



**Request for South Dakota Department of Transportation and
South Dakota Rail Board Support
2020 Federal CRISI Rail Grant Program**

**West River Rail Replacement
May 7, 2020**

Introduction

Rapid City, Pierre & Eastern Railroad (RCP&E) is a 742 mile long Class II common carrier freight railroad headquartered in Rapid City and spanning the width of South Dakota. It handles a mix of grain, ag products, bentonite clay, cement, and other commodities. The railroad started on June 1, 2014 with the purchase of the line from Canadian Pacific Railway by Genesee & Wyoming Inc.

RCP&E requests support of South Dakota Department of Transportation and the South Dakota Rail Board for the submission of a Consolidated Rail Infrastructure and Safety Improvements (CRISI) competitive federal grant application due on June 19, 2020. The project, to be funded in part by the grant, will allow for replacement of slightly more than 17 track miles of main line rail west of Ft. Pierre, improving both the carrying capacity of the line and its functionality over Pierre Shale geological formations in the West River region.

Additionally, RCP&E seeks supplemental funding from the South Dakota CRISI Special Transportation Circumstance (STC) funds to extend the rail replacement effort another four track miles of main line rail. This is a separate grant request from the CRISI funded project outlined above, but if awarded the additional four miles will be constructed concurrently with the competitive grant funded project to economically and efficiently undertake both efforts.

Together both projects would be a step forward in replacing very old, worn and light weight RCP&E main line rail on its PRC Subdivision. Both requests are outlined below.

Competitive Project Description

<i>Location:</i>	On the RCP&E PRC Subdivision main line, west of Ft. Pierre, from MP 512.85 to MP 530.0 located in Jones and Haakon Counties, South Dakota.
<i>Scope of Work:</i>	Replace 17.15 miles of predominately 90+ year old 100-35 lb. sectional rail ¹ with 136 lb. CWR; reconstruct 22 private and public grade crossings;

¹ Mixed with the 100-35 rail is replacement 90-35 rail (plug rail replacing earlier defect rail sections) of very similar poor condition and age. At MP 525 there is approx. 1.5 miles of 110 lb. rail. It too is in very poor condition.

replace 767 bridge timbers and one main line turnout; ballast, ditch and resurface 17.15 miles of track.

Schedule: Acquisition of materials and work would begin and be finished as soon as possible after execution of grant agreements. Expected completion in 2021, assuming normal seasonal weather conditions.

Project Track: No. 3, Final design and construction

<i>Project Funding:</i>	Total Project:	\$12,000,000
	CRISI Grant Request:	\$ 6,000,000
	RCP&E Matching Funds:	\$ 6,000,000

Project Readiness: All materials required for the project are standard items and readily available. Acquiring materials, arranging contractors, and beginning construction to start as soon as grant agreements allow.

Plans Readiness: Scope of work and budget for project are developed and complete.

Enviro Readiness: Work will fully fall into a NEPA Categorical Exclusion (CE) as allowed by Federal Railroad Administration (FRA). Preliminary CE analysis will be included in competitive grant application to FRA, and completion of CE review will be undertaken as soon as possible after award of grant.

Overall Benefits: Discussed below.

Application Dev.: RCP&E / Genesee & Wyoming, with support of a recognized consulting firm for creation of BCA and preliminary CE analysis.

Application Cost: Responsibility of RCP&E.



Typical section of old rail in PRC Subdivision main line, west of Ft. Pierre

Project Benefits

Economic Growth: Since its creation in 2014, RCP&E has supported and facilitated tremendous economic growth in South Dakota. The railroad has been involved in many industrial development projects across the state, from the new Novita feed supplement mill in Aurora to the new rail industrial park in Belle Fourche. This focus on developing new customers and supporting existing ones was highlighted in the \$90 million investment by GCC Cement to modernize and expand its plant in Rapid City.

This CRISI project is a significant step forward to improve the entire RCP&E main line from Ft. Pierre to Rapid City, and is necessary to be able to eventually increase the entire line from 10 mph and 263,000 lb. railcar weight limit to 25 mph and an industry standard 286,000 lb. railcar weight limit. These improvements are important in attracting new customers requiring rail services to the West River region served by RCP&E and allowing current customers to better compete in their markets.

