance – thus incurring only incremental additional costs. We have assumed these costs (including the costs to move the cars to Brandon) to be 25% of the benefits. This 25% will be subtracted from the benefits.

1000 trucks per year x 1480 miles = 1,480,000 miles per year. At 6 mpg fuel usage is 246,666 gallons. That fuel usage will generate (246,666 x 22.46lb/gallon) 5,540,133 pounds of CO2. The value of CO2 is given $53 per metric ton. 5,540,133lbs/2000lb/ton X. 907 metric tons per ton x $53 equals $133,159 per year benefit. Over 30 years the benefit is $3,994,800. Truck drivers time is given as $30.80 hr. – 1,480,000/60mph = 24,666 hours of driving time avoided which equates to $759,733 per year, over 30 years would be $22,792,000. Truck operating costs are given as $.93 per mile (x 1,480,000 miles per year) which equates to $1,376,400 over 30 years would be $41,292,000 for a total of total of $68,078,800 reduced by 25% to account for the costs associated with rail transportation for a new benefit of $51,059,100.

There are more categories of possible benefits that were not addressed, nor is the benefit amount discounted to current dollars. Based on this value the project clearly has a positive benefit and a benefit cost ratio of 16.9:1.

Preliminary Design and Cost Detail



Encore Industrial Park
Track Construction
Preliminary Opinion of Probable Cost

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 100,000.00	$ 100,000.00
2	#9 Mainline Turnout, F&I	Each	3	$ 125,000.00	$ 375,000.00
3	#9 Industrial Turnout, F&I	Each	3	$ 75,000.00	$ 225,000.00
4	Double Switch Point Derail	Each	2	$ 20,000.00	$ 40,000.00
5	115# Track Construction	Tr-Ft	6,069	$ 175.00	$ 1,062,075.00
6	Grading	LS	1	$ 250,000.00	$ 250,000.00
7	Subballast	LS	1	$ 300,000.00	$ 300,000.00
8	Geosynthetic Fabric/Geogrid	SqYd	24,000	$ 3.50	$ 84,000.00
9	Erosion Control	LS	1	$ 10,000.00	$ 10,000.00
10	Drainage Structures	LS	1	$ 10,000.00	$ 10,000.00
11	Railroad Protective Insurance	LS	1	$ 5,000.00	$ 5,000.00
				Total:	$ 2,461,075.00

Engineering:	$ 150,000.00
Environmental Engineering:	$ 40,000.00
Contingency:	$ 369,000.00
Total Cost:	$ 3,020,075.00

Assuming USDOT notice of award by May of 2022 we anticipate construction in the summer of 2023. This timeline assumes timely turnover, responses, and approvals of environmental and project documents.

Proposed Funding

We will request pre-award authority for preliminary engineering and environmental. These costs will be included in the overall project costs. Total project costs are estimated to be $3,020,075. Ellis & Eastern Co. & Encore Park, LLC will provide the 20% match of $604,015 and the grant will provide 80% of the funding for a grant request of $2,416,060.

Project Readiness

The Encore Rail Park property is under contract is scheduled to close November 15, 2021. Final design of the park is underway. Phase I Mass Grading will commence this Fall with substantial Phase I work to be completed in 2022. Phase II will be developed as demand shows support. The rail portion of the project is standard railroad construction. This project will be constructed with standard contracting and construction practices.

Environmental Readiness

The project will need to have an environmental determination. We will start the environmental process after the award notice is posted by USDOT. The pre-award authority will allow us to begin that process prior to signing the grant agreement.

Overall Benefit

We are confident that once the park is built and operational that rail served businesses in the park will provide ample benefits that exceed the cost of the project as outlined above.

Proposed Responsible Party Tasked with Developing the Application

Ellis and Eastern will be the sub-recipient and develop the federal application to the requirements of SDDOT.

Proposed Funding for Creating the Application

Ellis & Eastern Co. and Encore Park LLC will provide the funds for the development of the application.

The following questions were brought forward from the September 29, 2021 board meeting.

- Please add details about the businesses located on the line that will use the proposed project.

The rail served business that is going into Encore Rail Industrial Park has requested information that might identify them or the business they plan on pursuing remain confidential.

- Will land acquisition be required? **The land is under contract and is scheduled to close November 15, 2021.**
- How many acres is the rail park total? **73 Acres**
- If Encore park owns this facility, why is Ellis and Eastern the proposed subrecipient of the grant? Please explain the relationship between E&E and Encore, and if Ellis and Eastern can legally be the subrecipient, please quote Federal policy to support your position.

The Encore Rail Park is owned and being developed by Encore Park, LLC. The SD DOT STC Grant sub-recipient grant applicant is the Ellis & Eastern Co. railroad. The CRISI Grant NOFO dated August 31, 2021 outlines Eligibility Information in Section C. This portion is cut and pasted below.

C. Eligibility Information
This section of the notice explains applicant eligibility, cost sharing and matching requirements, project eligibility, and project component operational independence. Applications that do not meet the requirements in this section will be ineligible for funding. Instructions for submitting eligibility information to FRA are detailed in Section D of this NOFO.
1. Eligible Applicants
The following entities are eligible applicants under this notice:
a. A State;
b. A group of States;
c. An Interstate Compact; 5
d. A public agency or publicly chartered authority established by one or more States; 6
e. A political subdivision of a State;
f. Amtrak or another rail carrier that provides Intercity Rail Passenger Transportation (as defined in 49 U.S.C. 24102);
g. A Class II railroad or Class III railroad (as those terms are defined in 49 U.S.C. 20102) or a holding company of a Class II or III railroad; 7

Ellis & Eastern Co. is a sub-recipient of a 2019 SD DOT STC grant for the Sioux Falls Bridges project. Ellis & Eastern Co. clarified the entity that qualifies to make application with their CRISI Grant FRA project manager via a phone call on October 7, 2021. Ellis & Eastern is collaborating with Encore Park, LLC to make this project possible. The entire project will be owned by Ellis & Eastern, and the vast majority will be built on the Ellis &

Eastern ROW. The spur into Encore Rail Park will be owned by Ellis & Eastern and Ellis & Eastern will have a simple land lease for the ground.

- Benefits section of the application have no monetary value.

The Benefit-Cost Analysis is included on Page 4.

Photos

Looking West

Attachment #3B

Looking Southeast

Looking North

Attachment #3C

Twin Cities & Western - Sisseton Milbank Railroad

STC Grant Application

Rail Relay Project

Project Description

This project would replace four miles of 1880's vintage 60 lb rail on the Sisseton Milbank Railroad from MP 19.3 to 23.3. This section is just north of Wilmot. This rail is the worst on the rail line. Crews fix broken rail in this area twice a week. The rest of the railroad has train speeds of 7 to 8 mph – in this section train speeds are 4 to 5 mph. Derailments are not uncommon – in 2019 9 cars derailed and tipped over. Below are some photos of this area of the railroad.

2019 Derailment

2017 Broken Rail

Vintage Rail

Project Summary

Location

The location is in Roberts County, South Dakota on the Sisseton Milbank Railroad from MP 19.3 to MP 23.3 north of Wilmot SD.

Scope

The project is to replace 4 miles of 60lb rail with new jointed 115# rail, add 2400 tons of ballast, surface the track. Preliminary engineering and environmental will be part of the scope. If the project is selected we will be requesting pre-award authority for preliminary engineering and environmental.

Schedule

Assuming USDOT award notification in May of 2022, our goal is to construct the project in the summer of 2023. This schedule assumes prompt turnaround times from all parties.

Proposed Funding

Sisseton Milbank Rail Relay

2021 STC Grant

Description	Unit	Quantity	Unit Price $	Total $
New 115# RE 80'	Ton	809.6	1405	1,137,488.00
New 115# bars	Pair	530	124.48	65,974.40
New Bolts	Keg	128	63.18	8,087.04
New Lockwashers	Each	3200	.40	1,280.00
Relay Plates	Each	25,360	8.05	204,148.00
New Track Spikes	Keg	423	85.04	35,971.92
New Anchors	Each	16,950	1.93	32,713.50
Relay Rail	Linear Ft	42240	11.00	464,640.00
Relay Mobilization	Each	1	11,500	11,500.00
Construction Subtotal				1,961,802.86
Design Engineering				50,000
Construction Engineering/Project Administration				50,000
Environmental				40,000
Contingency				60,000
Total				2,161,804.72

The estimated project cost is $2,161,804.72. Sisseton Milbank Railroad will provide 20% match of $432,360.94 and requests the remaining $1,729,443.78 from an STC grant. The project will be competitively for both materials and labor. The attached quotes were to demonstrate the basis for the estimate.

Project Readiness

The project is a simple rail replacement. This type of project is well understood from an engineering and contracting standpoint. Sisseton Milbank Railroad will design, bid and build the project as soon as possible.

Environmental Readiness

As a rail replacement project in existing right of way it is very likely this project will qualify for a Categorical Exclusion. If selected by the South Dakota Railroad Board we will request pre-award authority for preliminary engineering and environmental. Pre-award authority allows the grantee's preliminary engineering and environmental costs to be eligible for reimbursement when those costs were incurred prior to the signing of the grant agreement. The result is twofold – some costs that may not have been eligible for reimbursement will be and it allows the grantee to get a head start on the project.

Project Benefit

Currently the railroad repairs broken rail in this area twice a week. Derailments have been increasing in frequency over the past 10 years, currently happening once every year or so. Repairing this section of rail will nearly eliminate the chance of rail breakage and derailment. Repairing broken rail costs the railroad $1000 per week – this cost would be avoided with new rail.

The railroad currently averages 700 cars (263,000lb gross weight) per year of grain from the Sisseton Elevator. The elevator also acts as a truck elevator and ships grain to a rail served elevator in Graceville – 37 miles away. When the rail gets so bad that grain cannot be safely transported over this section, the elevator will ship these 700 cars per year to Graceville by truck. Because of the reduced capacity in the rail cars due to rail condition it takes four truck loads to make up for one railcar. 2800 trucks per year driving 74 miles per round trip is 207,200 extra miles per year. USDOT says truck driver time is valued at $30.80 per hour. 207,200 miles at 50mph is 4,144 hours. 4144 hours at $30.80 is $127,635 per year. Once at Graceville the truck must weigh and dump the load. Phil Deal, Wheaton Dumont Elevator manager and the overall manager of the Sisseton Elevator reports that it can take between one and four hours per truckload to unload. If we assume a 2 hour wait, that is an additional 5600 (2800 truckloads x 2 hours) hours at $30.80 per hour for wasted truck driver time for additional $172,480 per year. This cost is in addition to the driving time from Sisseton to Graceville. USDOT has a standard truck operating cost of $.93 per mile. Using that value, $193,696 is saved by not trucking this grain to Graceville. The total benefit of keeping the line in service vs allowing it to go out of service for grain movements is $493,811 per year. The railroads cost of repairing rail breaks would be eliminated - $12,000 per year. Total benefit per year is $505,811. Over 30 years the

savings would be $15.17 million less the cost of the rail move that is being replaced – the cost of the rail move is assumed to be 25% of the savings for an adjusted benefit of $11.4 million. There are other benefits such as reduced emissions, less truck crashes, less wear on the roadways.

There are other shippers on the line. A plastic film manufacturing business owned by the Sisseton-Wahpeton Oyate of the Lake Traverse Reservation receives 6 to 12 cars per month of plastic pellets. This business is located north of the proposed project. A smaller elevator in Wilmot ships a few cars per year by rail. These businesses will benefit by a project to rebuild the line to keep it open. If the project is not funded and constructed, it is likely the rail line will eventually go out of service. If the rail line ceases operation, the plastic film manufacturing business owned by the tribe will likely go out of business as well.

The benefit of $11.4 million exceeds the cost of the project at $2 million for a benefit cost ratio exceeding 5:1. This benefit cost ratio is an approximation as it does not quantify many other benefits and does not discount benefits and costs over time.

Proposed Responsible Party Tasked with Developing the Application

If selected Sisseton Milbank Railroad will develop the federal application in a format acceptable to SDDOT.

Proposed Funding for Creating the Federal Application

If selected Sisseton Milbank Railroad will fund the development of the federal application.

