#### Commander Eighth Coast Guard District

1222 Spruce Street St. Louis, MO 63103-2832 Staff Symbol: dwb Phone: (314) 269-2381 Fax: (314) 269-2737

Email: www.uscg.mil/d8/westernriversbridges

May 4, 2018

SUBJECT: Section 106 Consultation for Proposed Bridge Replacement on the Missouri River near Bismarck/Mandan, North Dakota (ND SHPO Reference 16-0636)

Dear Consulting Party Representative:

In compliance with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306108), as amended (NHPA), the United States Coast Guard (USCG) invites you to participate in continuing consultation on the above-referenced project. The USCG has designated BNSF's consultant, CH2M/Jacobs, to contact parties on our behalf for the purposes of Section 106. In that role, they are contacting you regarding the proposed undertaking and upcoming Consulting Parties meeting.

As an identified Consulting Party, the USCG invites you to attend a face-to-face Section 106 consulting parties meeting scheduled for Monday, May 14<sup>th</sup> from 6:00-8:00 pm Central Standard Time (CST) in Lecture Rooms A & B at the North Dakota Heritage Center, 612 East Boulevard Avenue in Bismarck. The meeting will provide an overview of the Section 106 process, review the proposed project and alternatives considered, and discuss potential mitigation measures. If you plan to attend the meeting, please accept this invitation and respond by contacting:

Mr. Ben Roberts, Cultural Resources Planner, CH2M/Jacobs, via telephone: (912) 677-2702, or email: Ben.Roberts@ch2m.com

Your timely response will greatly assist us in planning for the meeting. If you cannot attend in person but would like to attend via teleconference, please indicate that in your response and we will make arrangements to accommodate your request (Join by phone at: 866-203-7023 - access code 5093 167 060). If you wish to participate in the Section 106 consultation process but cannot attend the May 14<sup>th</sup> meeting, please let us know and we will ensure that you receive all materials from the meeting and notices of future meetings. If you do not wish to participate, no response is required and we will no longer send you information on this consultation.

We look forward to	your response and	to consulting	with you on	this undertak	ing. Should	you
have any questions,	please contact Mr.	Ben Roberts,	CH2M/Jaco	bs at or Mr. I	Rob McCask	ey,
USCG, via email at		<u>l,</u> or 1	by phone at			

Sincerely, A

ERIC A. WASHBURN

Bridge Administrator, Western Rivers By direction of the District Commander

## BNSF Bismarck Bridge Replacement Project

# 2<sup>nd</sup> Consultation Meeting – May 14, 2018

# Agenda

- 1. Introductions
  - a. Safety Check
  - b. Meeting purpose
  - c. The Section 106 Process and Roles
- 2. Project Purpose
  - a. Brief Review of Alternatives
- 3. Issues with retention of existing bridge
  - a. FEMA requirement of no additional structure impact
    - i. Proposed alternative will meet FEMA requirement
    - ii. Other alternatives will not meet FEMA requirement
  - b. Ice Jam Potential
  - c. Scour Critical Foundations (see figures: Scour Figure 1, Scour Figure 2)
    - i. Explain scour analysis and the associated risks
  - d. Right of Way constraints
    - i. Embankment Issues (see figure: East Slope)
    - ii. Second Track (see figures: Alt 3 Second Track North, Alt 3 Second Track Proposed)
- 4. Letter from BNSF addressing bridge retention
- 5. Schedule Next Consultation Meeting
  - a. Possible date of Tuesday, May 29
  - b. Consideration of bi-weekly meetings
  - c. Teleconference and e-meeting capabilities



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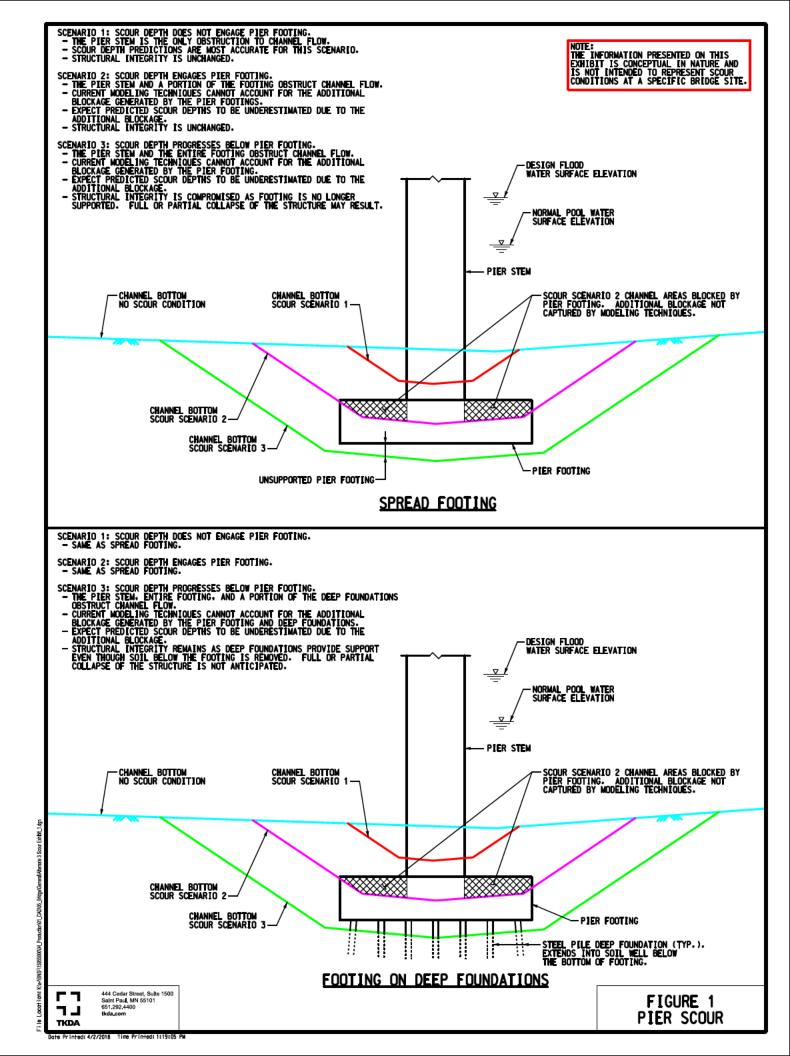
## Bismarck Bridge - Scour Issues