Connectivity: RCP&E provides important rail freight services to three primary groups of commodities on its PRC Subdivision: Grain, cement, and bentonite clay. Grain elevators in Midland, Philip, Wall, New Underwood, Rapid City and Belle Fourche, the GCC cement plant in Rapid City, and the bentonite clay producers in Colony, Wyoming all depend on RCP&E service over the PRC Subdivision to reach key markets across North America. Without efficient, economical, and reliable rail freight service, these shippers will be at competitive disadvantages in both domestic and international markets.

This project will replace approx. 100 year old inferior rail with new, heavy continuous welded rail that with proper maintenance will facilitate many decades of improved service for the RCP&E West River customers, helping them reach their markets using the national rail network through competitive rail gateways in Wolsey SD, Tracy MN and Mankato MN.

Good Repair: While not a state-owned line, RCP&E provides very important safe and efficient rail freight services across South Dakota and is focused on improving its infrastructure to support future traffic growth. Operating over the Pierre Shale formations found throughout the West River region requires intense maintenance to hold proper track geometry. This work is made much more demanding with old, lighter weight stick rail (rail bolted together in 33 foot or less lengths). Each bolted joint, no matter how tight the joint bars and bolts are made, deflect under the weight of a passing train. This deflection compounds the surface undulations caused by underlying Pierre Shale deposits and is made even worse with old light-weight rail that suffers from end-of-rail head surface wear.



Typical rail end wear, rail from PRC main line west of Ft. Pierre

RCP&E maintains safe and efficient operations in these circumstances by continuously resurfacing its main line tracks over Pierre Shale, pulling the track back into proper alignment and raising deflection points caused by worn rail. It also must restrict operating speeds to 10 mph, and in part due to the obsolete rail limit railcar weight to 263,000 lbs.

New and much heavier 136 lb. continuous welded rail will provide better weight distribution of trains passing over any one section of track and eliminate the subgrade pounding caused by rail joints. This will allow train speeds to increase from 10 to 25 mph, and eventually support increasing the railcar weight limit over the line to the North American rail industry standard of 286,000 lb.

Highway Impact: Without a competitive, efficient, and safe RCP&E PRC Subdivision serving the corridor between Ft. Pierre and Rapid City, the only recourse for shippers of grain, cement, and bentonite clay, along with all other rail shipments currently handled by RCP&E, would be to dray their shipments over public roadways and highways to the nearest Class I rail head.

In addition to the damage inflicted by this additional truck traffic on South Dakota roadways and road bridges, the resulting increased costs of truck logistics will place these same South Dakota shippers at an economic disadvantage in serving their markets.

Improve Safety: New modern heavy continuous welded rail will dramatically reduce the risk of train derailments over the program section of the PRC main line.

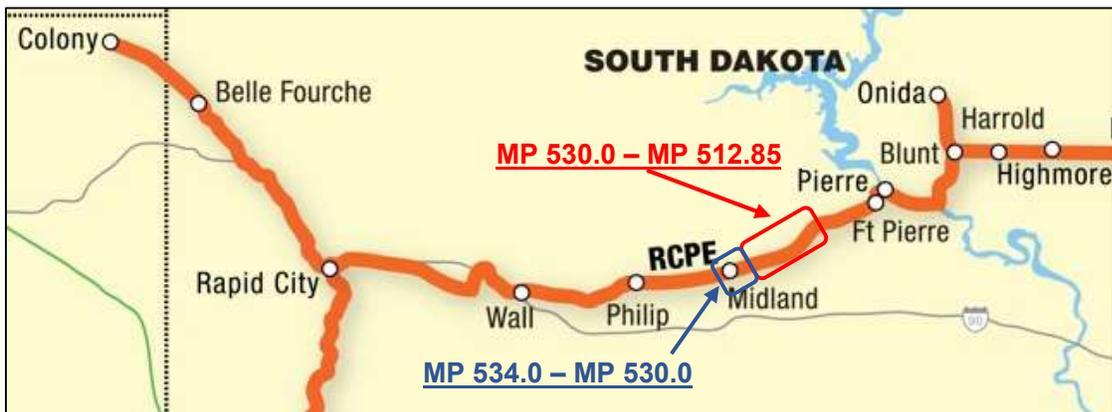
Over the last three years, over 1,000 rail defects have been found in the RCP&E main line between MP 512.85 and MP 530.0. Not all these defects required immediate rail replacement but all represent flaws in the rail reflecting is age, wear and light weight. New 136 lb. head hardened continuous welded rail will dramatically reduce the frequency of rail defects over this section of the PRC Subdivision main line, reducing the risk of a train derailment due to a broken rail.