State Rail Plan Goals

Support Economic Growth and Development

This project will maintain rail traffic to the Sisseton Elevator and the Sisseton-Wahpeton Oyate. If this project is not completed the Sisseton-Wahpeton Oyate's plastic film business is in real jeopardy. The Sisseton Elevator will lose a grain market and become a truck only elevator.

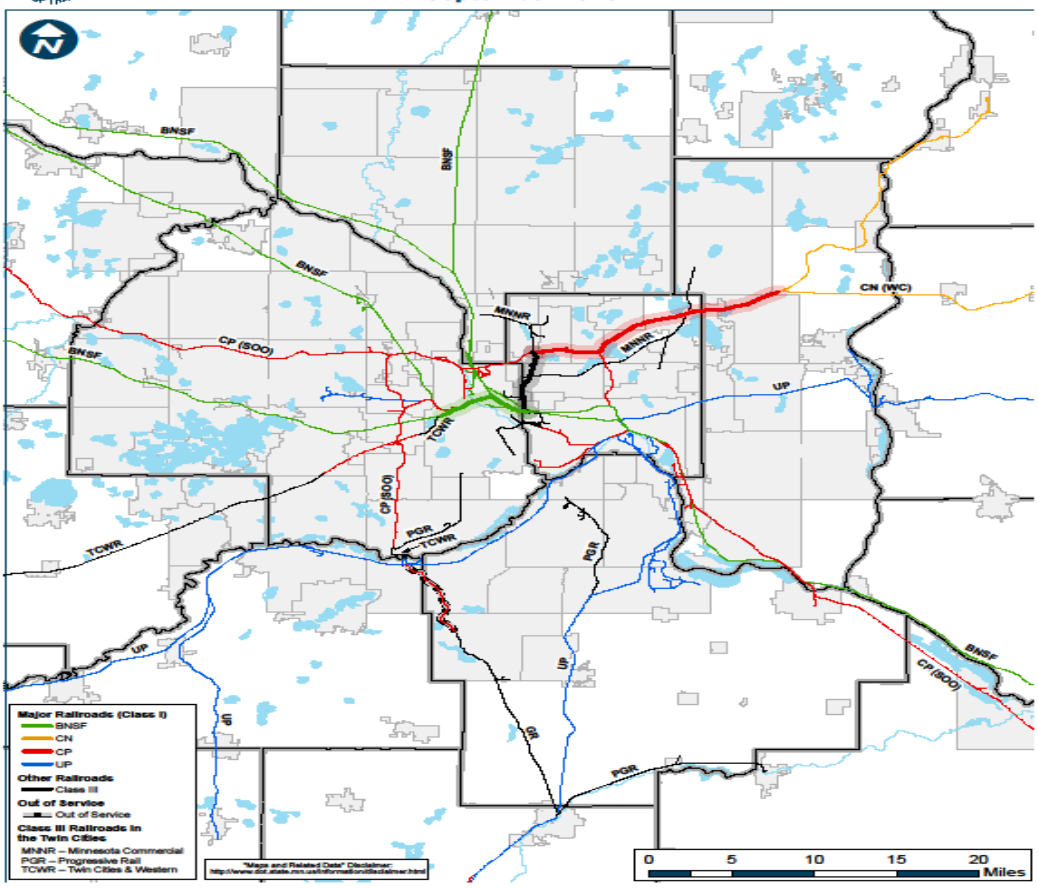
Ensure Connectivity for Critical Industries

The Sisseton Milbank can interchange with BNSF and TCWR at Milbank. The TCWR has trackage rights into the Minneapolis-St. Paul area where it can interchange with the BNSF, the Minnesota Commercial Railway, the Canadian National, the Canadian Pacific and the Union Pacific. Such interchange capability greatly expands the possible markets for shippers located on the SMRR, in particular the elevator at Sisseton. Below are maps of the Twin Cities & Western Railroad and the railroads in the Minneapolis-St Paul area.

Attachment #3C

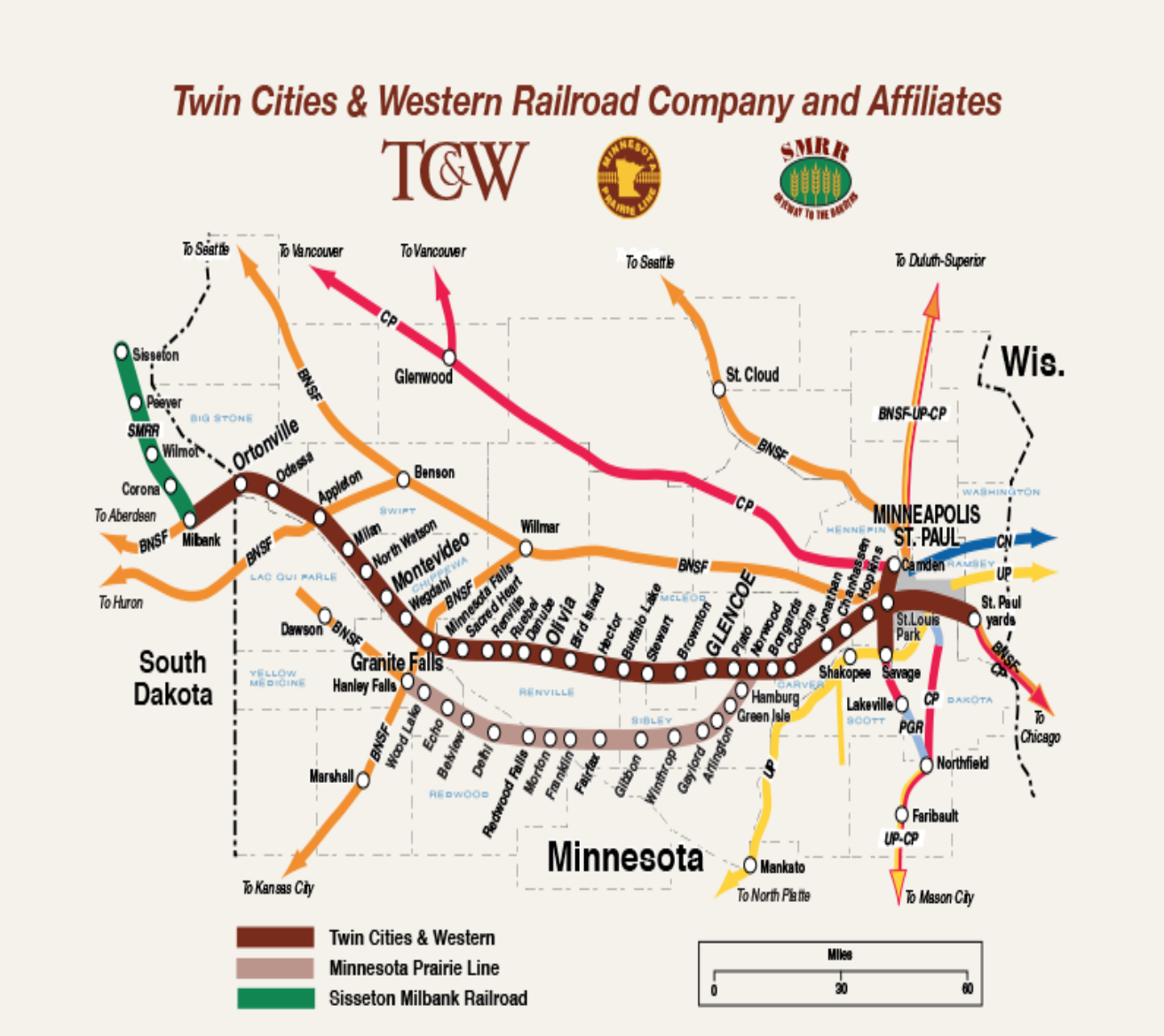
TWIN CITIES AREA FREIGHT RAILROAD MAP

Office of Freight and Commercial Vehicle Operations
September 2015



Where We Move

Customers of Twin Cities & Western Railroad Company, Minnesota Prairie Line, and Sisseton Milbank Railroad Company can connect with all Class 1 railroads serving the Twin Cities of Minneapolis and St. Paul, providing a gateway to world markets for all customers in our service territory.



Maintain State Railroad Assets in a State of Good Repair

In a previous round of STC grants the SD Railroad Board awarded the SMRR a grant to replace the Lake Farley Bridge. The replacement of this bridge was necessary to keep this line open. Likewise, this project is also necessary to keep the line open – it is the worst section of the line and continues to cause maintenance and reliability problems. If this section of the line can be replaced with this grant, it buys the railroad time to seek other grants and funding sources to upgrade the entire line.

Reduce Highway Impacts

If the project is not completed the grain now moving by rail will end up moving by truck. These additional 2800 trips and 207,200 truck miles cause additional wear on the roads and the additional miles increase the possibility of a crash.

Improve Railroad Safety, Security and Resiliency

The rail on this railroad, and in this section, is in very poor condition. It is well past its useful life – it was rolled in 1884 – it is now 137 years old. Despite having new ties installed and good surfacing and ballast the rail simply can no longer handle traffic loads. It is just old. New rail will significantly improve safety and resiliency. Because the rail is old and brittle the environmental stresses from heat and cold make it more likely to break. New rail would be far more resilient in extreme temperatures.

Material and Labor Quotes

Quotation

A&K Railroad Materials, Inc.

Quotation ID	QS-21-08681-3
Date quoted	09/20/2021
Your reference	
Customer account	000313

2134 S. 74th St.
Kansas City, KS 66106
USA
Phone 913-631-1861 Fax 913-631-1279 Email JHuenefeldt@akrailroad.com

Buyer	SISSETON MILLBANKS RAILROAD* 405 W Milbank Ave Milbank, SD 57252 1114 USA	Ship to	**SISSETON MILLBANKS RAILROAD** WILL ADVISE Milbank, SD 57252 USA

Requested by	RALPH SCHMIDT	Phone	605-432-6912	Cell phone	605-880-4005
Email	rschmidt@tcwr.net	Fax	605-432-9318		

WE THANK YOU FOR YOUR INQUIRY AND ARE PLEASED TO QUOTE AS FOLLOWS:

Quantity	Unit	Description	Price unit	AMOUNT	Ship via
809.60	NT	NEW 115RE RAIL IN 80' LENGTHS, DRILLED 3-1/2X6X6 WITH 10% SHORTS	1,405.00	1,137,488.00	89 Foot Flat Car
530.00	PR	NEW 115RE BARS TL 3-1/2X6X6 1" BOLT	124.48	65,974.40	FB-TRUCK
128.00	KG	NEW 1X6X50 BHON TRACK BOLTS WITH NUTS (25 PER KEG)	63.18	8,087.04	FB-TRUCK
3,200.00	EA	NEW 1X3/8 SQ LOCKWASHERS	0.40	1,280.00	FB-TRUCK
25,360.00	EA	RELAY 5-1/2" BASE DSTP MIN 12" PLATES	8.05	204,148.00	Gondola
423.00	KG	NEW 5/8X6X100 AREMA TRACK SPIKES	85.04	35,971.92	FB-TRUCK
16,950.00	EA	NEW 5-1/2" BASE DRIVE ON U5 UNIT ANCHORS	1.93	32,713.50	FB-TRUCK

Sales balance	Total discount	Freight charges	Total	
1,485,662.86	0.00	0.00	1,485,662.86	**USD**

Sales tax not included in quote. At time of order, sales tax will be charged in accordance with state and local tax laws.

PRICES IN MATERIAL/TRANSPORTATION SHALL BE SUBJECT TO CHANGE WITHOUT NOTICE.

All material quoted is subject to prior sale, prices quoted are valid for 7 days from date quoted.

PAYMENT TERMS 1/2% 10 Days, Net 30

AVAILABILITY All in stock unless noted

SHIPPING TERMS DAP (Buyer's Final Destination)

Quoted by _____

Jim Huenefeldt

VP Regional Sales Manager

TERMS AND CONDITIONS. This Quote is issued subject to and will be governed by the A&K Railroad Materials, Inc. Sales Order Terms and Conditions that are in effect on the date of this Quote and that can be found at www.akrailroad.com. Buyer is considered to have received and agreed to be bound by the Terms and Conditions. Please contact the Sales Person listed on this Quote if you require another copy of the Terms and Conditions.