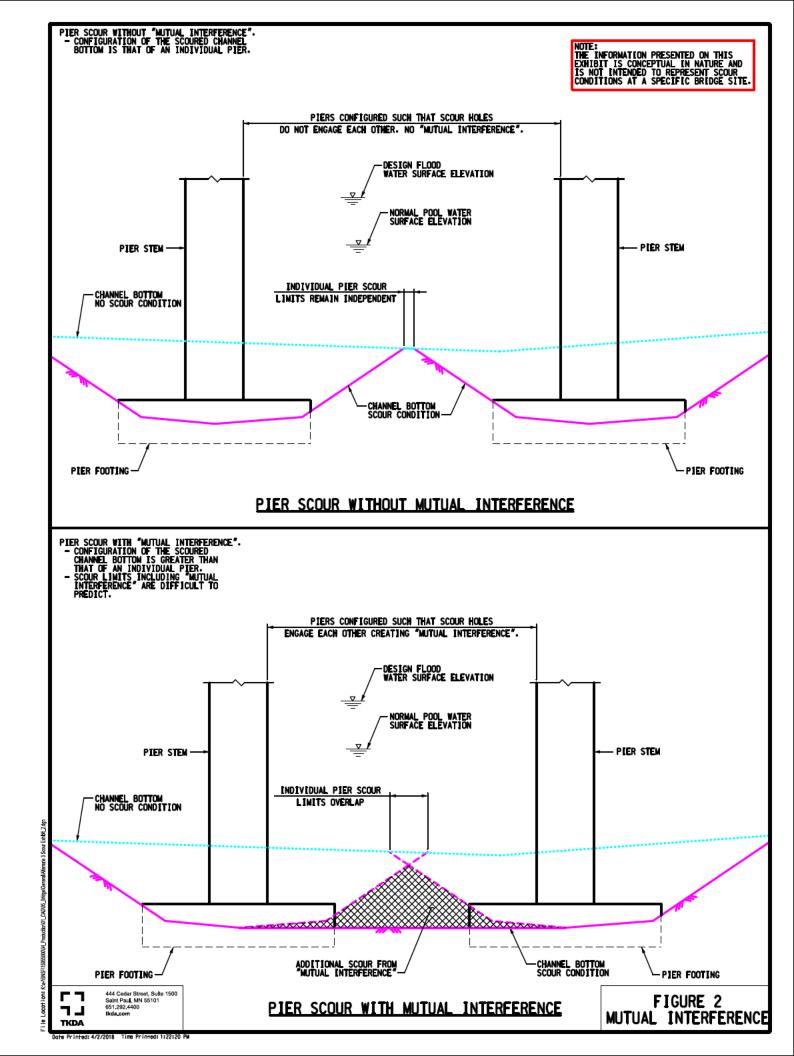
- "Scour" at a bridge pier refers to the erosion of the river bed adjacent to a pier. It results from the action of water flowing around the pier. Scour generally happens more quickly during "high-flow events" caused by heavy rains or snowmelt.
- BNSF's existing bridge piers are built with "spread footings," which have the potential to fail catastrophically if excessive scour erodes the riverbed underneath the footings. A bridge subject to this type of failure is called "scour critical" per American Railway Engineering and Maintenance-of-Way Association (AREMA) and Federal Highway Administration (FHWA) standards.
- When BNSF builds new bridges across waterways, it mitigates scour risk by using "deep foundations" that extend much farther down into the riverbed and are largely unaffected by scour.
- For existing scour critical bridges, BNSF has monitoring and inspection requirements to verify that scour does not reach unacceptable depths. In the case of the existing bridge across the Missouri River, BNSF has detected significant scour. However, the scour has not progressed to the point where the existing bridge is considered in danger.
- Placing new piers in the river "offset" from the existing piers that is, neither directly upstream nor directly downstream leads to deeper scour at the existing piers.
- There are some widely-used computer models that can predict the magnitude or depth of scour at a bridge pier. When it comes to predicting the effects of BNSF's proposed new bridge piers on the existing piers, however, there are a number of factors at work that the standard model doesn't capture adequately:
  - o Both new and existing piers have relatively narrow vertical stems with a wider, horizontal footing underneath (see Figure 1). When scour gets deep enough to expose these footings, the footings will present a greater obstruction than the upper portions of the piers. The model does not take this into account. As more and more of the footing is exposed, the model becomes more and more likely to underestimate the extent of scour. Note that scour does not become dangerous until it approaches the bottom of the footings on the existing piers, by which point all of the new pier footings and at least one of the existing pier footings are completely exposed. So the model breaks down long before the point at which it predicts outright failure.
  - o In some cases, the new piers are close enough to the existing piers that the scour around the existing piers would be expected to overlap with the scour around the new piers (see Figure 2). The scour between the two piers would interact in a way that is unpredictable and not captured in the model.
  - O Any scour model has to make an assumption about where the river bottom is at the beginning of the modeled flow event. The whole history of the river at this location, including BNSF inspections in the 21<sup>st</sup> century, suggests that the actual shape and elevation of the river bottom is quite dynamic and can change relatively quickly. So even a perfect hydraulic model would be limited in its ability to make predictions about the effects of scour at some unknown point in the future.



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- BNSF believes that the existing scour situation at the existing bridge is safe, but potentially susceptible to scour events.
- The state of the practice in engineering tells us with high certainty that adding new offset piers would increase the potential for dangerous scour at the existing piers. Due to the limitations discussed above, the resulting total scour effect cannot reliably be predicted. Therefore, BNSF believes that leaving the existing piers in place while adding new offset piers would present an unquantifiable, unacceptable risk of catastrophic failure of the existing bridge piers.





### Bismarck Bridge – East side ROW issues

- East of the Missouri River crossing, the BNSF track goes through a deep cut. The sides were quite steep in order to minimize cost and construction time.
- Steep slopes are inherently less stable than gentler slopes. They can be prone to landslides, where a portion of the face of the slope slumps down the hill. They can also erode more easily, and it can be difficult to establish vegetation to hold the topsoil in place.
- There is evidence that the slopes along the BNSF tracks have experience some small, localized landslides at some point in time. There are also drainage features at the top of and at certain places along the slope that suggest that erosion damage also had to be repaired at some point in the past.
- Over time, the ground tends to reach a relatively stable situation. Given that there have not been any recent failures, BNSF is comfortable that the existing slopes do not present much risk to railroad safety or operations.
- Where construction activities require widening the existing slope, BNSF will use a gentler slope in keeping with the recommendations of their geotechnical consultants. This will avoid the period of instability and risk associated with the steeper slope, and make it much easier to establish erosion-resisting vegetation.
- The gentler slope means the top of the cut will be farther from the railroad tracks than is currently the case. So, shifting the railroad track even a short distance to the northeast through this cut will result in the cut extending quite a bit farther to the northeast. The slope will not fit on BNSF ROW and will impact land owned by the Bismarck Reservoir.
- Even these gentler slopes don't take into account the additional loading from the reservoirs themselves. Extending the cut towards the reservoirs by any significant amount would require further analysis.



BNSF Railway Company 4515 Kansas Ave Kansas City, KS 66106

May 7, 2018

To: The consulting Parties

Subject: BNSF Bridge 0038.0196.6 NHPA Section 106 Consultation

As BNSF Railway works through the permitting process required to construct a new bridge over the Missouri River, in Bismarck and Mandan, ND, we understand the interest by some in acquiring our existing structure for public use.

BNSF's preferred alternative is to build a new bridge and remove the existing structure given the challenges that exist with allowing the current bridge to remain. In response to comments made during the first Consulting Parties meeting on January 31, 2018, BNSF Railway would like you and any potential interested party to be aware of responsibilities and the scope of items likely required if any abandoned BNSF bridge were to be acquired by others and converted to a pedestrian trail. The items listed below are not intended to be exhaustive lists, and this information is provided to help bring to light the serious, costly issues regarding any proposal to secure BNSF's privately owned and maintained infrastructure for public use. For reference, in our review, we have found just one somewhat comparable project of similar scale and scope (BRX Memphis, TN), which cost \$30 million dollars and took approximately 6 years to implement. These include, but are not limited to:

- Independent structural analysis of the structure by a licensed structural engineer.
- Acceptance of the structure "as is," with full knowledge that the railroad has determined the structure has reached the end of its useful life
- Ownership of all liability that may arise from allowing the public on a bridge that another entity has determined has reached the end of its useful life
- Indemnification and hold harmless for BNSF, possibly through the use of an insurance policy if one is available for this purpose
- Conversion costs including design, removal of existing track materials, construction of new deck, ADA access, grading, fencing to separate the approach embankment from railroad corridor, and property acquisition to access the bridge.
- Provision of alternative Right of Way (ROW) for BNSF's river crossing, including approaches to the bridge on both sides. Such ROW must provide for at least two parallel tracks, and whatever other features (such as maintenance roads and utility corridors) BNSF deems to be necessary for its operations.
- If construction on the alternative ROW (including construction of a potential future second track) would be more expensive, compensation for the increase cost
- Approval from FEMA for resulting impacts to the floodway
- Approval from USCG for additional navigation impacts



In addition to the considerations above, BNSF would have to have financial assurance that the group that takes ownership of the bridge can be responsible for the long-term costs associated with that ownership. Assumption of ownership of the existing bridge comes with many responsibilities, including but not limited to:

- o Inspection and maintenance
- Ownership of the USCG Bridge Permit
- o Removal, if and when it becomes necessary
- Maintain aids to navigation

We look	forward	d to	contir	nued	discu	ssions	of c	ur pro	posed	project	throug	h the	permitting
process.	If you h	nave	other	ques	tions	related	d to	BNSF,	please	contact	Amy I	McBeth	, Regional
Director	of Public	: Affa	irs, at					or					