Also, by reducing the impact on the Pierre Shale subgrade under the line, track geometry will be better maintained and reduce the risks of a train derailment due to misaligned track structure. Over the last three years 511 track geometry defects have been found in this section of the PRC Subdivision main line.

Detailed Project Scope and Costs (inclusive of associated contractor / labor costs)

Project Line Item	Project Item Description	Qty	Unit	Unit Cost	Total Budget
Rail	Milepost 512.85 to Milepost 530	181,104	Linear Foot	\$ 55	\$ 9,960,720
Turnout	MP 523.65 Turnout Capa Stub Track	1	Each	\$ 135,000	\$ 135,000
Ditching	Restore Ditches within rail project	17	Day	\$ 4,000	\$ 68,000
Surfacing	Surfacing Behind Tie Gang	17	Mile	\$ 6,500	\$ 111,475
Ballast	Ballast for Surfacing New Rail	12,005	Net Ton	\$ 20	\$ 240,100
Crossings	Crossing work within rail project	416	Foot	\$ 2,000	\$ 832,000
Bridge Ties	Bridge Ties in Rail Project	767	Each	\$ 400	\$ 306,800
Project Mgt	Engineering Support / Permitting	1	Each	\$ 275,000	\$ 275,000
Project Misc. Costs	Misc. Cost	1	Each	\$ 264,000	\$ 270,905
Salvage Values	Scrap Rail/OTM credit	1	Each	\$ (200,000)	\$ (200,000)
				Project Total Cost	\$ 12,000,000

Competitive (red) and STC (blue) Projects Map



CRISI Special Transportation Circumstance (STC) Project Description

To further expand the positive impacts of the proposed CRISI competitive project outlined above, RCP&E also requests South Dakota Department of Transportation and the South Dakota Rail Board to direct \$2.8 million of available CRISI STC funds to replace an additional approximately four track miles of PRC Subdivision main line rail and associated ballast, ditching and surfacing, along with replacing three main line turnouts in Midland. Rail would be replaced from MP 530.0, the end point of the CRISI Competitive Project, to MP 534.0, just west of Midland.

This will be structured as a separate grant project, although it will increase the efficiency of many of the project management costs associated with the competitive project. Contractor costs should be reduced on a per unit basis, by avoiding separate project mobilization costs. Finally, unit material costs may benefit from larger aggregated quantities.

An additional four track miles will allow the combined efforts of both grants to address close to one third of the PRC Subdivision rail that requires replacement to upgrade the line. It will also incorporate one RCP&E customer located in Midland. Benefits will be very similar to those outlined above for the competitive project.

Conclusion

The combination of CRISI competitive and CRISI STC grants would make a significant improvement in the key rail corridor serving the West River region of South Dakota. It would generate immediate performance and safety benefits and be a major step forward in rehabilitating the key rail freight line serving the second largest city in South Dakota and numerous significant industries in the western part of the state. The grants would improve the ability of the railroad to work with the state to not only support the transportation needs of key sectors of the South Dakota economy, but also enhance efforts to attract new employers and jobs into the region. Finally, running the two grants together would provide excellent opportunities to reduce the overall costs associated with either project. For these reasons it is requested that South Dakota Department of Transportation and the State Rail Board strongly support both efforts.