THE OPPORTUNITY OF QUOTING IS APPRECIATED AND WE HOPE THAT WE MAY BE FAVORED WITH YOUR ORDER

PLEASE VISIT OUR WEBSITE AT WWW.AKRAILROAD.COM

Attachment #3C

MGA

MGA Railroad Construction, Inc.
47429 210th St
Aurora, SD 57002
(p) 605-690-4754, (f) 605-693-1349
mgarailroad@gmail.com

September 20, 2021

Sisseton & Milbank Railroad
Attn: Ralph Schmidt
405 W Milbank Ave
Milbank, SD 57252

2022 RAIL REPLACEMENT

Quantity	Description	Unit	Unit Cost	Subtotal
42240	RELAY OWNER FURNISHED 115 LB RAIL	PER LINEAR FT.	$ 11.00	$ 464,640.00
1	MOBILIZATION	LOT PRICE	$ 11,500.00	$ 11,500.00
			Subtotal	$ 476,140.00
			2% Excise Tax	$ 9,718.02
			TOTAL	$ 485,858.02

Proposal Notes:

- If old steel is picked up and salvaged, it should be a $40,000/mile credit for the project. This is not a part of MGA's scope of work for the project.

Brett Yoshida
President
MGA Railroad Construction, Inc.
Cell: 605-690-4754
Email: brett.mgarr@gmail.com

Ringneck & Western Railroad
Special Transportation Circumstance Grant Proposal:
Ringneck and Western Efficiency and Growth Project

The Ringneck & Western Railroad (RWRR), which began operations in May 2021, is a newly acquired rail line purchased by Watco from the State of South Dakota. The line stretches 108 miles from west of Presho east to Mitchell where the RWRR interchanges with BNSF Railway. The primary commodities hauled by the RWRR are grain, fertilizer and paper products. Customers served on the line are located across the entire railroad from Mitchell west to Presho.

The RWRR respectfully submits the following application to the South Dakota Railroad Board's call for Special Transportation Circumstance projects under the Federal Railroad Administration's Consolidated Rail Infrastructure and Safety Improvements program.

Project scope and need

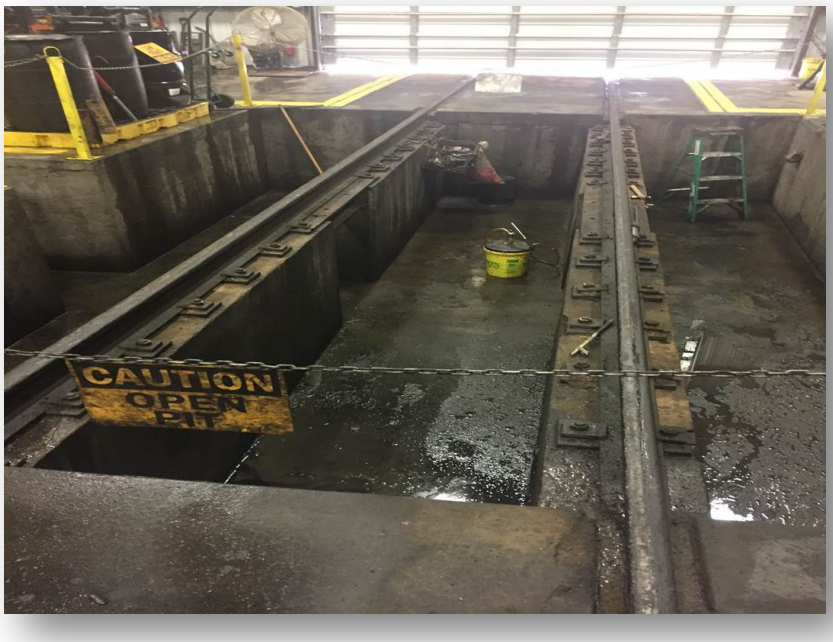
The RWRR proposes the build out of new railroad infrastructure in Plankinton located on wholly-owned railroad property at MP 395 that will improve efficiency, reduce fuel consumption, and drive new transload capacity and economic development opportunities. The proposed project includes two main components: a 558' locomotive shop track and two 1,500' transload tracks for new opportunities. Ancillary project work would include a loadout spur, access roadway for transloading, six turnouts and a maintenance pit.

Location and Scope of Work

Project is just east Plankinton, SD on property that is owned by the RWRR at the intersection of Hwy 281 and Old Hwy 16. This project scope includes all necessary engineering, permitting, labor, equipment and logistical services for installation of a rail transload facility including preliminary and detailed design, grading, sub ballast, erosion control, conflicting utilities modification; completing all rehab and track construction work, ties, ballast; and fine grading and stone placement for vehicular and transloading equipment access. The scope is further described as follows:

- Grading site including clearing, stripping, embankment, sub ballast installation and an earthen bumper.
- Obtain, manage and closeout SWPPP and NEPA permits for project including install of erosion control measures – silt fence, rock check dams and construction entrance along with any necessary coordination efforts with effected project partners.
- Construction surveying and stacking for grading and track installation activities.

- Install approximately 4,998 Track Feet of 115# jointed relay rail on new Grade 4 or Grade 5 hardwood crossties.
- Install four each AREMA Industrial #10 turnouts to be built using 115# rail, Sampson Points, Rail Bound Manganese Frog, Wood Ties, and OTM – plates, spikes, anchors, bolt/washer/nut assemblies.
- Install two each AREMA Industrial #8 turnouts to be built using 115# rail, Sampson Points, Rail Bound Manganese Frog, Wood Ties, and OTM – plates, spikes, anchors, bolt/washer/nut assemblies.
- Install 5,325 tons of ballast including tamping and regulating.
- Any pre-existing rail, ties or OTM that is removed when installing switch components, must be removed and disposed of according to all local, state and federal regulations.
- Installation of a reinforced concrete pit structure, such as the example photo under the existing fabric building on site along with adjacent concrete for use as the facility floor. The walls of the pit would also function as structural support for the rail coming into the building.
- Additional details concerning the scope of work needing to be done with each portion of the Project, will be addressed at the throughout the detailed design process and will be integrated into the project bid documents prior to construction.



The project has three main areas of benefit – first is the ability to bring in lumber by rail. We have a customer that wishes to remain confidential at this point. They are interested in bringing in five cars per week of dimensional lumber. Second is a project element that will allow us to perform locomotive maintenance in Plankinton instead of Chamberlain, and third is the ability to move rock into Plankinton for both our use and for use in others construction projects.

Schedule

Assuming federal grant award by April of 2022, the RWRR anticipates construction the summer of 2023 and project completion by the fall of 2023. The schedule depends upon the award date and

the environmental process time length. If reviews and response times are longer than anticipated the project may end up being constructed in 2024.

State Rail Plan Goals
Support Economic Growth and Development

The customer that is interested in receiving lumber by rail currently receives their lumber by truck. The ability to receive rail carloads of lumber from the Pacific Northwest (PNW) will significantly reduce material costs and allows the customer to both grow their business and increase profits.

The reduction in crew time and locomotive down time for routine maintenance that would occur if the RWRR performed out maintenance in Plankinton reduces our costs. This reduction in cost makes the railroad more efficient and allows us to serve its customers with less of a cost overhead.

The ability to receive aggregate by rail not only helps RWRR save money (they receive about 1,000 tons per month) but will allow them to receive aggregate for other customers – including contractors working on local and state projects.

Ensure Connectivity for Critical Industries

Agriculture is the biggest industry in the state, and grain elevators are our biggest customers. This project will help us become more efficient. This efficiency allows the railroad to be more resilient in the event of weather or climate related service disruptions. Since our biggest customer is the agriculture industry, our ability to respond quickly is a benefit to this critical industry.

Maintain State Railroad Assets in a State of Good Repair

This project is not directly related to mainline condition. However, the increased efficiency afforded by this project will benefit the railroad which will help us afford to invest in the mainline. For example, lower cost ballast will allow the railroad to place more ballast than we might have done otherwise.

Reduce Highway Impacts

The lumber that is currently being trucked in from the PNW would no longer be shipped that 1,100 miles on the highway. The rock currently being trucked from Spenser could come from Dell Rapids via rail. This reduction in truck traffic has a definite positive impact to the roadway, energy use, emissions, and safety. Please see the section on benefits for more details.

Improve Railroad Safety, Security and Resiliency

Today, the RWRR operates four locomotives that are maintained in Chamberlain at MP 440.5. Upon start up, the team found an old, out-of-service locomotive pit, which we cleaned up and restored for temporary use. This is the only place designated on the RWRR for locomotive maintenance today. The pit is exposed to the elements and not as properly functional as the new proposed locomotive shop (using an existing building) and pit, which would allow the RWRR team to control for environmental risks, hazmat and the safety of the mechanical team. TheChamberlain location is 66 miles from interchange taking two crews more than 12 hours round trip to do routine maintenance, 92-day inspections and any other issue that arises in keeping its power safely operating. With the build out on a new locomotive maintenance track, existing building converted to a locomotive shed and new locomotive maintenance pit in Plankinton, the railroad will optimize its locomotive use, improve safety, reduce risk, as well as save on crew hours and fuel.

The transload track design allows for appropriate equipment
access to various railcar types for the transloading from truck to railcar and vice versa.

The railroad does not envision these transload tracks to be used for long-term storage opportunities but instead if a current RWRR customer needs a storage solution only on a short-term basis on a space available basis. The proposed transload tracks are primarily for carload growth opportunities.

Benefits to moving locomotive repair and maintenance to Plankinton includes but is not limited to the following:

- Risk reduction: shortening the average trip the locomotives must take for routine maintenance or repair, reduces the miles traveled across class 1 track speed and exposure to 38 public and five private at-grade highway/rail crossings.
- Improve efficiency/flexibility: the RWRR is a nimble railroad that responds to customer needs as they arise. The proposed closer location for locomotive repair allows for the railroad to more quickly serve customers closer to interchange.
- Crew cost savings: reduces crew needs from two to one crew when routine maintenance or repair is needed due to reduced travel times: 6/7 hours > 2.5 hours.
- Mechanical team safety: a new, state-of-the-art locomotive pit in a controlled environment will improve the team's exposure to the elements and allow for hazmat handling.

Project Costs & Local Match

Total project costs are $2,998,348.39. Watco will provide 40 percent local match of $1,199,339.36 and requests a STC grant in the amount of $1,799,009.03. A cost breakdown is attached.

Project Readiness

The project is a standard railroad project and is well understood from an engineering and construction standpoint. Watco requests that preliminary and final engineering expenses be eligible for reimbursement under pre-award authority.

Environmental Readiness

Environmental work will begin upon notice of award by USDOT. Watco requests that environmental expenses be eligible for reimbursement under pre-award authority. We believe this project will qualify for a categorical exclusion.

Overall Project Benefits

There are three areas of benefits. The first is the relocation of locomotive maintenance activities from Chamberlain to Plankinton. The second is a modal shift from truck to rail for five cars per week of lumber originating in the PNW. There is only incremental modal shift with new aggregate business.

Locomotive Maintenance

The RWRR burns roughly 250 gallons of diesel on one run from Mitchell to the current locomotive maintenance area in Chamberlain (over 66 miles) at 10 mph. Round trip is 500 gallons. The RWRR averages three of these trips monthly. The proposed locomotive maintenance shed and track in Plankinton is 21 miles from interchange at Mitchell, a roughly 2.5 hour trip one way. The RWRR anticipates 100 gallons of diesel for that 21 mile one-way trip. The railroad would save 300 gallons of diesel each round trip for routine locomotive maintenance if the locomotive shop were in Plankinton instead of Chamberlain. Overall, that is a savings of 10,800 gallons of diesel ayear.

Not burning 10,800 gallons eliminates 110 metric tons of carbon emissions per year. That carbon emission savings has a value of $53 per metric ton for a benefit of $5,800 per year – over 30 years that benefit adds up to $174,000. The value of the fuel is also saved – at $3 per gallon $32,400 per year - $972,000 over 30 years. Crew time savings 4.5 hours per trip, three trips per month, $50 per hour for the crew time equals $8,100 per year or $243,000 over 30 years.