Sincerely,

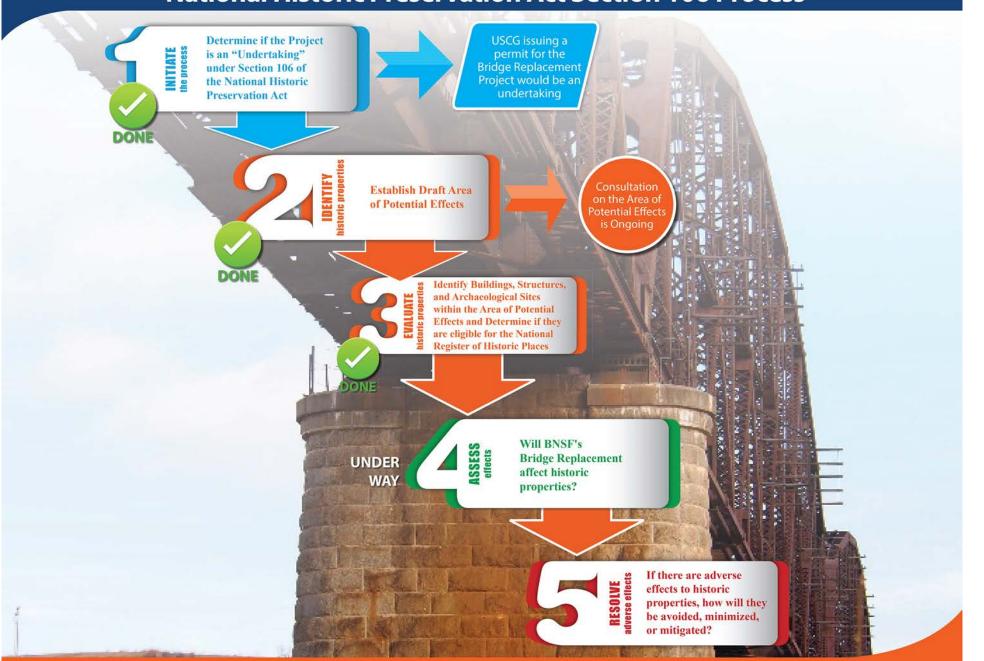
Mike Herzog BNSF Railway Company Director Bridge Construction

# **AGENDA**



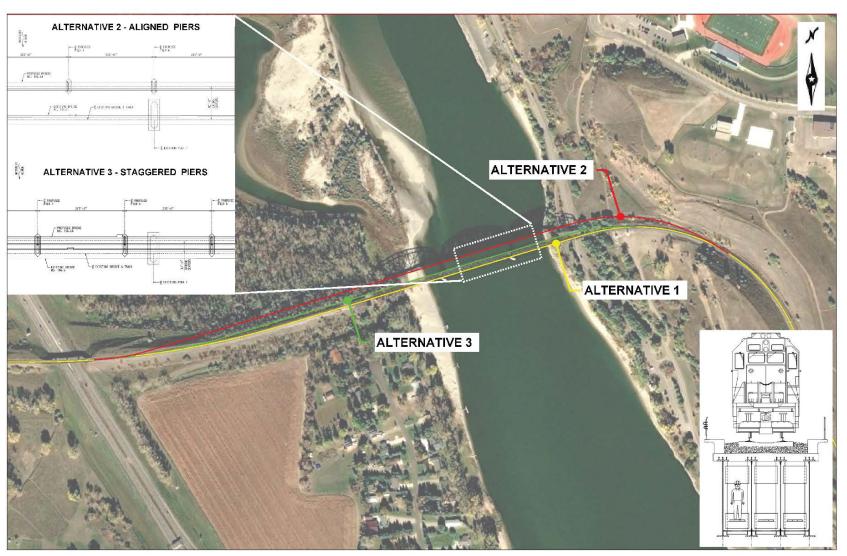
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# **National Historic Preservation Act Section 106 Process**



# **Project Alternatives**





### **Purpose and Need:**

- · Provide a robust, dependable, and safe railway crossing
- · Provide potential for future expansion
- . Minimize impacts to river performance and the environment

## **Project Alternatives:**

- Alternative 1: Maintain existing structure (No Action)
- . Alternative 2: New bridge on new alignment 80' north of existing
- . 200' spans with structural members below the track
- New piers aligned with the existing
- · Existing bridge remains
- Alternative 3: New bridge on new alignment 30' north of existing
- · 200' spans with structural members below the track
- · New piers staggered relative to the existing
- · Existing bridge to be removed

#### **Alternatives Analysis:**

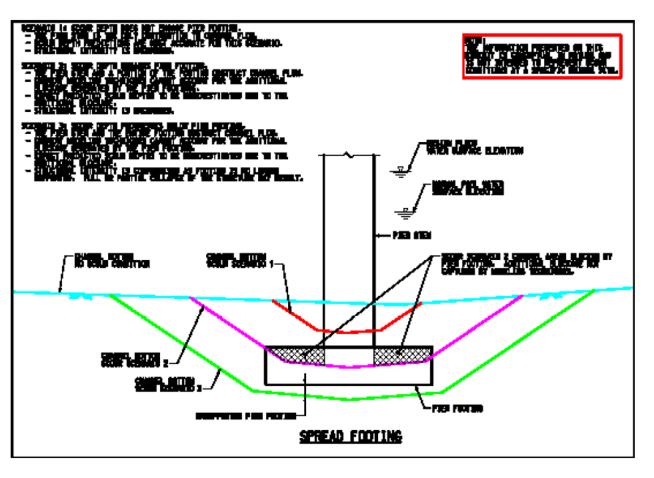
- · Provide a robust, dependable, and safe railway crossing
- · Structural characteristics and maintenance requirements
- Impacts to railroad operations
- Construction cost
- · Provide potential for future expansion
  - · Construction cost
- Structural characteristics
- . Minimize impacts to river performance and the environment
  - Impacts to river hydraulics
- · Impacts to river navigation
- Risk of ice jams
- · Scope of bridge approach civil works
- · Requirements for right-of-way acquisition

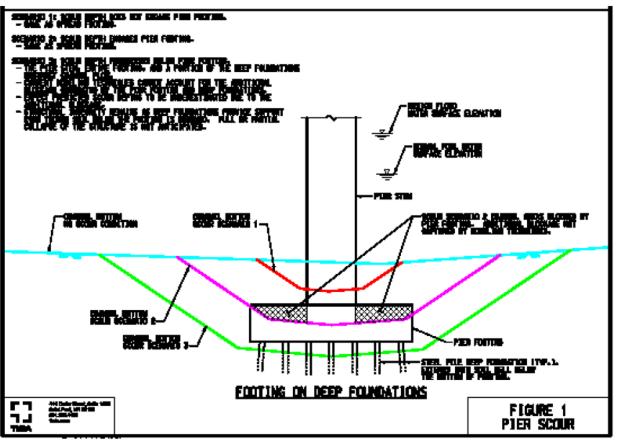
### **Analysis Outcome:**

 Alternative 3 satisfies the purpose and need with the lowest level of impacts and is therefore the proposer's preferred alternative.

