

BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

BNSF RAILWAY COMPANY,
Petitioner
vs.
YAKIMA COUNTY,
Respondent,
YAKAMA NATION,
Intervenor.

DOCKET NO: TR-140382 and
DOCKET NO: TR-140383
PREFILED TESTIMONY OF
GARY NORRIS

INTRODUCTION

Q: Please state your full name and job title.

A: Gary A. Norris, P.E., P.T.O.E. I am a Project Manager/Senior Traffic Engineer at DN Traffic Consultants, Preston, Washington.

Q: Please describe your background and qualifications.

A: I have more than 30 years' experience in traffic engineering and transportation planning both as a consulting engineer and a traffic engineer and planner for local governments. I have developed traffic management plans and other traffic engineering

1 designs for large public work projects. As a private consultant, I have conducted more
2 than 1,000 traffic impact analyses.

3 Previously, I was Renton's city traffic engineer for ten years, and was responsible for
4 the planning, design, construction, operation, and maintenance of the city's
5 transportation facilities, including 5,000 luminaires and 100 traffic signals. I am also
6 the past president for the Washington State Section of the Institute of Transportation
7 Engineers.

8 I have an undergraduate degree in Civil Engineering, Traffic Engineering, and a
9 graduate degree in Civil Engineer, Transportation Planning, both from the University
10 of Washington.

11
12 Q: Have you worked with at-grade railway crossing closures before?

13 A: Yes. During the last 15 years, I have been involved with BNSF and the Washington
14 State Department of Transportation Rail Office on approximately 15 individual
15 projects involving the closing or opening of 21 individual railway crossings. Of these,
16 six have required testimony before the WUTC. One involved testimony before the
17 Federal Railroad Administration.

18
19 Q: Please describe your involvement in and review of the Barnhart Road and North
20 Stevens Road crossing closure petitions, and what you were asked to do.

21 A: BNSF has petitioned the Washington Utilities and Transportation Commission for
22 closure of two at-grade railway crossings, located at Barnhart Road and North Stevens
23 Road on the Yakama Indian Reservation near Toppenish, Washington. I was asked to
24 summarize the traffic-related issues of the proposed closure of the two at-grade railway
25 crossings. I examined the impacts to traffic and access, including traffic volumes,
26 emergency access, school bus routing, and accident history. I have also considered the
27 potential impact to access for community facilities, including Yakama Nation tribal
activities, and farmlands.

1
2 Q: I'd like to begin by talking about at-grade railway crossings generally. What are some of
3 the impacts of at-grade railway crossings?

4 A: The adverse impacts of at-grade railway crossings are significant. In fact, a Washington
5 statute states that "[a]ll railroads and extension of railroads hereafter constructed shall
6 cross existing railroads and highways by passing either over or under the same..."¹ In
7 other words, no new at-grade crossings are to be added.

8 The Federal Highway Administration has stated that "[e]liminating redundant and
9 unneeded (railway) crossing(s) should be a high priority."² That's in part because
10 "[n]umerous crossings were built when railroads first began operating," and "[s]afety
11 was not a serious concern because horse-drawn carriages could easily stop and train
12 speeds were low."³ Today, vehicles aren't able to stop in the same time frame as the
13 horse and buggy, and train speeds are considerably higher—many requiring at least a
14 mile to make an emergency stop. As a result of the changes in vehicular and train
15 operating characteristics, at-grade railway crossings have become unsafe.

16
17 Q: What are some of the reasons why crossings are considered for closure?

18 A: Decisions to close at-grade railway crossings are based on a balance of necessity,
19 convenience, and safety.⁴

20 BNSF has been working aggressively to improve safety at at-grade crossings. Since
21 2000 the BNSF closure program has closed more than 5,600 at-grade crossings across
22 its 28-state network. Closing at-grade railway crossings is one of the most effective
23

24 ¹ RCW 81.53.020.

25 ²Railroad Highway Grade Crossing Handbook, Revised Second Edition, Federal Highway
26 Administration, August 2007. Section 4 – Identification of Alternatives.

27 ³*Id.*

⁴Railroad Highway Grade Crossing Handbook, Revised Second Edition, Federal Highway
Administration, August 2007. Section 4 – Identification of Alternatives.

1 ways to address grade crossing safety. Crossings that are redundant, have low crossing
2 volumes, are not emergency routes, or are private crossings that are no longer needed
3 are good candidates for closure.
4

5 Q: Could you briefly describe the background of the petition process used with the North
6 Stevens Road and Barnhart Road crossings?