Lumber Transload

Plankinton is located on the RWRR between interchange at Mitchell and its western terminus at Presho. With the build out of two 1,500’ transload tracks, the RWRR team sees opportunities to grow carload business by converting current truck traffic to rail. These two proposed transload

tracks will be able to hold 25 railcars each. While the railroad is not able to divulge confidential business information, the RWRR is excited to share that we are courting new lumber traffic, as well as aggregate and grain business.

The modal shift from truck to rail for the lumber is significant. The customer indicated they could use five cars per week of lumber – that is 20 cars per month or 240 cars per year. Those 240 railcars will replace 1,200 trucks per year. The trucks travel 1,100 miles to Plankinton from an assumed located in the middle of PNW lumber country. It is unknown if the trucks can get a back haul or another load – we assumed that they will not return empty. We further assumed that the rail cars of lumber coming in will be attached to a longer train – thus incurring only incremental additional costs. We have assumed these costs (including the RWRR costs to move the cars to Plankinton) to be 25% of the benefits.

Twelve hundred trucks per year x 1,100 miles = 1,320,000 miles per year. At six miles per gallon fuel usage is 220,000 gallons. That fuel usage will generate (220,000 x 22.46lb/gallon) 4,941,200 pounds of CO_2. The value of CO_2 is given $53 per metric ton. 4,941,200 lbs/2,000lb/ton x 907 metric tons per ton equals $118,764 per year benefit. Over 30 years, the benefit is $3,562,926. Truck drivers time is given as $30.80/hr – 1,320,000/60mph = 22,000 hours of driving time avoided, which equates to $677,600 per year, over 30 years would be $21,555,600. Truck operating costs are given as $.93 per mile, which equates to $1,227,600 over 30 years would be $36,828,000. The total of $61,946,000 should be reduced by 25% to account for the costs associated with rail transportation for a new benefit of $46,460,000.

Benefit Cost Ratio

Since the benefit is larger than the cost of the project, the project has a positive cost benefit. Comparing thebenefit to cost $46.4 million/$2.9 million we get a BCR of 16. Please note costs and benefits havenot been discounted for time.

Proposed Responsible Party Tasked with Developing the Application

Watco will develop the CRISI application for submittal to USDOT. Watco will work with SDDOT to develop the application in a format that meets the needs of SDDOT.

Proposed Funding for Creating the Application

Watco will be responsible for funding the federal project application if selected.

RWRR Point of Contact:

Kley Cameron
General Manager
575-964-4358
Kley.Cameron@watco.com

Attachment #3D

CAPACITY - PROPOSED REVISION 3 BUILDOUT

LOCATION	CONSTRUCTION LENGTH	CAPACITY LENGTH	CAPACITY 60' CAR
TRANSLOAD TRACK 1	2174	1500	25
TRANSLOAD TRACK 2	1930	1500	25
AGGREGATE LOADING TRACK	336		
LOCOMOTIVE SHOP LEAD	558		
TOTAL	4998		50

NOTES:
ALL PROPOSED TURNOUTS DEPICTED ARE NO. 10 EXCEPT TURNOUTS 3 & 4 ARE NO. 8.
TRACK QUANTITIES EXCLUDE TRACK WITHIN TURNOUTS.
MAXIMUM 10 DEGREE CURVES.
EARTHEN BUMPERS REQUIRED AT ENDS OF ALL STUB ENDED TRACKS.

LEGEND

- PROPOSED TRACK
- EXISTING TRACK
- ACCESS ROADWAY
- PROPOSED TURNOUT
- CE> EXISTING
- (P) PROPOSED

(P) CROSSING - 56 LF WOOD PANEL
(P) ACCESS ROADWAY 9957 SY
(P) CROSSING - 112 LF WOOD PANEL
(P) WCR BUMPING POST
(P) LOCOMOTIVE SERVICE PIT - PRECAST OLD CASTLE OR EQV
(P) LOCOMOTIVE SHOP LEAD
FABRIC BUILDING - 40' X
(P) EARTHEN BUMPER
(P) AGGREGATE LOADING TRACK
(E) OVERHEAD POWER
(P) CROSSING - 80 LF WOOD PANEL
(E) RWRR MAINLINE
(P) TRANSLOAD TRACK 2
(P) TRANSLOAD TRACK 1
CE> 40' ROAD CROSSING
OLD HWY 16
36.00'
28.00'
15.00'
80.00'
1
2
3
4
5
6

GRAPHIC SCALE: 100' 0 50' 100' 200' — 1" = 100'

REV	DATE	DESCRIPTION	APP

3/4

INFORMATION CONFIDENTIALITY: ALL PLANS, DRAWINGS, SPECIFICATIONS AND/OR INFORMATION HEREWITH SHALL BE THE PROPERTY OF WATCO AND SHALL BE HELD IN CONFIDENTIAL AND SHALL NOT BE USED FOR ANY PURPOSE NOT PROVIDED FOR IN AGREEMENTS WITH WATCO.

DESIGNED BY	JRW
DRAWN BY	JRW
CHECKED BY	ORW
APPROVED BY	JLW
DATE	9/17/21

WATCO

RINGNECK & WESTERN RAILROAD

WATCO
PLANKINTON, SD
RWRR STORAGE YARD BUILDOUT

CONTRACT NO.	21.156
DRAWING NO.	PLAN
REVISION	REV-03
SHEET NO.	001
SCALE	AS SHOWN

WATCO

Attachment #3D

Pay Item	21-156_RWRR_Locomotive_Facility (IV.xlsm)					Pay Item No1	Notes
	Original Pricing Date 9/15/21			Revised Pricing Date	9/16/21		
	Description	Quantity	Unit	Unit Price	Total		
	Site Work				$ 718,420.57		Site Work
	BASE COURSE				$ 103,472.00		
1	Subballast Installed only pricing	12934	TN	$8.00	$ 103,472.00	1	
	CLEARING				$ 32,332.50		
2	Strip Topsoil	21555	SY	$1.50	$ 32,332.50	2	Strip topsoil and place in existing borrow pit
	CUT TO FILL- BASIC				$ 123,112.00		
3	Earthen Bumpers	2	EA	$1,200.00	$ 2,400.00	3	use subballast material for bumpers
4	Borrow Excavation (on site source)	15089	CY	$8.00	$ 120,712.00	4	Borrow from on site pit - average haul 1k lf - quantity is in place measure
	DRAINAGE				$ 24,500.00		
5	24" CMP - double riveted and coated	140	LF	$175.00	$ 24,500.00	5	Pipe to be bedded and material to be polymer coated.
	EROSION CONTROL				$ 41,550.00		
6	Grassing - SD DOT Spec	4	AC	$4,500.00	$ 18,000.00	6	Grassing includes shoulders and pit area
7	Rock Check Dams	4	EA	$1,200.00	$ 4,800.00	7	rock check dams at outfall structures to prevent silt from leaving project site
8	Silt Fence	2500	LF	$7.50	$ 18,750.00	8	silt fence on perimeter of site
	MAINTENANCE				$ 88,265.00		
9	Locomotive maint Pit	1	LS	$88,265.00	$ 88,265.00	9	Item Quoted by Matlock Construction
	Addl. Site Work & Site Work-Mobilization				$ 305,189.07		
10	Site Work	12,933	TN	$ 22.00	$ 284,527.47	10	
11	Site Work-Mobilization	5%	PCT	$ 413,232.00	$ 20,661.60	11	
	Track Work				$ 1,454,457.00		
	Turn Outs / Switches				$ 384,984.00		
12	Material - AREMA Industrial 115RE #10 w/ SM points W/ Solid Mang Self Guarded frog All Rail and OTM - 2 Right Hand-2 Left Hand W/ Hard Wood SW Pack Ties W/ 36EH Switch Stand	4	Ea	$ 48,503.25	$ 194,013.00	12	
13	Labor- Assemble, Install, Ballast and Tamp to Completion	4	Ea	$ 18,500.00	$ 74,000.00	13	
14	Material - AREMA Industrial 115RE #8 w/ SM points W / Solid Mang Self Guarded frog All Rail and OTM - 0 Right Hand-2 Left Hand W/ Hard Wood SW Pack Ties W/ 36EH Switch Stand	2	Ea	$ 41,985.50	$ 83,971.00	14	
15	Labor- Assemble, Install, Ballast and Tamp to Completion	2	Ea	$ 16,500.00	$ 33,000.00	15	
	Derails				$ 1,900.00		
16	Material - 1st listed T/O 1RH 1LH-Flop Over Derail No Stand	2	Ea	$ 950.00	$ 1,900.00	16	
	Track				$ 709,802.00		
17	Material - Rail 115RE 39 FT-Joints-New 7x9x8'6" IG Crossties--DS 12inch Tie Plates-Kegs Spikes-Rail Anchors-1x6 Track Bolts-1 Inch Lock Washers	4998	TF	$ 107.02	$ 534,872.00	17	
18	- Labor To Construct Track -	4998	TF	$ 35.00	$ 174,930.00	18	
	RR Ballast				$ 159,727.00		
19	Ballast with Loading and Freight	5325	NT	$ 30.00	$ 159,727.00	19	
	Road Crossing				$ 198,044.00		
20	Material-Wood Panel-115RE Rail-9 Foot Ties-Plates Panadrol with E clips-Spikes Screw --Field weld - W/ Labor Welds--Tons of Ballast--	245	Ea	$ 434.11	$ 106,356.00	20	
21	Labor-	245	Ea	$ 374.24	$ 91,688.00	21	
	Direct Construction Costs				$ 2,172,877.57		
				Site Work	$ 718,420.57		
				Track Work	$ 1,454,457.00		
	Indirect Costs				$ 510,403.51		
	Contingency (Site, Rail & Civil Only)	20%		$ 2,172,877.57	$ 434,575.51		
	Tax - On material only (see exclusion #11)	4.0%		$ 1,895,700.00	$ 75,828.00		
	Engineering & Project Management				$ 315,067.31		
	Design (Engineering)	1	L.S.	$ 206,423.41	$ 206,423.41		$150k for NEPA and SWPPP Permitting Processes
	IL/GL - Project Management	1	L.S.	$ 108,643.90	$ 108,643.90		

	See Exclusions or Special Conditions Below		Totals	$ 2,998,348.39
	Tax on labor not included	Direct Construction Costs		$ 2,172,877.57
		Indirect Costs		$ 510,403.51
		Engineering & Project Management		$ 315,067.31

	Exclusions or Special Conditions		Exclusions or Special Conditions
1	Based on 10% Drawing	11	(Taxable Labor not Included)
2	Need Site Survey	12	Prices may vary with Steel Tariffs and the Current Steel Market
3	No utility pricing is included.	13	Tie prices may vary with the volatility of the Wood Market
4	No Bond is included - Add 1.5% for bond.	14	
5	No lighting is included.	15	
6	No Geotech information is provided at time of proposal. Pricing assumes onsite material is suitable for borrow fill.	16	
7	No conflict from existing utilities is anticipated in this proposal. One call should be made to verify conflict.	17	

Attachment #3E

D & I Railroad

Mainline Rail Replacement Project

October 20, 2021

CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

The D & I Railroad Main Line Rail Replacement Project (the Project) will improve railroad **safety, efficiency, capacity, and reliability** on a railroad line that is critical to the success of local economies and the national and global reach and competitiveness of communities in rural eastern South Dakota and northwestern Iowa. Significant freight shipments originate or terminate on this rural railroad line, and consist of aggregates, ethanol, corn oil, cement, chemicals, agricultural products, construction materials, and plastics. ***The majority of this vital railroad line includes several miles of legacy jointed rail on the main line that is approaching 100 years of age.*** The safety, efficiency, capacity, and reliability of present-day railroad operations on the line are affected by the timeworn main line rail nearing the end of its useful life. These impacts have caused temporary speed restrictions (slow orders) to appear more frequently, despite recent concerted maintenance and capital investment by the D & I Railroad. Safety improvements at 8 grade crossings are included in the project.