# Scour Figure 1

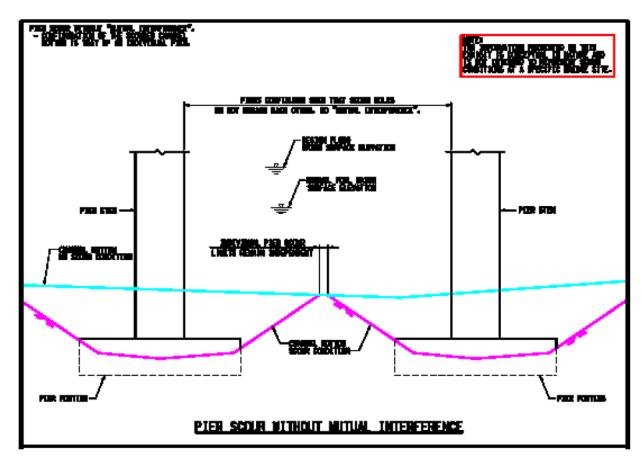


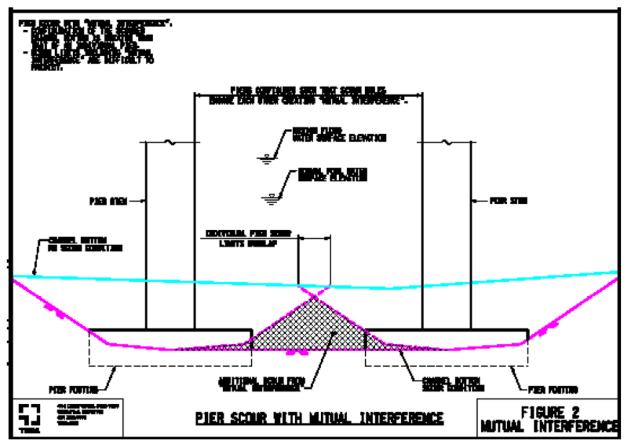


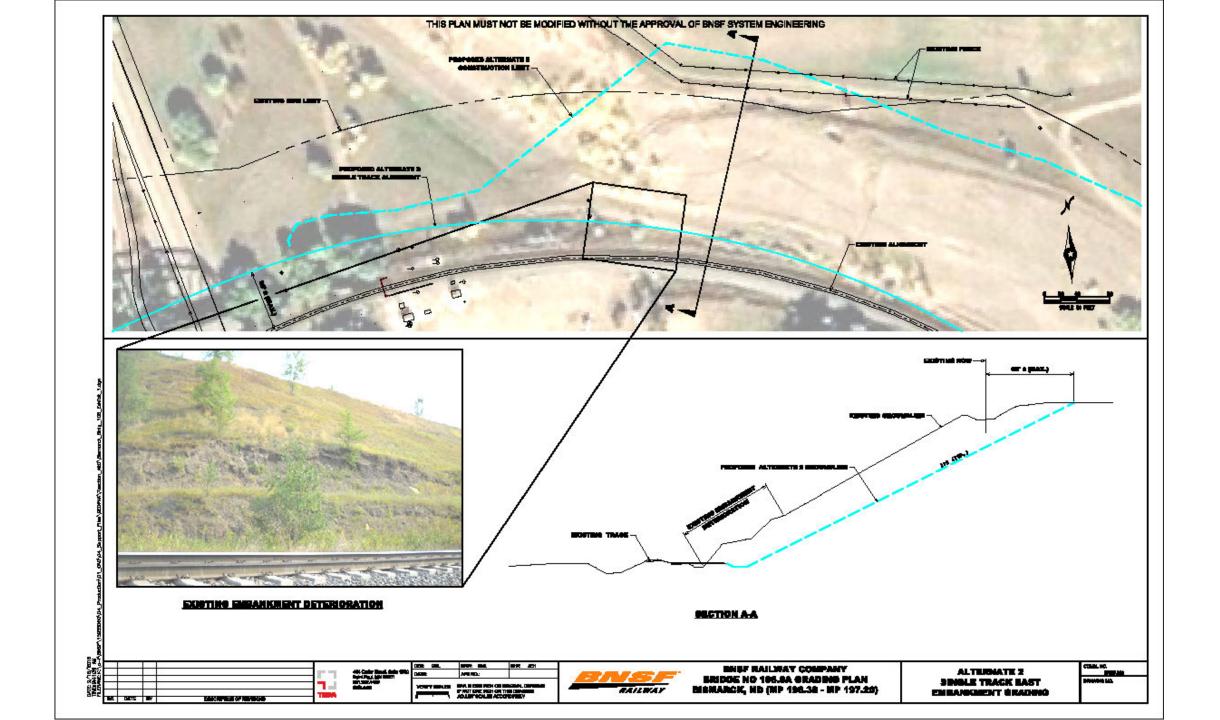


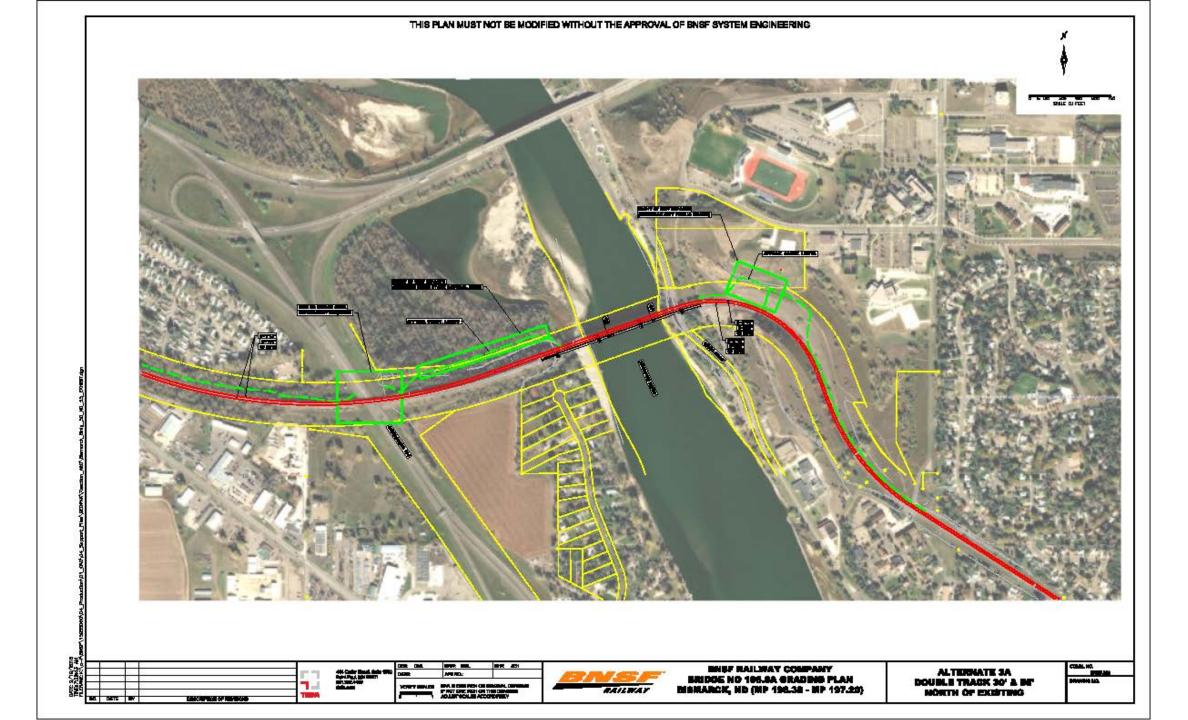
# Scour Figure 2

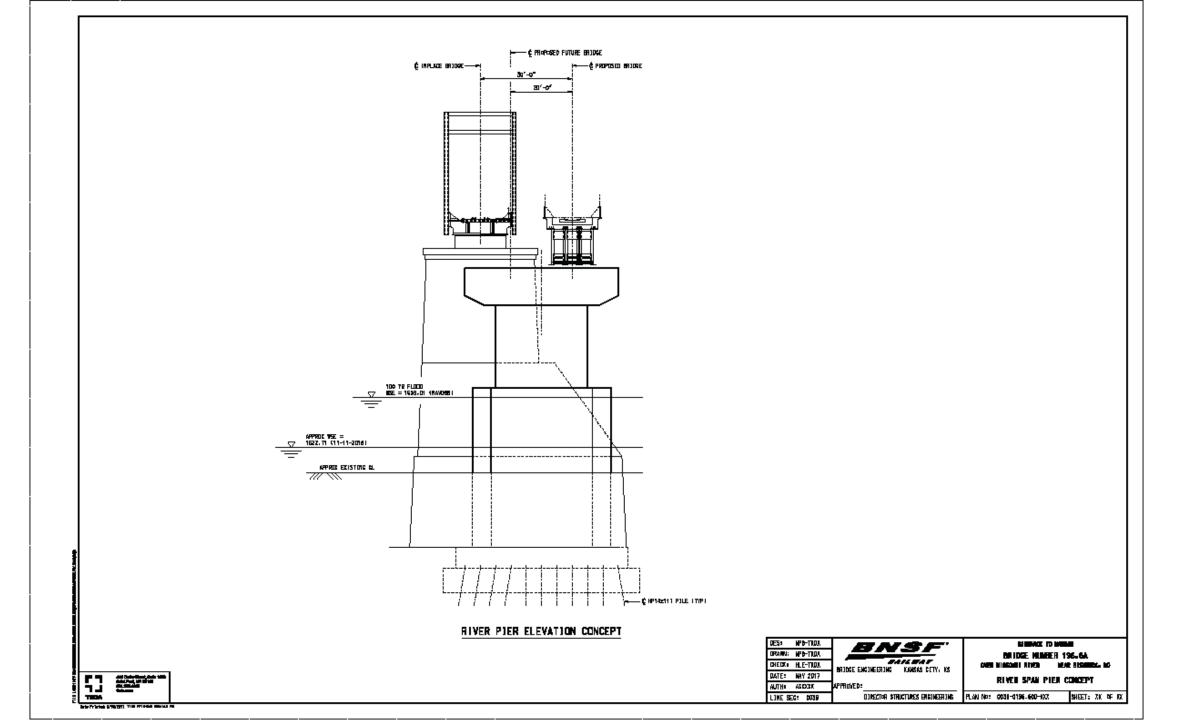












SIGN-IN SHEET FOR SECOND SECTION 106 CONSULTING PARTIES MEETING FOR THE PROPOESED BRIDGE REPLACEMENT AT MILE 1315.0 ON THE MISSOURI RIVER NEAR BISMARCK/MANDAN, NORTH DAKOTA (ND SHPO REFERNCE 16-06360