7 A: Yes. The proposed closures have a significant history, which is important to consider as
8 part of the current deliberations. On October 12, 2012, Yakima County Department of
9 Public Works filed a petition with the Washington Utilities and Transportation
10 Commission ("WUTC") to close both the North Stevens Road and Barnhart Road
11 BNSF railway crossings⁵. On December 21, 2012, Yakima County issued Declarations
12 of Non Significance ("DNS") for the County's requested closure of the Barnhart Road
13 and North Stevens Road railway crossings⁶. On February 15, 2013, after the SEPA
14 appeal period, the Yakama Nation sent a letter to the UTC requesting that the crossings
15 remain open. On March 20, 2013, the Yakima County Commissioners issued a letter to
16 the WUTC requesting withdrawal of the petition to close the crossings. On March 10,
17 2014, BNSF petitioned the WUTC to close the crossings at Barnhart Road and North
18 Stevens Road.
19

20 Q: You have before you (Exhibit No. (GN-2)), showing a map. Could you describe it?

21 A: Yes. This map shows the location of the North Stevens Road and Barnhart Road
22 railway crossings, the towns of Toppenish and Granger, and the Satus Longhouse.
23

24 Q: You have before you (Exhibit No. (GN-3)), showing another map. Could you describe
25 it?
26

27 ⁵ WUTC Reference TR-121647 and TR-121648.

⁶ Yakima County Reference SEP 2012-00034 and SEP 2012-00035.

1 A: Yes. This map shows the location of the two crossings that are addressed in this
2 petition, and the multiple railway crossings between them. The figure also shows the
3 distance between all crossings and the crossing immediately to the northwest of North
4 Stevens Road crossing, and the crossing immediately to the southeast of the Barnhart
5 Road crossing: Meyers Road and Satus Longhouse Road respectively.

6
7 Q: You have before you (Exhibit No. (GN-4)), a table titled "Adjacent Crossings." Could
8 you describe it?

9 A: Yes. This table presents a summary of the proposed crossing closures, including the
10 distance and travel time to adjacent SR 22 crossings and the traffic control devices at
11 the adjacent crossings.

12
13 Q: Please describe the existing crossing at Barnhart Road.

14 A: The Barnhart Road Railway Crossing, part of Tribal Trust Allotment #T-614, is located
15 about three miles south of the town of Granger, Washington, and 200 feet north of SR
16 22. At the crossing, Barnhart Road is a two-lane paved roadway. To the north of the
17 crossing, Barnhart Road becomes a gravel roadway. The crossing itself is controlled by
18 cross-bucks, pavement markings, and stop signs.

19
20 Q: You have before you (Exhibit No. (GN-5)), a photo. Does that depict the Barnhart Road
21 crossing?

22 A: Yes.

23
24 Q: And what about the existing crossing at North Stevens Road?

25 A: The North Stevens Road railway crossing is about one mile southwest of the town of
26 Toppenish, and 150 feet south of South Track Road. North Stevens Road is a gravel
27 road at the railway crossing. The crossing is controlled by cross-bucks and stop signs.

1 Q: You have before you(Exhibit No. (GN-6)), a photo. Does that depict the North Stevens
2 Road crossing?

3 A: Yes
4

5 Q: Could you give a general overview of the train traffic and track at these crossings?

6 A: Yes. At this time, about 12 to 14 freight trains come through each day. The approved
7 and existing train operation speed is 49 miles per hour.

8 In the vicinity of these two crossings, BNSF runs generally east-west between Yakima
9 and the Tri-Cities (Pasco, Richland, and Kennewick) in central Washington. The
10 railway is a mainline common carrier with no passenger trains. The Barnhart Road
11 crossing is located at railroad milepost 62.40. The North Stevens Road Crossing is
12 located at railroad milepost 68.40.
13

14 Q: What, generally, is proposed for the crossing closure?

15 A: If approved, both crossings will be closed so that vehicle traffic will be prevented from
16 crossing the railway. A gravel hammerhead would be constructed at each crossing to
17 allow vehicles to turn around.
18