The State of South Dakota is an eligible recipient for STC grant funds. The State will serve as the lead applicant for the grant funding and the South Dakota Department of Transportation (SDDOT) will be the agency managing any grant funds received from the Federal Railroad Administration (FRA). The project's Applicant is the D & I Railroad (D & I) along with support from shippers on the line. These parties are also contributing time and resources towards the development of this STC grant application. Public-private partnerships, such as this one, demonstrate an innovative approach that allows multiple stakeholders to cooperate on and deliver projects more efficiently, cost effectively, and with less federal funding required. The above-named parties are committed to delivering the Project and will contribute toward the Project as detailed in Section 2.0

The primary purpose of the Project is to enhance freight railroad infrastructure to maintain the rural economy of a large geographic area in eastern South Dakota and northwest Iowa. Ancillary benefits generated by the Project are improved railroad operation from the replacement of legacy main track rail as well as a reduction in derailment exposure and likelihood by providing safer and more reliable railroad infrastructure. This railroad line is vital to the operation and future growth for many rural shippers.

1.0 PROJECT SUMMARY

The proposed project contains 2 parts. First, to replace 5.8 miles of existing 100 lb/yd jointed rail with 115 lb/yd ribbon rail located in South Dakota on the D & I Sioux Valley Subdivision from MP 29.86 to MP 35.66.

Secondly; to replace existing 1.7 miles of existing 100 lb/yd jointed rail with 115 lb/yd ribbon rail located in Iowa, also on the D & I Sioux Valley Subdivision from MP 35.66 to MP 37.0 (1.66 miles) and, MP 28.6 to MP 28.24 (.34 miles).

This proposal provides full utilization of a standard 7.5-mile train of 115 lb/yd ribbon rail and replaces worn out legacy rail on a track segment integral to hazmat shipments.

Figure 1: D & I Ethanol Train at Hawarden, Iowa

The jointed rail to be replaced is nearing the end of its useful life and is on a track segment that is integral to the hazmat shipments on the lines. The rail line serves a major aggregates producer, L.G. Everist, two ethanol shippers, a cement terminal, and several transload customers and facilities. Continued degradation or loss of railroad service will be detrimental to these industries. These improvements are needed to solve lingering legacy infrastructure issues, to preserve and enhance capacity, rail access, multimodal connectivity, and interchange connections with three Class I railroads (BNSF Railway, Canadian National Railway, and Union Pacific Railroad), and to accommodate future growth in economic and industrial development in the rural Siouxland region.

Assuming approval of the STC grant in midyear 2022, construction of the Project will begin in the spring of 2023 and be completed by the end of 2023. Overall, the Project will have an immediate positive impact on this rural area and the industries that rely on this vital link to the national freight rail network and global marketplace.

1.1 Challenges Addressed by the Project

The Project will improve railroad **safety, efficiency, capacity, and reliability** of the railroad line in rural south eastern South Dakota and northwestern Iowa. Most of the carloads originate on the railroad line, and consist of unit volumes of aggregate and ethanol, and carload volumes of chemicals, agricultural products, construction materials, and plastics. ***The majority of the infrastructure on this railroad line is a relic of the past, including several miles of existing main line jointed rail that is nearing 100 years of age and the end of its useful life.*** Temporary speed restrictions (slow orders) appear more frequently, despite the continued maintenance and capital investment made by D & I.

The purpose of the Project is to maintain freight railroad access to this robust, rural economy located in eastern South Dakota and northwestern Iowa. **Reliability** is key to the industries, businesses, and customers utilizing this railroad line. Maintaining the existing railroad line to a state of good repair is paramount to preserving and achieving economic and industrial growth in this rural area. The proposed Project improvements will enhance overall service reliability, safety and operational efficiencies.

The aging and worn-out main line rail also increases potential derailment exposure, further putting the railroad, its users, and communities at risk. The proposed Project improvements will replace some of the railroad line's oldest and most worn-out sections of main line rail, which will allow for **safer** railroad operations due to reductions in potential derailment exposure.

1.2 Grade Crossing Improvements and Information

The D & I Project includes upgrades to grade crossing components. Seven rural crossings and 1 farm crossing will receive plank and hardware improvements in the rail relay project element.

1.3 Performance Measures

As the applicant for and potential recipient of STC funds, SDDOT understands that the USDOT may establish performance measures for the D & I Main Line Rail Replacement Project in order to assess progress in achieving strategic goals and objectives. The D & I understands that USDOT, through the SDDOT, may require it to periodically report information related to such performance measures. Potential performance measures for the Project would be confirmed through coordination with USDOT after award of STC funds to SDDOT.

2.0 PROJECT FUNDING

2.1 Main Line Rail Replacement (Sioux Valley Subdivision)

The Project represents a significant transportation infrastructure investment to provide enhanced service performance and reliability for this rural freight railroad line primarily serving SD originations and terminations. $5,252,190 is the total project cost estimate; $3,997,520 in South Dakota and $1,264,670 in Iowa. The D & I will contribute $799,504 thousand toward the $3.99 million construction cost for Task 1 (South Dakota), and SD State Rail Trust funding of a grant or loan of $1,264,670 for Task 2 (Iowa portion of Project). The $3.2 million request for STC funds would provide the remaining project funding needed to construct the Project. Project funding sources are presented in the following tables.

Task No.	Task Name/ Project Component	Cost	Percentage of Total Cost
1	**South Dakota Main Line Track Rail Replacement (5.8 miles)**	**$3,997,520**	**100%**
	Total Project Cost	**$3,997,520**	**100%**
Federal Funds Received from Previous Grant		$0	N/A
STC Federal Funding Request		$3,198,016	*80%*
Non-Federal Funding/Match		$799,504 *Cash: $799,504* *In-Kind: $0*	*20%*
Portion of Non-Federal Funding from the Private Sector		$799,504	*20%*
Portion of Total Project Costs Spent in a Rural Area		$3,997,520	*100%*
Pending Federal Funding Request		$0	N/A

The funding breakdown consists of an “80/20” funding package for the $3.99 million project as supported by the following public-private partnership:

- $3.19 million STC Grant by the Federal Railroad Administration (FRA)
- $799 thousand from D & I Railroad

Task No.	Task Name/ Project Component	Cost	Percentage of Total Cost
2	**Iowa Main Line Track Rail Replacement (1.7 miles)**	**$1,264,670**	**100%**
	Total Project Cost	**$1,264,670**	**100%**
Rail Trust Fund Grant or Loan		$1,264,670	*100%*
Pending Federal Funding Request		$0	N/A

D&I Railroad

Attachment #3E

Rail Rehabilitation - Milepost 29.86 to 35.66

Preliminary Opinion of Probable Cost

South Dakota Rail Replacement Project

Materials Only

Item	Description	Unit	Quantity	Unit Price	Total
1	115lb CWR	Tons	1,225	$ 1,400.00	$ 1,715,000.00
2	Tie Plates	Each	40,000	$ 14.00	$ 560,000.00
3	Anchors (115 Lb)	Each	40,000	$ 2.00	$ 80,000.00
4	Rail Spikes - 50Lb Kegs	Kegs	1,800	$ 80.00	$ 144,000.00
5	6"x8"x8'-6" Grade 3 Ties	Each	200	$ 55.00	$ 11,000.00
6	7"x9"x10'-0" Grade Ties	Each	240	$ 85.00	$ 20,400.00
7	Timber Crossing Planks	Tr-Ft	216	$ 180.00	$ 38,880.00
8	12" Crossing Lags	Each	760	$ 4.00	$ 3,040.00
9	Weld Kits (115Lb)	Each	60	$ 165.00	$ 9,900.00
				Total Materials:	$ 2,582,220.00

Labor Only

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 100,000.00	$ 100,000.00
2	Rail Relay	Tr-Ft	30,700	$ 20.00	$ 614,000.00
3	Skew Tie Correction	Tr-Ft	30,700	$ 1.00	$ 30,700.00
4	Tie Replacement	Each	200	$ 42.00	$ 8,400.00
5	Ballast	Ton	2,000	$ 30.00	$ 60,000.00
6	Surfacing	Tr-Mi	5.8	$ 5,000.00	$ 29,000.00
7	Timber Crossing Reconstruction	Tr-Ft	216	$ 200.00	$ 43,200.00
8	Traffic Control	LS	1	$ 10,000.00	$ 10,000.00
9	Rail Train Unloading	LS	1	$ 20,000.00	$ 20,000.00
10	Bonding	LS	1	$ 15,000.00	$ 15,000.00
11	Railroad Protective Insurance	LS	1	$ 8,000.00	$ 8,000.00
				Total Labor:	$ 938,300.00

Total Constructi	$ 3,520,520.00
Contingency:	$ 352,000.00
Engineering:	$ 125,000.00
Total Project Cost:	**$ 3,997,520.00**

D&I Railroad

Attachment #3E

MP 28.24 to MP 28.6 and MP 35.66 to MP 37.0

Iowa Rail Replacement Project

Preliminary Opinion of Probable Cost

Materials Only

Item	Description	Unit	Quantity	Unit Price	Total
1	115lb CWR	Tons	310	$ 1,400.00	$ 434,000.00
2	Tie Plates	Each	15,000	$ 14.00	$ 210,000.00
3	Anchors (115 Lb)	Each	20,000	$ 2.00	$ 40,000.00
4	Rail Spikes - 50Lb Kegs	Kegs	700	$ 80.00	$ 56,000.00
5	6"x8"x8'-6" Grade 3 Ties	Each	200	$ 55.00	$ 11,000.00
6	7"x9"x10'-0" Grade Ties	Each	20	$ 85.00	$ 1,700.00
7	Timber Crossing Planks	Tr-Ft	16	$ 180.00	$ 2,880.00
8	12" Crossing Lags	Each	60	$ 4.00	$ 240.00
9	Weld Kits (115Lb)	Each	30	$ 165.00	$ 4,950.00
				Total Materials:	$ 760,770.00

Labor Only

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 100,000.00	$ 100,000.00
2	Rail Relay	Tr-Ft	9,300	$ 20.00	$ 186,000.00
3	Skew Tie Correction	Tr-Ft	9,300	$ 1.00	$ 9,300.00
4	Tie Replacement	Each	200	$ 42.00	$ 8,400.00
5	Ballast	Ton	600	$ 30.00	$ 18,000.00
6	Surfacing	Tr-Mi	1.7	$ 5,000.00	$ 8,500.00
7	Timber Crossing Reconstruction	Tr-Ft	16	$ 200.00	$ 3,200.00
8	Traffic Control	LS	1	$ 2,500.00	$ 2,500.00
9	Rail Train Unloading	LS	1	$ 5,000.00	$ 5,000.00
10	Bonding	LS	1	$ 5,000.00	$ 5,000.00
11	Railroad Protective Insurance	LS	1	$ 2,000.00	$ 2,000.00
				Total Labor:	$ 347,900.00

Total Constructi	$ 1,108,670.00
Contingency:	$ 111,000.00
Engineering:	$ 45,000.00
Total Project Cost:	**$ 1,264,670.00**

3.0 BENEFIT COST ANALYSIS

The cost effectiveness of the Project's proposed improvements was measured by conducting a Benefit-Cost Analysis (BCA). The main line rail improvements constructed under the Project will provide many quantifiable benefits to railroad operations, rail shippers, and the public. Non-quantifiable benefits of the grade crossing improvements, increased safety and reliability to users, patrons and public along the rail line are not included in the monetized benefits explained below:

- **Annual avoided train crew costs and train delay due to improved running times - $83.2 thousand per year**
    - Due to existing temporary slow orders, the main line within the Project Area has been operating at a slower track speed temporarily. The Project would eliminate these temporary slow orders and return the main track back to its original timetable speed.
- **Annual reduction in maintenance costs – $92.4 thousand per year**
    - Due to the current condition of the track, significant time and resources are used to keep the rail in usable condition. Completion of the Project would allow maintenance crews to return to a less intense maintenance schedule
- **Annual avoided costly derailments - $111 thousand per year**
    - Completion of the project is assumed to save one derailment per year. The average cost of a derailment has been $111 thousand.
- **Total Annual Project Benefits - $286.6 thousand per year**
- **Some of the track assets installed during the construction of the Project maintain residual value since their useful life is greater than the 30-year analysis period.**

4.0 PROJECT ELIGIBILITY

The D & I Railroad Main Line Rail Project is requesting STC funding for Project Track 3 Final Design/Construction for the South Dakota located project. Pending publication of the STC Notice of Funding Opportunity (NOFO), it is anticipated that the Project is eligible for STC funding.