Name In-Person	Organization	Email	Phone Number
Hans Erickson	BUSF MILDO		
Amy McBeth	BUSFIT		
Kattheen Spilman	Mandantisbried Society.		
Christopher 1 1-15	NDSHPO		
CITO I SICPINI	1 TP		
Tavid Keagle	Bismarck Historical Society		
Walter Balley Emilie Avariasson			
Emily Sakariassen Bob Shennon	Preservation North Dakota (FORB)		
ERIK SAKARIASSEN	FORT LINCOLN FOUNDATION		
mandy Perssen	Fizinds Of the Rail Bridge		
Cynthia Wagner Goulet	'. '.		
Annette Schilling Willis	Bismarck Tour Co.		
Annette Schilling Willis Amy Guthrie Sakariasser Valerie Barsie	National Trust Justish R		
Valerie Barsie	Friends of the Rail Bridge		
Nicholas Bradbury MATR ZIMMERMAN	Friends of the Rail Bridge Friends of Ma Rail Bridge		
	+ Frengs 6 1114 Nail 121192		
ROS Mc (AUKG)	BMSF		
1500 116 -	000		
Attended via telephane			
Kitty Henderson	Historic Bridge Foundation		
Kristina Quaempts	Northern Cheyenne THPO		

# Proposed Bridge Replacement at Mile 1315.0 on the Missouri River near Bismarck/Mandan,

# North Dakota (ND SHPO Reference 16-0636)

# Section 106 Consulting Parties Meeting #2

# **Minutes**

# Monday, May 14, 2018

# Lecture Rooms A & B, North Dakota Heritage Center

### **List of Attendees:**

#### In-Person:

Rob McCaskey (U.S. Coast Guard)

Kristopher Swanson (BNSF)

Amy McBeth (BNSF)

Lori Price (Jacobs, BNSF)

Ben Roberts (Jacobs, BNSF)

Susan Quinnell (North Dakota SHPO)

Hans Erickson (TKDA, BNSF)

Kathleen Spilman (Mandan Historical Society)

Christopher Wilson (Advisory Council on Historic Preservation [ACHP])

Jay (Did not sign the sign-in sheet) (No Affiliation)

David Keagle (No Affiliation)

Walter Bailey (Bismarck Historical Society)

Emily Sakariassen (Preservation North Dakota)

Bob Shannon (Friends of the Rail Bridge [FORB])

Erik Sakariassen (Fort Abraham Lincoln Foundation)

Mandy Persson (FORB)

Cynthia Goulet (FORB)

Annette Willis (Bismarck Tour Company)

Amy Guthrie Sakariassen (National Trust for Historic Preservation)

Valerie Barbie (FORB)

Nicholas Bradbury (FORB)

Mark Zimmerman (FORB)

Mike Herzog (BNSF)

### Via Telephone:

Kristina Quaempts (Northern Cheyenne Tribe)

Kitty Henderson (Historic Bridge Foundation)

# **Three Screens Displaying PowerPoint Presentation**

### **Timeline and Proceedings** (all quotations are paraphrased)

The meeting began at approximately 6:00 p.m. (CDT)

- Welcome and Introductions (Lori Price, Jacobs)
- Explanation that Rob McCaskey/USCG was delayed at the airport and would try to join later in the meeting, as soon as he could get there.
- Round-Robin style introductions
- K. Quaempts asked if any other Tribes were attending the meeting
- L. Price answered 'No'
- K. Swanson Safety Moment (Evacuation Plan)

- K. Swanson Meeting Purpose (Addressing the Requests for Information from the Jan. 31 meeting)
- C. Wilson Intro; Purpose of the ACHP
  - o Appendix A to 36 CFR Part 800 sets forth criteria for ACHP involvement
  - Meeting summary, especially in the absence of USCG rep.
  - Don't re-hash items from previous meetings
  - Allow for interaction between the consulting parties
  - o Problematic that the City of Bismarck was not in attendance
- K. Swanson touched on brief run-down of alternatives and BNSF's process for choosing the preferred alternative (Alternative 3)
- S. Quinnell Clarified intent that the point of this meeting is to get beyond the engineering analysis; how to avoid the adverse effect to the Bridge
- K. Quaempts signed off and asked for the meeting minutes
- S. Quinnell asked for clarification of Alt. 2, specifically the northern side where the conservation easement is located
- H. Erickson clarified about the ROW challenge at the east approach, the dimension we have shown at that location is about 60' that our construction limits will extend outside of ROW; I don't have a number for the ROW for alt. 2 with me tonight, but that data is available
- K. Henderson in the 12/14 meeting minutes, Alt. 1 differs from the one presented tonight
- K. Swanson stated that multiple variations vetted along the existing alignment
- V. Barbie Asked if BNSF had consulted with ND DOT about mitigation for I-94 wetland mitigation and land swap
- K. Swanson- No
- V. Barbie I would advise consultation with ND DOT
- H. Erickson Parks and Rec. has said that the land is set aside for recreation purposes only
- E. Sakariassen To clarify, you have not entered into consultation with ND DOT?
- K. Swanson That is correct
- C. Wilson No one is here to hinder infrastructure in N. Dakota; the purpose is to discuss beyond NEPA or other environmental consideration, the point is 106 must be done prior. It's supposed to inform the overall process. So, I'd like you to lighten up on the overwhelming engineering analysis, but to move on to what are some viable options to leave the Bridge in place
  - o Economic viability, partnerships, looking at avoidance
- K. Swanson the technical aspects were included here as response to requests from the previous meeting
- C. Wilson Do you have official documentation from FEMA?
- BNSF Yes, it's all with USACE
- C. Wilson reiterated concern that FEMA, USCG, and the City are not here [at this meeting]
- K. Swanson has everyone had a chance to review the letter addressing the questions from the last (1/31) meeting?
  - Let's pull that up on the screen to review, do we want to discuss it line by line
- K. Swanson Are there any questions?
- Bob Shannon (FORB) asked about Independent structural analysis, would like to request a copy of most recent bridge inspection report
- K. Swanson BNSF structural survey is proprietary information, and you would want an independent survey of it if you're to take on the responsibility
- M. Herzog That's not something that's shared with the public as part of BNSF internal policy
- N. Bradbury In the letter, [BNSF] had determined that the Bridge has met the end of its useful life span, so, is the Bridge safe?