The D & I Railroad (D & I) is a short line railroad that is owned by L.G. Everist, Inc. (LGE), and operates approximately 138 route-miles of rail lines in the states of South Dakota and Iowa. From north to south, the D & I operates from:

- Dell Rapids, South Dakota to Sioux Falls, South Dakota (on trackage owned by D & I)
- Sioux Falls, South Dakota to Canton, South Dakota (via operating rights over BNSF Railway trackage)
- Canton, South Dakota to Elk Point, South Dakota (on trackage owned by D & I)
- Hawarden, Iowa to Beresford, South Dakota (on trackage owned by D & I)
- Elk Point, South Dakota to Sioux City, Iowa (via operating rights over BNSF Railway trackage)

The D & I interchanges unit train and carload rail traffic with three Class I railroads in Sioux City, Iowa (BNSF Railway, Canadian National Railway, and Union Pacific Railroad). This competitive access is critical to the ongoing success of the D & I and its shippers.

The D & I Main Line Rail Replacement Project is a capital project that will:

- Improve short line railroad infrastructure and operations
- Address congestion challenges affecting rail service, and will increase rail capacity and upgrade the condition and capacity of railroad main lines
- Improve track conditions on a railroad line, helping to alleviate rail service interruptions and lift permanent speed restrictions

Figure 2: D & I at Poet Ethanol Products. Located at Hudson, SD

4.1 Expected Users and Beneficiaries of the Project

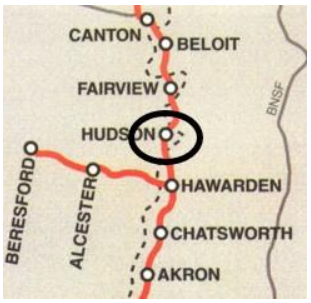
Expected users and beneficiaries of the Project include:

- **Public** – The rail upgrade will improve the health of the corridor and will decrease the potential likelihood of track-caused derailments – a livability benefit for the public. In addition, the rail upgrade component of the project will help lift several speed restrictions resulting in faster and more efficient train operations and less overall train occupancy times at highway-rail grade crossings. Improvements at grade crossings will enhance safety to the residents along the line.
- **Industries** – Shippers and receivers of raw materials and goods entrust their businesses to the reliability of this supply chain component. Being able to ship and receive bulk materials by rail is also advantageous as it reduces input costs for the producer, as well as overall price for the end user. D & I shippers on the railroad line and their commodities include:
    - ***L.G. Everist***, aggregates used in construction
    - ***BX Civil & Construction***, magnesium chloride for roadway dust control and de-icing
    - ***Poet Bio-Refining***, ethanol and dried distiller's grains (DDG)
    - ***Siouxland Energy Cooperative***, ethanol
    - ***Poet Nutrition***, corn oil
    - ***GCC Dacotah Cement***, raw cement
    - ***Prinsco***, plastic pellets for the manufacture of agricultural drain tiles
    - ***EnviroTech Services,*** road surface products
    - ***Valero***, corn oil
    - ***Vollan Oil Co.,*** diesel fuel
    - ***Purina Animal Nutrition***, DDG
    - ***The Andersons Inc.,*** corn oil
- **D & I Railroad** – Railroad operator

5.0 PROJECT LOCATION

The Project is located fully within rural South Dakota, and within the following congressional district:

- South Dakota – At Large



The nearest Urban Area is the City of Sioux Falls, which is nearly 20 miles away from the northern end of the Project Area (Hudson, South Dakota). The Project's southern end is located just north of the South Dakota/Iowa border and is not within the urban area.

The Project's location (geospatial data) is in proximity to:

- Latitude and Longitude: 43°03'52.89"N - 96°29'22.82"W

6.0 PROJECT ADHERENCE TO STATE RAIL PLAN GOALS

1) **Economic Support, Growth, and Development.** The Project will promote continued safe and reliable rail service for the shippers on the D & I Dell Rapids Subdivision, and will provide additional operational flexibility that will increase track capacity and create transportation efficiencies, all while increasing the ability to accommodate the shipments of new customers on the line. At present, nearly 75 percent of all existing D & I rail traffic originating or terminating on the rail line traverses the Project Limits, meaning most future traffic will benefit from this Project's proposed improvements.

   Over the past 10 years, freight shipments on the D & I have averaged between 17,000 and 20,000 carloads annually. New shippers to the railroad line show great potential for more growth in the transloading business, with products arriving from a four-state area, encompassing South Dakota, Minnesota, Iowa, and Nebraska. After the completion of the Project, D & I will be able to attract more business opportunities for further economic and industrial growth and development within the region.

2) **Ensuring Enhanced Competitive Access and Maximum Connectivity for Critical Industries.** Often over looked, short line railroads fill a critical role within the U.S. freight network as they provide bulk freight service transportation for the "first or last mile" connections between farmers, manufacturers, and the end consumer. Industries along the D & I rail line rely on D & I to transport bulk quantities of rock, sand, agricultural products, construction materials, and ethanol by rail to customers outside of the eastern South Dakota and northwestern Iowa region. These commodities have significance to the regional, national, and global economies. The D & I connects to and interchanges with three Class I railroads in Sioux City (BNSF Railway, Canadian National Railway, and Union Pacific Railroad), and thus provides local businesses and industries with broad competitive access to the national freight railroad system, global marketplace, and the opportunity to grow their market share.

Figure 3: D & I at Siouxland Energy Cooperative located at Hudson, South

Local industries are also leading the source of inquiries for new business on all South Dakota railroad lines, and continually look to expand their operations, leading to economic growth within this rural area. With strong growth and new business opportunities present along the D & I rail line there is an overwhelming need to maintain freight railroad access to this rural area in order to preserve existing businesses and industries, and their ability to attract new business. The D & I Main Line Rail Replacement Project will help to maintain the reliability of existing freight rail service and to improve future rail service on the line.

3) **Maintaining State Railroad Assets in Good Repair.** The D & I Railroad has a long history of maintaining this rail line to an acceptable standard. The rail replacement component of this Project is a much-needed improvement since the existing rail is or nearly is 100 years old. The rail has served its useful life and needs to be replaced due to its worn condition, which was caused by heavy impacts to the rail joints, leading to excessive rail end batter and warp conditions. Further rail degradation could potentially result in added maintenance for D & I, loss of the ability to accommodate rail cars with a maximum allowable gross weight of 286,000 lbs., or an increase in service failures and a marked reduction in operating velocity and efficiency, including an enhanced risk of train derailments and other incidents. The rail renewal proposed in the Project will allow the D & I to remain competitively connected with three Class I railroads and its transload facility in Sioux City, Iowa. It will also allow D & I to confidently maintain consistent service over the line.

Figure 4: D & I Railroad departing Sioux City, Iowa

Since 1981 D & I has worked diligently with ongoing public-private partnerships to invest in numerous capital projects involving bridge replacements, new rail, and track and tie maintenance, ensuring that this railroad line continues to provide reliable, safe, and fully accessible service to the states and region. Shippers, their employees, their customers, and surrounding communities all rely on this vital rural railroad connection. The capital improvement proposed in the D & I Main Line Rail Replacement Project will greatly reduce the risk for rail traffic interruption and any negative impacts this could potentially have on existing rural-area businesses (and their ability to attract new business) on the railroad line.

4) **Reducing Highway Impacts.** Previous capital improvements to the D & I Sioux Valley Subdivision by the D & I have allowed for the upgrades to accommodate 286,000 lb. heavy-axle load rail cars on the railroad line, further reducing impact to local roads and the highway system. This improvement has allowed existing shippers to ship more weight per carload, thus avoiding extra shipment of smaller carloads or diverting excess shipments from freight rail to trucks during peak times. Further investment in the D & I line will continue to encourage local, regional, and state-wide growth opportunities and reduce the impact on state highways and local roads.

In addition, the local rail service that many short line railroads offer, like D & I, have helped to attract local truck-haul service for end point or origin points of shipments (or for transload from truck to rail or vice versa). It is the understanding of D & I that the Final Rule for Electronic Logging Devices and Hours of Service Supporting Documents (known as the "ELogs"), as mandated by the Federal Motor Carrier Safety Administration under USDOT, has changed the carload/truckload interchange to benefit freight rail as it is being phased into operation[1]. Logistics companies are looking for new avenues to shorten truck hauls in order to maximize driver productivity.

The recent additions to the D & I customer base are a direct result of the "ELogs" mandate. The trucking companies that serve new transload customers are realizing the importance of short-haul in the freight rail system, which was previously known for long-haul shipping only. These trucking companies prefer to ship manageable distances that allow their drivers to maximize their time in the seat. In last 5 years, four additional transload customers located their operations on the railroad line in Hawarden, Iowa. With the Project's improvements, D & I will be better positioned to handle more of these short-haul moves in the future since the Project will improve overall capacity and reliability of the railroad line, and help to remove more long-haul trucks from local roadways and state highways (which will reduce pavement damage, air emissions, etc.).

5) **Improving Railroad Safety, Security, and Resiliency.** Improving railroad safety, security, and resiliency is one of the key goals identified in the South Dakota State Rail Plan (2014). The Project will provide much needed rail infrastructure and will aid in lowering potential derailment exposure caused by track defects on the D & I Sioux Valley Subdivision. This capital improvement project will help to improve the overall safety and reliability of this railroad line and sustain the continued operation of the D & I. For D & I, the capital improvement project will reduce the overall potential risk to train operations. A recent FRA geometry inspection shows rail in the project area contains permanent bent rail ends, which leads to track warp. A permanent condition where track surfacing is unattainable.

[1] U.S. Federal Register, *Final Rule for Electronic Logging Devices and Hours of Service Supporting Documents*, https://www.gpo.gov/fdsys/pkg/FR-2015-12-16/pdf/2015-31336.pdf

7.0 PLANNING READINESS

For Tracks 3 (FD/Construction) Projects:

The Project's component is supported in the South Dakota State Rail Plan (2014). Table 1 summarizes the planning document coverage.

Table 1: State Planning Documents Identifying the Importance of the Project

Planning Document	Sponsor	Relevant Pages	Web Location
South Dakota State Rail Plan (2014)	SDDOT	41, 42, 43	Link

This Project demonstrates the State of South Dakota's intent and commitment to finding long-term improvements that:

- Support economic growth and development
- Ensure connectivity for critical industries
- Maintain state-owned railroad assets in a state of good repair
- Reduce highway impacts
- Improve railroad safety, security, and resiliency

The D & I Railroad will assist the SDDOT with preparation of the STC application. This document may serve as a template for the application.

8.0 ENVIRONMENTAL READINESS

The National Environmental Policy Act (NEPA) requires consideration of environmental impacts for federal actions. The level of analysis and documentation required to comply with NEPA depends on the scope of the project. This Project is categorically excluded under the categories of Maintenance of Existing Track (main line replacement) [64 Federal Register 28548(4)(c)].

9.0 SUMMARY OF NON-QUALITATIVE BENEFITS

- ***A more reliable railroad system helps control supply chain cost variability, which is beneficial to the shippers.*** Local businesses also thrive when the shippers on the railroad line are productive and profitable.
- Maintaining the freight railroad system in southeast South Dakota and northwest Iowa is crucial to the economies of the counties and rural communities along the railroad line.
- Shippers and employees of surrounding businesses that support these local shippers rely on a reliable local rail system to transport products via the D & I Railroad.

Application to
South Dakota Department of Transportation and the South Dakota Railroad Board
for 2021 Consolidated Rail Infrastructure and Safety Improvements (CRISI)
Special Transportation Circumstance (STC) Funds

September 21, 2021

Introduction

The PRC Subdivision of the Rapid City, Pierre & Eastern Railroad (RCP&E) provides the primary connectivity for Rapid City, the second largest city of South Dakota, and much of the West River region of the state with the national rail network.

The PRC Subdivision is 163 miles long between Fort Pierre and Rapid City. The single track main line includes the ruling grade on the entire RCP&E, reaching a maximum of 1.5 percent grant eastbound between the Cheyenne River bridge at Wasta and Wall. It is largely a 10 mph railroad limited currently to 263,000 lb. railcar weight limit. There is a commitment by both the railroad and the State of South Dakota to improve the line through replacement of 88 track miles of rail and upgrading 121 bridge structures to allow the PRC Subdivision to operate at a minimum of 25 mph and handle industry standard 286,000 lb. freight cars. A federal Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application was submitted earlier this year to fund, along with railroad and state funds, the $84 million project to undertake this work.

Another very significant issue requiring attention on the PRC Subdivision came to the forefront in 2019, with several incidents of extremely heavy regional or localized rain falls resulting in culvert and bridge structure failures on the PRC Subdivision. These events will be documented more extensively below. The eastern end of the PRC Subdivision closely follows the Bad River, and part of the near-western end follow the Boxelder Creek. Both of these waterways collect storm run-off from significant watersheds, and have a propensity for flooding. Culverts typically provide the passage of this storm water run-off into the respective waterways.

After recovery from these right-of-way failures, RCP&E retained the professional hydrology engineering firm Bridge and Stream Engineering, Inc., headquartered in Denver, Colorado (see: https://www.bridgeandstream.com/), to complete a thorough analysis of the existing culverts and trestles on the PRC Subdivision. This study evaluated the expectations of performance of these structures based on future possible storm demands placed upon them, and ranked each location on the expected frequency of water breaching over the rail structure and the risk of wash out. The Bridge and Stream Engineering evaluations and recommendations are the basis of this proposed 2021 CRISI STC Grant Project (Project) scope of work.

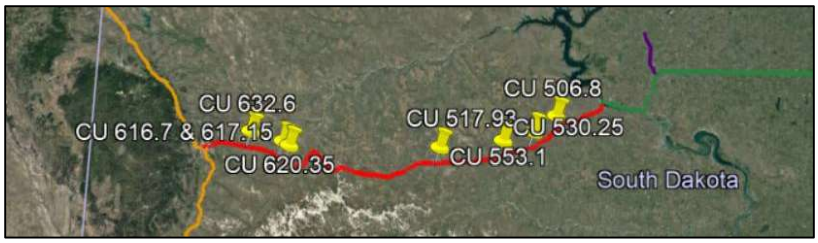
The Proposed 2021 CRISI STC Grant Project

The professional hydrology studies were completed in 2020 and early 2021. Seven culverts and one bridge structure were identified at significant risk in future heavy storms. Addressing these eight locations is the basis for this Project.

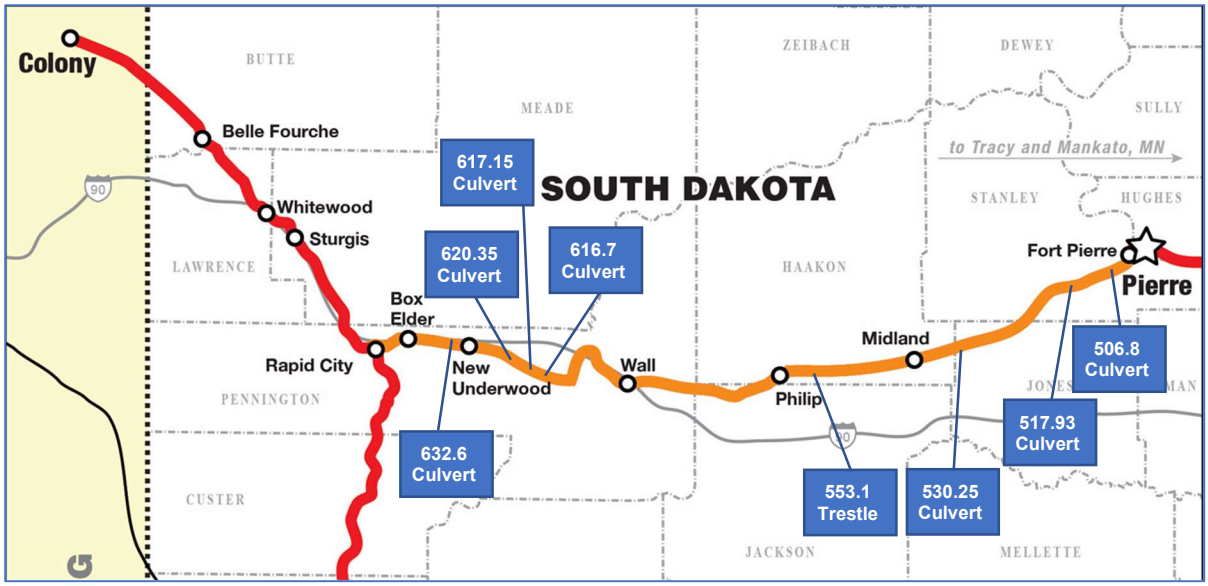
The culvert work is predominately installing larger culverts to allow for unrestricted passage of expected future storm events. The bridge structure is proposed to be replaced with a new embankment and new culvert placement to better control future flood waters on the Bad River, and to prevent compromising the balance of the bridge structure.

Location and Map of Project

At eight specific locations along the RCP&E PRC Subdivision main line between Fort Pierre and Rapid City, generally in two groups: structures that facilitate storm water and other flows into the Bad River between west of Fort Pierre and Philip areas, and structures that facilitate storm water and other flows into the Boxelder Creek in the general vicinity of New Underwood.



Satellite photo of locations of seven culverts and one bridge structure included in scope of work
PRD Subdivision is in red



Locations of Scope of Work

Events of 2019: Why this Proposed Project is Critical

After several weeks of significant rainfall in the Bad River watershed, numerous right-of-way failures occurred between Fort Pierre and Philip on May 22 and 23. Culverts were overwhelmed, and right-of-way breached at two locations:

May 22, 2019; Van Metre SD, MP 514.02 in At Van Metre a significant culvert under the PRC Subdivision gave way, creating a very large loss of grade and subgrade under the track structure.

RCP&E lost of culvert at Van Metre SD

May 23, 2019; Vicinity of Capa SD, MP 526.3 Another RCP&E PRC Subdivision culvert was overwhelmed and failed.

Failed culvert near Capa SD

August 2, 2019; New Underwood SD, MP 622.75 At approximately 3:30 a.m. eastbound RCP&E train MRCHU01 encountered a washed out culver designed to provide storm run off into Boxelder Creek from a large area north of the rail line. A microburst storm away from the railroad dropped an estimated 15 inches of rail approximately 11 miles from the RCP&E right-of-way that overwhelmed the culvert under the RCP&E main line and washed it out. Three locomotive and 17 rail cars were derailed, and the locomotive engineer and conductor were both injured and temporarily trapped in the cab of the lead locomotive until recused by the RCP&E General Manager.

Wide angle view shortly after loss of culvert at New Underwood SD and subsequent derailment, note locomotives on the left of the derailment with lead locomotive out of sight on its side

Supported by the South Dakota State Rail Plan

The objective of this Project is part of the current (September, 2014) South Dakota State Rail Plan (Plan). Specifically, the Plan calls for the RCP&E "Pierre to Rapid City Track Upgrade" at an estimated total cost of $105 million.

More generally, the project fully meets all five of the state goals presented in the Plan:

- ✓ **Support economic growth and development;**
  Project will improve reliability of rail service over PRC Subdivision. In conjunction with the larger rebuilding effort of the PRC Subdivision to operate at a minimum of 25 mph and handle 286,000 lb. freight cars, the Project will enhance attractiveness of future industrial development efforts along the line.

- ✓ **Ensure connectivity for critical industries;**
  Project will help ensure uninterrupted access to PRC and Black Hill Subdivision customers to Canadian Pacific and Union Pacific interchanges at Tracy and Mankato, Minnesota (respectively), and avoid the significant limitations of BNSF interchange at Crawford, Nebraska.

- ✓ **Maintain State railroad assets in a state of good repair;**
  Project will maximize utilization of either the current unimproved PRC Subdivision, or more significantly, the line after completion of its upgrading.

- ✓ **Reduce highway impacts; and**
  Avoiding interruptions of service on the PRC Subdivision due to failed culverts will eliminate the need of industries on the line to truck commodities to other, more distant and expensive rail loading locations. This is especially true for cement, grain and bentonite clay shipments. This in turn will reduce the demands for truck shipments on South Dakota roadways.

- ✓ **Improve railroad safety, security, and resiliency.**
  As demonstrated in 2019, inadequate culverts can close down rail traffic between Fort Pierre and Rapid City for extended periods and expose railroad workers to safety risks. Preemptively addressing this issue will ensure safe, reliable and efficient rail service through western South Dakota even with severe rain events in the region.

Project Cost and Matching Funds

Total Project Costing	$1,000,000
CRISI STC Grant Funds	$ 800,000
RCP&E Matching Funds	$ 200,000

RCP&E matching funds limited to 20 percent due to expected RAISE project match of $42 million, and significant routine capital investments budgeted for the railroad.

Scope of Work and Costing

Structure Number	Description	Total Cost	STC Grant	RCP&E Match	Overtop Frequency	Washout Risk	Estimate Notes
All	Mobilization	$ 66,000	$ 52,800	$ 13,200			20% of labor cost due to heavy equipment needs
All	Disposal	$ 32,500	$ 26,000	$ 6,500			10% of material cost at 553.1 bridge fill
All	Project Management	$ 50,000	$ 40,000	$ 10,000			Estimated PM fees required by Grant Agreement
PRCC-0506.80	Replace existing culverts with 3-72"x40' corrugated metal pipes	$ 52,500	$ 42,000	$ 10,500	2 YR to 5 YR	HIGH	Includes 50 tons of rip rap and 50 tons of ballast
PRCC-0517.93	Replace existing culvert with 1-60"x60' corrugated metal pipe	$ 39,500	$ 31,600	$ 7,900	5 YR	HIGH	Includes 50 tons of rip rap and 50 tons of ballast
PRCC-0530.25	Replace existing culvert with 3-72"x80' corrugated metal pipes. Rehabilitate the ditch on the south side of the track for 600' to the east	$ 115,000	$ 92,000	$ 23,000	10 YR	HIGH	Includes 100 tons of ballast and 100 tons of rip rap
PRCC-0553.10	Fill 22 of the current 25-span, 320-foot-long timber pile trestle open deck (TPTOD) bridge, build a new headwall, and install 1-60"x60' corrugated metal pipe. All timber to be disposed in accordance with G&W specifications	$ 312,500	$ 250,000	$ 62,500	5 YR to 10 YR	HIGH	Includes 6,300 tons of fill, 1,000 tons of rip rap, and 300 tons of ballast
PRCC-0616.70	Replace existing culvert with 4-36"x30' corrugated metal pipes	$ 23,400	$ 18,720	$ 4,680	25 YR	HIGH	Includes 25 tons ballast and 30 tons of rip rap
PRCC-0617.15	Install 2-48"x40' corrugated metal pipes	$ 37,000	$ 29,600	$ 7,400	25 YR to 50 YR	MEDIUM	Includes 300 tons of new, clean fill, 30 tons ballast, 50 tons rip rap
PRCC-0620.35	Install 3-72"x80" corrugated metal pipes.	$ 106,200	$ 84,960	$ 21,240	25 YR to 50 YR	MEDIUM	Includes 500 tons new clean fill, 90 tons rip rap, 50 tons of ballast
PRCC-0632.60	Replace existing culvert with 3-60"x40' corrugated metal pipes	$ 48,200	$ 38,560	$ 9,640	2 YR	HIGH	Includes 60 tons of ballast and 100 tons of rip rap
		$ 882,800	**$ 706,240**	**$ 176,560**	**Subtotals**		
		$ 117,200	**$ 93,760**	**$ 23,440**	**Contingency (material, fuel, contractor pricing)**		
		$ 1,000,000	**$ 800,000**	**$ 200,000**	**Grand Total**		

The scope of work was developed based on guidance contained in individual Bridge and Stream Engineering reports for each of eight Project locations. The engineering firm provided "Overtop Frequency" and "Washout Risk" assessments based on evaluations of historic rainfall, size and water capacity of the watersheds and characteristics of the current culvert or bridge at each location.

Genesee & Wyoming corporate staffs reviewed and refined costing components for the Project, and the engineering components of the scope of work have been thoroughly reviewed by the Genesee & Wyoming engineering staff.