- K. Swanson Yes, and this was addressed at the last meeting, the reason we approach these
  issues so early, BNSF can't wait until the 'just in time', and it would not be in our best interest to
  wait until it isn't
- N. Bradbury in G. Morrison's final report Piers 1 & 3 have been constructed dozens of feet below bedrock
- H. Erikson Original pier foundations are known as spread-footings; bedrock is actually clay stone material is the bearing strata for the current piers; with today's technology and bridge design techniques such as deep foundations (in this case driven steel piling) would be used.
- K. Swanson How deep do the piles go?
- H. Erikson beneath the bottom of the footing, the distance is about 70'
- C. Wilson No one doubts the need to replace the Bridge, and this meeting is being run by Engineers, and not the permitting agency; In order to not run the clock down, please limit the engineering discussion; what has been done since the last meeting to move this meeting forward?
- L. Price At the last meeting there were several questions on why BNSF can't just do avoidance and leave the Bridge in place
- After that meeting, FEMA provided a response on the project requiring a "no-impacted structures" condition. Can't achieve that with two bridges
- Also, BNSF compiled the letter with the items to be considered if a third party was to take control of the Bridge
- Have there been any meetings with the City since the last meeting?
- K. Swanson They have not expressed interest
- BNSF Neither Bismarck nor Mandan were interested; they were invited tonight and did not come
- C. Wilson Has the issue of leasing been addressed? What about other Bridges that have been donated?
- BNSF Yes, we have many examples of Bridges that have been donated. The main difference
  with all of these examples is that they were for abandoned rail lines, not adjacent to or along
  active lines
- C. Wilson This is not consultation without the agency being here
- E. Sakariassen At the last meeting, I'm the one who took us back to 106. Referring back to the question by Aaron Barth, if someone has the interest in seriously taking over the bridge, is BNSF willing to consider having a pedestrian track right next to an active ROW? The sense I get is that you have only wanted to have Alt. 3 as the only alternative.
- E. Sakariassen Concern that construction operations will disrupt the River boat
- E. Sakariassen Referring back to the Class III inventory done for this, I just want to ask Susan [Quinnell], is it standard for [consultants] to suggest mitigation alternatives?
- S. Quinnell They're allowed to express whatever their client has suggested
- E. Sakariassen Does the SHPO normally consider these alternative mitigation suggestions as part of their MOA
- S. Quinnell we can consider them, but it was so entirely premature
- E. Sakariassen So if there are mitigation suggestions presented this early in the process, is it possible that that might be misleading to a client to what our alternatives are?
- S. Quinnell It's my suspicion that these mitigation suggestions came from the client
- E. Sakariassen we're all talking about 106 and mitigating adverse effects; he then goes into specifics about the riverboat and its economic viability.
- K. Swanson If none of the concerns alarm the group that's willing to take control of the Bridge, then OK, but that was the intent of the Letter, making it clear as to why the two Bridges cannot be left in place together

- H. Erickson- Scour explanation referencing the figures sent out prior to the meeting
- Unknown- And the pilings are 70' long?
- H. Erickson Yes, the pilings are 70' long; continues with the technical presentation regarding scouring
  - o Three different scour conditions presented in the materials provided
  - The blue line presented is the river bottom in a static condition
- K. Swanson when would that have existed in history?
- H. Erickson At the date the line was drawn, so, the Missouri River is a very dynamic system, and that blue line is constantly fluctuating, so it's as good as the date it was drawn on paper
- K. Swanson Is it reasonable to believe that it was probably only like that when it was originally constructed?
- H. Erickson Good question, it's reasonable to believe that it's going to change seasonally and as the flow flushes through the River
  - These are just conceptual figures, just showing characteristics of construction types and how they relate to scour
  - In terms of the spread footing, there's a term that's used that's called 'scour critical', represented by the green line on the exhibit.
  - Shown there is the scour limits that's produced in a flood or high flow event, projecting bottom of River bed down to the green line, so all the material between the green and blue lines gets washed away in a scour event
  - The challenge with a spread footing condition, is you've interrupted that load path, so there's no load path between bottom of footing, and bottom of channel, so it's termed scour critical, meaning that collapse, or partial collapse, could result because we've lost that support underneath the footing in this scenario.
  - o To mitigate this, is to use the deep foundation, these pilings
  - There's two phenomenon that we're going to use for the scour, one on exhibit 1, the other on exhibit 2
  - So, how the scour limits are determined one of the key ingredients, or parameters that's used, is the width of the pier stem, meaning how much of that pier is blocking flow of water moving through the River channel, that is a static variable. There's a single parameter
  - o Two scenarios presented in both exhibits:
    - One is defined by the red line (scour scenario one), a scour limit that projects down along the pier stem, but it doesn't go down deep enough to where it engages a pier footing, as a result, this is based on the pier stem width, so we have a pretty good reliability on the overall limits of scour that are predicted in this scenario.
    - ➢ If the scours depths and limits were to increase slightly, down to a depth that's presented by the magenta line, you can see that we've projected down to a depth where we start to engage the footing of the pier itself, and by doing so, we've exposed some portions, that are blocking or restrict flow, so by introducing this additional blockage, there's some degree of estimation of the overall scour that we've predicted, and this is what our analysis has identified.
  - Are there any questions so far?
- C. Wilson Do you have a conclusion, because this is not an engineering course, so you're point is...?
- H. Erickson Then we have two phenomena that we have identified by calculation that introduce risk into the proposals to keep the existing bridge in place

- B. Shannon It's my understanding that there's a cohesive layer below that may not be subject to scour, is that part of your analysis?
- H. Erickson No, that was not part of the analysis, there's no delineation of material types that were used, and I am also telling you that our analysis does not show a scenario where the scour extends below the existing footing in scenario 3.
- C. Wilson We've got 45 mins left, can you speed this up?
- H. Erickson Sure, let me get to this 2<sup>nd</sup> point:
  - we've identified one aspect that's introduced some unreliability in terms of the overall scour
  - o so the 2<sup>nd</sup> behavior that I want to point out here is known as mutual interference; references the exhibits that show two limits for source that don't engage each other.
  - You can imagine that if we move these piers closer together, the limits of the scour are going to start to interfere, or intersect, with each other, and this behavior is known as mutual interference
  - This is something that [current] technology does not have the ability to accurately
    predict, so what's typically done is that you connect the two bottoms of scour holes
    between adjacent structures.
  - Since we're dealing with spread footings, that we believe that this scenario presents unacceptable risk
- Unknown Has it been considered to build a bridge that does not put additional footing in the
  water, or a curved bridge, that allows the footings to be put even further away from the existing
  bridge?
- K. Swanson Element of feasibility; is it possible from an engineering stand point? Yes, but we would not be able to afford that, no matter how deep the pockets you think BNSF has
- Unknown But, it could be done?
- K. Swanson Absolutely, but who's going to pay for it?
- V. Barbie So you haven't explored the option with the DOT to utilize that land, or you haven't explored in the EA to use the existing bridge as a pedestrian?
- Mandy Person I'd like to explore the scour issue? That is something I'd like more info. about, the scour, because that really affects what we can do
- Mandy Person One of the things I'm interested as a leader for the FORB group is the scour issue
- V. Barbie are there techniques to mitigate scour?
- H. Erickson There are techniques to mitigate scour, scour counter-measures, Rip-rap, but it's
  not really a long-term solution, does require maintenance and monitoring over time, so not
  really a long-term solution, and does not address the mutual interference issue
- M. Zimmerman I'm not an engineer, but there has been a lot of scour against that Bridge is been here since 1884, and it seems to me that from that design for the Bridge, that it's held up for 130-some years; go to the City of Bismarck and ask them about cutting into that bank, is there a new model, and new way to cut into that bank?
- M. Zimmerman Our group, FORB, met with the Burleigh County Commission, and they passed a resolution, and are very interested in looking at alternatives for saving the Bridge
- M. Zimmerman What about building the new Bridge and keeping the existing bridge as a siding as provided at the 12/14/18 meeting? I don't see the honest attempt at finding alternatives.
- C. Wilson 106 is handicapped here; more people need to be at this table; the USCG needs to do a better job of getting stakeholders to the table; I want the USCG to participate more. As we all know, 106 has no teeth, but we can gum you to death.
- A. McBeth I saw that the County has said that funding is not available from the last meeting
- A. McBeth Fairview Bridge different deal, that's an abandoned rail bridge
- C. Wilson can we hear from Kitty Henderson at HBF? Positive and negative examples