Project and Environmental Readiness

Project engineering and costing is largely complete, and will be reviewed again and updated as necessary immediately upon approval of a STC grant. Likewise, environmental evaluation based on the National Environmental Protection Act (NEPA) and related laws will be started very shortly after approval of the grant. Initial review will determine the project locations that may be available for a Federal Railroad Administration (FRA) NEPA Categorical Exclusion, and if any locations require a more detailed environmental impact evaluation.

RCP&E management team will support rapid movement of the awarded grant into formal FRA – SDDOT and SDDOT – RCP&E grant agreements as quickly as possible.

Public Benefits, CRISI Evaluation Criteria and Benefit Cost

Public Benefits

The Project will provide immediate and clear public benefits:

- A more reliable means of transporting freight through the West River Region, capable of withstanding future significant rainfall or flooding events much better than it can today and giving better resiliency to logistic patterns in the region
- Avoidance of truck shipments required if the PRC Subdivision becomes unusable for a period of time after a significant rainfall event in the watershed areas it passes through; dependent upon the cause of the rail line outage and the seasonal shipping demands of the rail customers on the line, this could be avoidance of thousands of truck trips over multiple month periods of time
- Facilitate future investments in the PRC Subdivision to continue to improve the route, as opposed to simply reacting to emergency line outages

CRISI Evaluation Criteria

The Project will reduce emissions, promote energy efficiency, increase resiliency, and recycle or redevelop existing infrastructure, all stated objectives in the 2021 CRISI Notice of Funding Opportunity, and consistent with Executive Order 14008, Tackling the Climate Crisis at Home and Abroad (86 FR 7619).

In support of this Executive Order, the Project will direct resources and benefits towards low-income communities. One of the counties served by the PRC Subdivision, Jackson, is federally designated as an area of Persistent Poverty.

Outside Rapid City the West River Region is highly rural with a very low population density. Jones County has one of the lowest population densities of any county in the continental U.S., with a population of only 0.25 people per square mile.

Another focus area of the 2021 CRISI program is “explicitly addressing climate change”. The Project, through increasing the ability of the RCP&E PRC Subdivision to withstand much heavier than normal rainfalls and continue to provide safe, efficient and reliable rail freight services does this.

Finally, the following formal benefit considerations of the 2021 CRISI program are addressed by the Project:

- Effects on system and service performance: Project will ensure significant improvement in operational reliability of the PRC Subdivision
- Effects on safety, competitiveness, reliability, trip or transit time, and resilience: Project will ensure much more reliable transit time performance over the PRC Subdivision
- Ability to meet existing or anticipated demand: Project will improve the ability of the PRC Subdivision to handle current and expected future demand growth

Benefit and Cost

While not a full or formal Benefit Cost Analysis, data available suggest a clearly positive result, for the following reasons:

- Of the eight structures that will be improved in the Project scope of work, six are considered "High" risk of failure by the professional engineering firm that evaluated the sites. A failure of one culvert could easily close the PRC Subdivision for at least one week. During the closure the following extraordinary costs are included:
  - To RCP&E West River customers, costs associated with emergency trucking, inventory and handling costs associated with delayed shipments, lost orders and possibly lost customers
  - To RCP&E West River communities: Additional roadway wear and tear due to emergency truck shipments by railroad customers, possible job reductions at rail-dependent customers
  - To state and regional efforts to promote economic development through the West River Region: Perception of a less than fully reliable rail service over the PRC Subdivision resulting in possible lost opportunities

- In the loss of service over the PRC Subdivision, alternative methods of transporting freight through the West River Region can be expensive:
  - Diverting rail traffic over the RCP&E Black Hills – South Subdivision between Rapid City and Crawford, Nebraska is significantly challenged due to substandard rail on the line with a history of track caused derailments and interchange limitations imposed by BNSF on the interchange of traffic at Crawford
  - Use of the Crawford interchange is completely inferior for West River shipments between RCP&E and Union Pacific or Canadian Pacific

The loss of PRC Subdivision culverts in 2019, as outlined above, provide a strong factual basis for understanding costs created for all parties (customers, communities and railroad) of the loss of any of the eight locations to be addressed in the Project. The engineering study of these eight locations confirms that failure of the six current culverts at these locations is generally a "high" risk and can be expected in the near future ranging from of 2 to 25 years. A 2021 CRISI STC grant will allow these sites to be addressed in a prompt and efficient manner during a period of other expected major expenditures by the railroad to improve the speed and weight limit of this line.

Proposed Responsible Party and Funding for Developing the 2021 CRISI STC Application

RCP&E, with the support of its parent company, Genesee & Wyoming Inc. and in consultation with South Dakota Department of Transportation. If support of a consultant is necessary for this work, it will be at the expense of RCP&E, along with all of expenses associated with preparing a submission-ready application for SDDOT to submit to FRA.

Conclusion

Through a modest CRISI STC grant award a major increase in rail freight storm resiliency can be provide to the West River Region.

Application to
South Dakota Department of Transportation and the South Dakota Railroad Board
for 2021 Consolidated Rail Infrastructure and Safety Improvements (CRISI)
Special Transportation Circumstance (STC) Funds

Supplemental Information

Further Explanation on Proposed Scope of Work on Trestle 553.10

This proposal calls for the filling of 22 of the total 25 spans of the wood trestle at MP 553.10. This structure at one time was directly involved in the Bad River. At some point over at least 35 years ago there was a project to "straighten" the Bad River in the vicinity of Trestle 553.10. The result of this effort moved the active river channel approximately 800 feet south of the trestle, leaving the surface under the trestle normally dry.

The only useful hydrology purpose of this trestle is to provide a flow of periodic storm water run-off from the north of the RCP&E main line into the Bad River. The structure is grossly over-sized for this purpose. However, in flooding events the trestle also allows for flood waters of the Bad River to surge north of the RCP&E main line and threaten to undermine the approaches to this bridge structure and railroad subgrade in the area.

Photo of Trestle No. 553.10, taken during most recent bridge inspection; no water is present under the trestle structure

By eliminating 22 spans of Trestle No. 553.10 with fill, flooding would be contained south of the RCP&E main line in the flood plain established in the current river channel. Three spans of this trestle will be retained to allow a local rancher to maintain cattle access to the flood plain in the area south of the trestle. These three spans are based on a higher ground surface level than the other 22 spans. This higher base will compliment the base of the fill associated with the 22 spans to help contain flood waters in the natural flood plain of the current river alignment.

Normal storm water drainage north of this location will pass under the RCP&E main line through a new 60 inch culvert to be installed in the area of the 22 spans of the current trestle to be filled. The 2020-21 professional hydrology study determined this as fully adequate release for storm water from the gathering area draining to the area of the current trestle.

Environmental Considerations

The scope of work in this project was pulled directly from recommendations made in a thorough 2020-21 professional hydrology study previously mentioned. The firm conducting the study work, Bridge & Stream Engineering, Inc., is fully qualified for this work. The firm used hydraulic design criteria and local flood flow analysis for sizing waterway openings through culverts, further considering numerous other related factors.

While the scope of work for the completed hydrology study did not include a FRA Categorical Exclusion analysis associated with the proposed remediation work, the proposed work was developed in a manner consistent with facilitating the appropriate flows of storm water run off passing through the studied sites.

Furthermore, the scope of work for the STC grant request was thoroughly reviewed by the Director of Bridges and Structures – Western Region of Genesee & Wyoming Railroad Services, Inc. This manager is a Professional Engineer and previously he worked as an employee of the U.S. Forest Service, where he was a civil engineer and then a transportation planner. His worked directly with the preparation of NEPA Categorical Exclusions associated with various Forest Service projects.

The consensus of all this is that the scope of work in this CRISI STC grant request is very reasonably considered to be eligible for a FRA Categorical Exclusion (CE). The project will have minimum direct involvement with water bodies covered in NEPA (National Environmental Policy Act) and related laws, and does not appear to have any negative impacts on the numerous environmental factors considered through the CE application process.

A complete CE study will be undertaken as soon as possible after the award of the requested CRISI STC grant. This study will be thorough and prepared by an acknowledged and recognized engineering firm approved by SDDOT. If any part of the scope of work is determined not to be eligible for a CE, RCP&E commits to undertake the necessary further analysis and work to fully meet the National Environmental Policy Act.

Project Relationship to Track Structure

The CRISI STC grant project will have no direct improvement or denigration of the existing RCP&E PRC Subdivision main line track structure. No weight or speed improvements will be provided by this project. What it will do is protect the track structure from loss due to abnormal flash flooding events as occurred in 2019, and the subsequent out-of-service of the PRC Subdivision until emergency repairs are completed.

Basis for Developing Contingency Budget

As part of any project involving installation of new culverts and placement of new fill in a railroad right-of-way, there will be considerable transportation costs associated with bringing culverts, stone and dirt fill to the work sites. Such transportation costs will be impacted by future diesel fuel price increases that are expected to increase, however at an undetermined rate. An allowance for such increases is a part of the overall contingency fees in the budget for this project. Other factors considered in the development of the contingency fees include (however not limited to) the cost of contractors, materials, and impacts of weather delays.

Relationship Between this Proposed Project and Submitted RAISE Grant Application

The previously submitted RAISE grant application and this CRISI STC grant request are both to improve the RCP&E PRC Subdivision. However, the scopes of work of the two proposed efforts are completely different, with different public benefit outcomes. The RAISE grant is to improve the freight car weight limit and train operating speed / transit time over the PRC Subdivision. The CRISI STC grant is to improve the resiliency of the PRC Subdivision to withstand abnormal flooding events.

Conclusion

This proposed CRISI STC grant request will significantly improve the ability of the RCP&E main line between Fort Pierre and Rapid City to continue operations after future flooding events along the Bad River and Boxelder Creek. This line is the primary means to connect the second largest city in South Dakota to the national rail network.

As noted in the August, 2021 "Climate Action Plan, Revitalizing Efforts to Bolster Adaptation & Increase Resilience" by the U.S. Department of Transportation:

> ***"Over the last decade, DOT has integrated climate change impacts, adaptation, and resilience into domestic and international planning, operations, policies, and programs. However, more must be done."***

In the report summary of "Notable Impact Areas", it specifically calls out for attention:

> ***"Culvert and drainage infrastructure damage, due to changes in precipitation intensity, or snow melt timing."***

This proposed CRISI STC project exactly meets this call to action, improving the climate resiliency of a key part of freight infrastructure in South Dakota. The South Dakota Railroad Board is respectfully requested to support a $800,000 2021 CRISI STC grant to this project.

# # #

Attachment #3G

Application to
South Dakota Department of Transportation and the South Dakota Railroad Board
for 2021 Consolidated Rail Infrastructure and Safety Improvements (CRISI)
Competitive Grant Application

September 23, 2021

Background

Before the July 12, 2021 deadline, South Dakota Department of Transportation submitted to US Department of Transportation a completed federal Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant submission for the reconstruction of the PRC Subdivision of the Rapid City, Pierre & Eastern Railroad.

The reconstruction project involves 88 miles of replacement rail with 136 lb. CWR and the upgrading of 121 bridge structures. Results of the project would allow for a minimum of 25 mph operations over the PRC Subdivision with a 286, 000 lb. freight car weight limit. This $22 million grant request will be match by $42 million in RCP&E funds and $20 million in State of South Dakota funds passed by the state legislature and signed into law by Governor Noem earlier this year.

Implications of 2021 CRISI Competitive Grant Project

While the exact timing of the RAISE grant award announcements by USDOT is unknown, general consensus is that they will be made in mid to late October of 2021. This raises the possibility of submission of a 2021 competitive CRISI grant application for the same project if the RAISE grant is unsuccessful.

Such an approach with CRISI will be constrained by several factors:

1. Obtaining the results of the RAISE grant application that is negative in time for recrafting the project into a CRISI submission before the deadline for CRISI, November 29, 2021, and
2. With a rejection of the RAISE application, necessary to obtain guidance from FRA/USDOT on application deficiencies, and
3. With significant increase in steel / rail pricing, the project will require a complete reworking of costing and federal grant / RCP&E matching economics.

Request to Railroad Board

Provide contingent concurrence for a potential CRISI competitive grant submission for the PRC Subdivision project if RAISE grant is not awarded, with the understanding of the constraints outlined above.