- K. Henderson (HBF) There is an example of Big River Crossing with an active rail line next to a pedestrian bridge
- K. Henderson (HBF) There is concern about the liability; I've seen saving smaller bridges be more successful. Some groups have taken 10 years to raise the funding
- C. Wilson what about partnerships with municipalities and the owner of the Bridge to share the liability? Can you send these examples to the USCG?
- K. Henderson (HBF) Yes, I'll send a list along
  - C. Wilson This is not new, these issues have been addressed around the Country for 50 years.
  - This meeting is a bit like the fox guarding the henhouse for me, it's run by BNSF, their PA person, their consultants, and their engineers. It's like this is a meeting without all the constituents that need to be here, and I'd like to encourage BNSF to do, and this would be with USCG as the lead, is please don't have any sidebar discussion with the municipalities and discourage them from taking on some of these issues.
  - The whole point of 106 is to shine the light on these processes. But we can't get there without all of the elements being represented.
  - The USCG has got to do a better job having these discussions in an open format, not in a backroom type of meeting; I'm very concerned
- A. McBeth To clarify, there have been no back-room meetings; the county commission
  meeting was a public meeting and they got an invitation to this meeting just like the other CPs
- C. Wilson What's the USCG going to do to have better local participation?
- L. Price At the last meeting, when both Cities were here as well as the USCG, we had the specific conversation with the local municipalities, and the answer was no, they declined express any interest; we have been including them. We conveyed that at the last meeting and tried to get them to engage.
- R. McCaskey arrived at approx. 8:45 pm CDT
- B. Shannon Getting back to the 106 process, you want a new Bridge, we want to preserve the Bridge; our group (FORB) has been investigating things like ADA access, how does BNSF maintain access to the ROW
- E. Sakariassen FORB We're making an effort to hold public input meetings; to give info. to the City and the people
- E. Sakariassen FORB what other examples do you have? What other things have been done?
- C. Wilson Since USCG rep. is now here, this meeting can count as formal Section 106 consultation
- Valerie NEPA process started without true consultation, and it seems like the MOA has already been drafted
- L. Price there is no draft MOA...I'm the one who would be drafting it, and there is no MOA
- V. Barbie I don't see culture addressed in the EA
- USCG R. McCaskey The EA is in draft Form and shouldn't yet be seen by the Public; not what we're here to discuss tonight
  - o I will welcome your input when we get to that point
- A. Willis Is the railroad open to considering preserving the Bridge, or is it a foregone conclusion?
- K. Swanson There is no foregone conclusion here; we have not pre-determined anything
- C. Wilson –There are some missing constituents, ie, the municipal involvement, etc, we can't force people to attend these meetings. This is a high-profile case, it's on the director's report. On the upside, I think there has been some movement on the process
- M. Zimmerman Our group has formed a 501c3, and the FORB is applying for a grant to hold those public meetings; locally we're going through a Mayoral election, we'll meet again with the County Commissions; I hope that our grant will be approved soon and we'll be back in the

community to address some of the alternatives; I found it interesting that our County Commission has backed the process (although not financially); I would hope that all the examples of saving a Bridge will be looked at. Please bring us some more ideas and examples back

- Unknown I brought a short letter and our articles of formation/resolution of our Group; Mark did include everything I wanted to say; in summary, I'm really happy to be at this meeting, but one week is not enough time to plan for attending; would prefer 2 weeks notice
- K. Swanson on that note, we took what we could get, understanding that there's going to be more meetings.
- L. Price we want to explore more frequent meetings, and go ahead and pick a few dates
- C. Wilson 106 is not designed to slow down your projects. Setting some dates is a really good idea, and if you can, get more City participation.
- K. Swanson Kitty was involved with one consultation in Washington that met bi-weekly and it
  was fairly successful
- C. Wilson We realize your project has to move forward, and how your freight needs to keep moving and we all benefit from the goods and services from the railroad.
- If you live in Bismarck, then this is personal, but this also has national attention, and there are lots of eyes on this project.
- R. McCaskey I'll be here in person every time my boss will pay for it
- C. Wilson I review every USCG, NPS, NIST, Smithsonian, USBP adverse effect determination.
   My experience with the USCG is pretty good, we've done training with them recently; my perception of the USCG is that they're very conscientious that they're following the law
- L. Price I do many USCG consultations, and I would agree
- Unknown It could be a matter of months, and I want to get back to the matter of setting a recurring meeting
- K. Swanson Weekly is sometimes too often, so I propose bi-weekly
- L. Price I'll send out some proposed dates, there is no norm
- C. Wilson every case is different
- L. Price Every 3 weeks is reasonable, and we can keep it flexible
- K. Swanson Bi-weekly conference call, and in person meetings as needed
- R. McCaskey Tri-weekly is recommended
- Unknown Can we have an agenda ahead of time?
- C. Wilson after June 3<sup>rd</sup> or 4<sup>th</sup> is my request for the next meeting
- Unknown BNSF is really hanging their hat on the Scour issue can we make the diagrams more presentable?
- K. Swanson Yes
- Unknown How about the alternative of a curved Bridge?
- A. McBeth The idea of a curved bridge is not an industry standard, but we're not going to
  design or build something that is not safe or industry standard); we have 300 employees and
  their families that live in the area, and we're going to do something that's safe
- K. Swanson They're out there, and we said it's possible but not feasible
- C. Wilson What about other examples of BNSF bridges that have been preserved?
- C. Wilson One of the things about 106 is that it brings us all together; this would bring a lot of
  public good-will to BNSF if the Bridge is preserved; is it too much to ask to consider that as a
  corporation? Corporations used to have an obligation to the communities they operated in
- A. McBeth We do have a lot of goodwill given to the communities and give money to the communities in which we operate. The very building we are meeting in, BNSF donated \$300K toward its remodeling. I want you to understand that we see the communities as partners, and we absolutely see the value of the Bridge; it's one of our corporate values
- C. Wilson I don't think you fully do

- A. McBeth And we have an obligation to operate safely, and I'd be careful here on how you talk about it
- C. Wilson I don't have to be careful, I work for and independent agency and we're a watchdog, and I'm tired of hearing from paid employees from BNSF, and until [R. McCaskey] got here, this wasn't even 106. This is very high-profile case
- A. McBeth We very much understand the high-profile aspect of this project and it's important enough that we brought experts from each of the fields involved
- C. Wilson I'll work with USCG to get the local governments to the table
- R. McCaskey I appreciate your help in getting the local municipalities to come
- S. Quinnell One option would be can we find examples of a RR letting their historic bridge be leased until they needed the ROW
- K. Henderson I don't have any examples, but I'll try to get some more information
- S. Quinnell 4(f)?
- L. Price Provides an explanation for why Section 4(f) does not apply to this project. It's not a Dept of Transportation project.
- Unknown It would behoove us to talk about the agenda for the next meeting,
- C. Wilson If it would help, I could bring FRA into the discussion, think about that
- Unknown I want to re-iterate here, the timeline, and we've been pursuing our grant to hold public meetings, know that's it's going to take some time to get our effort for input going, and our own public meetings.
- K. Henderson UP bridge in AR, example provided
- L. Price that doesn't have a live ROW adjacent to it, the ROW was abandoned
- K. Swanson If BNSF was abandoning this line, then it would be a completely different situation
- C. Wilson Is it possible that 6 months from now, would your [BNSF's] Senior Management attend? They're welcome to attend these meetings by the way?
- M. Herzog introduces himself and his role; our job is to assess the feasibility and the permanent solutions for Bridges
- Unknown One [request] for BNSF, is to get the FEMA topic on the agenda for the next meeting.
- K. Swanson Yes, there are flood plains and floodways. FEMA says that BNSF is not allowed by FEMA from a regulatory aspect to have an impact to these.
- Unknown Agenda sent out in advance for the meetings. Can the CPs have topics added to the agenda for the meetings?
- L Price Yes
- Unknown Scour added to the agenda for the next meeting?
- L Price Yes
- M. Herzog I would ask FORB, some research with contractors, what does it take to maintain a 120-year old rail bridge? What keeps them up at night?
- C. Wilson Remember Kitty's assignment for other examples of Bridges, to get on the agenda of not just the analysis of the existing conditions, but the phased approach; it always amazes
- L. Price I don't think they want to get rid of them, let's just be careful how we phrase that
- C. Wilson I'm not going to be careful, and this is just a preview of future meetings; the point of 106 and emphasize with the coast guard for the next meeting is to try to think about partnerships of leaving bridges in place

The meeting ended at approximately 8:54 p.m. (CDT)





# FORB – Friends of the Rail Bridge

Established 2018 | Bismarck, ND 58503 | (701)220-4513 | savethebridgebismarck@gmail.com

Mr. Robert McCaskey Bridge Management Specialist USCG District Eight Bridge Branch 1222 Spruce Street St. Louis, MO 63103-2832

4/7/2018

To United States Coast Guard:



On April 3, a group of over 50 community leaders met at the North Dakota Heritage Center to organize Friends of the Rail Bridge. Our bridge, crossing the Missouri River between Bismarck and Mandan, represents the oldest, most well-built piece of industrial infrastructure in the state and on the upper Missouri River. It is contemporary with the construction of the Brooklyn Bridge, and was built with similar construction methods. It is the iconic landmark in our state and indeed, predates North Dakota's statehood by 6 years. BNSF, whose trains run across the bridge, is planning to reroute the tracks to a new bridge and subsequently demolish our cherished bridge. We feel strongly that this would be a loss of a national treasure. We are seeking solutions to preserve the bridge, forming an organization to facilitate repurposing the bridge for public use.

We are including our Historic Bridge Resolution which was unanimously approved in our meeting. We have filed as a nonprofit in the state of North Dakota (certificate pending).

We hope that our elected and appointed leaders will support our efforts to save the historic Missouri River rail bridge between Bismarck and Mandan, North Dakota.

If you have any questions, please contact us at 701-220-4513.

11 MATERIA

Sincere

Mandy Persson

Nicholas Bradbury

## Friends of the Rail Bridge - Historic Bridge Resolution

Whereas, Burlington Northern Sante Fe (BNSF) wishes to build a new railroad bridge across the Missouri River between Bismarck and Mandan, North Dakota; and

Whereas, BNSF's Alternative #3, which BNSF prefers, includes destroying the historic BNSF railroad bridge at mile 1315; and

Whereas, at SHPO consultation meeting #1 held on January 31, 2018, Lori Price, (Consultant to BNSF) stated, "We have talked about the possibilities of leaving the bridge in place after the comments received at the public meeting. Are there any entities that would be willing and able to take ownership of the bridge?" and

Whereas, the United States Coast Guard (USCG), in a letter dated September 20, 2017, to the State Historic Preservation Office (SHPO), stated the bridge eligible for listing in the National Register of Historic Places "for its association with broad patterns of railroad, commercial, and military history in the United States and with engineer George Shattuck Morison." It is also eligible for listing in the National Register of Historic Places in the areas of Design and Construction; and

Whereas, in same letter mentioned above, "the USCG has determined the project to have a finding of Adverse Effect to Historic Properties," and invited SHPO "to enter into consultation on a Memoranciam of Agreement to seek ways to avoid, minimize, or mitigate the adverse effect"; and

Whereas, after a SHPO consultation meeting held on January 31, 2018, BNSF indicated the cost to demolish the historic BNSF railroad bridge would be approximately four million dollars; and

Whereas, public recreation trails are located immediately adjacent to the historic BNSF railroad bridge on both sides of the river and direct connection between them would greatly enhance public recreation in our region; and

Whereas, other organizations across the United States, including an organization in Fairview, ND/ MT, have taken ownership of historic bridges and used them for recreational purposes; and

Whereas, after study, it appears possible to seek solutions for the repurposing effort and to provide an organizational structure that could endow funds for conversion, liability, inspection, maintenance and other requirements of transferring ownership,

Therefore, be it resolved, citizens who would like to see the historic BNSF railroad bridge left in place are forming a non-profit organization, Friends of the Rail Bridge (FORB), which is willing to take ownership of the bridge, with the goal of using the bridge as part of a recreational trail system between the cities of Bismarck and Mandan, ND. FORB intends to assume all liability, be responsible for inspection, maintenance, and discuss right of way issues with BNSF.

10.Rob

April 7, 2018

Nancy K Willis

RECEIVED

APR 1 3 2018

8TH COAST GUARD DISTRICT BRIDGE BRANCH

Mr. Robert McCaskey Bridge Management Specialist USCG District Eight Bridge Branch 1222 Spruce Street St. Louis, MO 63103-2832

Dear Mr. Robert McCaskey,

I am writing to you because of my concern for the dismantling of the 1882 BNSF railway bridge spanning the Missouri River from Bismarck to Mandan. This bridge has become such a beautiful symbol of the work involved to reaching the West.

Many years before trains crossed the river on the Missouri people and horse drawn wagons took a ferry. Large, heavy loads were to wait till mid winter when the river froze and train tracks were laid on the ice to cross.

We find this bridge to be beautiful and an echo of the past, a relic to be preserved and used by the public as a walking path, eventually connecting everyone to paths on either side of the Missouri, so it's not necessary to be walking the busy highway bridges so close to cars and trucks. It will also be a romantic vision of the past that we can all enjoy.

The hundreds using the paths in Bismarck/Mandan now will heavily use this new public access, across the Missouri. People love innovative ways of reinventing treasures of the past for our present lives. I suspect even more will use our paths with this "footprint of our past."

The old BNSF Bridge is fun; it's beautiful, an iconic symbol, a landmark for a hundred years or more to come. It will be admired by those who visit, those who see it from our other bridges and hills, and those who just want to remember what a good life we have in our cities united.

Let's us keep this wonderful piece of history.

Thank you,

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# Mandan Historical Society 3102 37th St NW PO Box 98 Mandan ND 58554

May 14, 2018

HAND DELIVERED

Mr. Rob McCaskey Eighth Coast Guard District 1222 Spruce Street Suite 2.102D St Louis, MO 63103-2832

# Sec. 106 Consulting Parties Proposed BNSF Bridge Replacement on Missouri River (ND SHPO Reference 16-0636)

At your invitation, and as authorized by the Board of Directors of the Mandan Historical Society, our organization offers the following observations and recommendations.

While it will be beyond disappointing to allow removal of the existing Northern Pacific "high bridge" bridge due both to its place in the community and its historical significance, the Mandan Historical Society directors have concluded if a new bridge is built, it is unlikely the existing bridge will be retained. The City of Mandan is concerned over river flow/ice jams/flooding impacts a second set of bridge piers will bring. The US Army Corps of Engineers is concerned over compounding the river bottom scour threat with two bridges in near proximity to each other.

We will likely leave the final alternative debate to other parties. But if the bridge is removed, we are concerned that its significance to the City of Mandan's history will not be adequately documented and retained for future generations. Per my earlier email, the Class III archeological study was completely devoid of any reference to the significance of the bridge's impacts to our Mandan's history and must be addressed if the existing bridge is removed or relocated.

In general, we are supportive of any permanent display regarding the bridge – including possibly portions of the current bridge and interpretive panels as an outdoor display - at the ND Railroad Museum.

We also recommend professionally produced short documentary videos of 10-15 minutes each in length be made on (1) the current bridge, (2) the new bridge design and construction, and (3) on how the selection of the final bridge crossing point halted the land speculation on the west river bank as to the final location of the City of Mandan. Specific topics should include the debate on who get's credit for naming

the city (a RR official or a local land speculator), the pioneer postmasters playing games with the city's name and other information associated with the earliest days of the city. There are two wonderful well researched professionally articles including one authored by the State Historical Society of ND, that have compiled more than enough info for a short video. We can provide electronic copies of both articles to you or BNSF (although BNSF likely already has copies). The Mandan Historical Society can offer its services to compile/write the scripts based on its records and familiarity with the city's early history and would like script/text review and approval for historical accuracy for any displays or videos.

Again assuming the existing bridge is removed, the Mandan Historical Society respectfully requests a monetary donation in order to purchase and install a large screen TV and computer to run the video in our museum area as well as a small donation to our Foundation to continuing costs for the display.

At the January 2018 consultation meeting in Bismarck, members of the Bismarck Historical Society identified another gross omission from the prepared history of the bridge. Fort Frazier artillery emplacement/army encampment during WWI (named for one of the most colorful political characters in our state's history) also involved in another noteworthy and colorful political character in our state's history, i.e. William Langer being arrested for sneaking across the bridge in the dead of night while serving as the State's Attorney General. The State Historical Society of ND has at least one photo of it. A record should exist of its establishment to protect the bridge from sabotage / attack etc. during WWI. We defer to the Bismarck Historical Society as to an appropriate historical perspective on this particular subject.

And we would certainly support a fourth video produced on the history of Bismarck leading up to the final project approval and site selection as well as impacts to the city once the bridge began operation.

Finally, the records for the old bridge must be transferred to a state historical society. While we would prefer the State Historical Society of ND in Bismarck, our members have compiled a lot of information on the bridge already including research of the records maintained by the Minnesota Historical Society and we know how extensive their collection is. Housing the records with them would be our second choice.

Thank you for your consideration.

Sincerely,

Kathye Spilman, Secretary Mandan Historical Society