19 Q: Did you look at traffic data?

20 A: Yes. Traffic volume data was collected for each of the two crossings.
21

22 Q: What were your findings with respect to that data?

23 A: For the Barnhart Road crossing, traffic was counted on Barnhart Road between SR 22
24 and the BNSF railway crossing. Over a three-day period, the morning peak hour volume
25 ranged from 8 to 11 vehicles per hour, and the afternoon peak hour volume ranged from
26 9 to 13 vehicles per hour. The 24-hour traffic volume ranged from 84 to 102 vehicles.
27 At the North Stevens Road crossing, traffic was counted between South Track Road
and the BNSF railway crossing. Over a three-day period, the morning peak hour volume

1 ranged from 7 to 12 vehicles per hour, and the afternoon peak hour volume ranged from
2 10 to 12 vehicles per hour. The 24-hour traffic volume ranged from 64 to 74. On SR 22,
3 near the crossings, the existing traffic volume is estimated at 1,600 vehicles per day.
4

5 Q: Is this a significant amount of traffic?

6 A: No. These peak hours and daily volumes are low.
7

8 Q: How would closing the crossings affect traffic?

9 A: The closure of the Barnhart Road and North Stevens Road railway crossings would
10 require that some vehicular traffic be rerouted to other roadways in the adjacent
11 roadway network. Counts completed in the last six months on these roadways show that
12 reassignment of the vehicles from the two crossings will not affect the capacity of the
13 surrounding roadway network.

14 This finding is supported by the recent volume counts. For example, the 24-hour
15 volume on North Stevens Road northbound, 0.35 miles north of SR 22, is only 36
16 vehicles. The 24-hour volume on Barnhart Road northbound, 0.14 miles north of
17 Drainbank Road, is only 33 vehicles. These low volumes are consistent throughout the
18 adjacent roadway network, and therefore rerouting vehicles currently crossing at
19 Barnhart Road and North Stevens Road to the adjacent roadways will not adversely
20 impact the operations of these roadways and will continue to keep the volumes far
21 below the capacity of these two-lane roads.
22

23 Q: You mentioned crash history. What were your findings?

24 A: A review of the latest three-year crash history included data from the Federal Railroad
25 Administration (FRA) for the two crossings, the Washington State Department of
26 Transportation for SR 22, and the Yakima County Sheriff's Office for county roads.
27 None of the data sources—the FRA database, the Washington State Department of
Transportation, or the Yakima County Sheriff's office—indicated there were any

1 collisions related to these crossings during the latest three-year analysis period.

2 A review of the State of Washington Collision History for SR 22 in the section from
3 Meyers Road to Satus Longhouse Road was completed to determine whether there has
4 been any history of farm-vehicle- or railroad-crossing-related accidents in the last three
5 years. The data does not show any recorded accidents with farm tractors or farm
6 equipment. In addition, there are no accidents that are described as being related to the
7 crossings of the BNSF railroad which runs parallel to SR 22. The majority of accidents
8 involve passenger cars or pickup trucks. The most common type of accidents involve
9 hitting animals, roadside objects, or vehicles entering from driveways or intersecting
10 streets.⁷

11
12 Q: What are the benefits of closing these two crossings?

13 A: As I mentioned earlier, at-grade railway crossings have become unsafe. Using the U.S.
14 Department of Transportation Accident Prediction Model⁸, the Barnhart Road railway
15 crossing has a predicted accident rate 0.1073, which means one train/vehicle accident
16 every ten years. The North Stevens Road railway crossing has a predicted accident rate
17 of 0.0524, which translates into one train/vehicle accident every 20 years. While these
18 rates may not appear high, the impact of a train/vehicle collision is catastrophic,
19 generally resulting in fatalities.

20
21 Q: You have before you two exhibits marked Exhibit No. (GN-7) and Exhibit No. (GN-8).
22 Are you familiar with these documents?

23 A: Yes. They are communications about citizen comments and examples of citizen
24 comments regarding the proposed closures. Public comments are a critical part of the
25 petition process, as crossing users have a unique perspective on the issues.

26 _____
27 ⁷ State of Washington Department of Transportation Standard Collision History Detail
Report for SR 22.

⁸*Id.* at Section 3 - Assessment of Crossing Safety and Operations.

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Q: What are some of the main comments regarding proposed closures?

A: The majority of public comments to the UTC were related to the Barnhart Road crossing. Commenters pointed out that the crossings are used frequently by farmers, expressed concerns about large trucks being able to maneuver adequately to use alternate crossings, were concerned about access to Satus Longhouse, noted that crossing volumes during harvest time are higher, and expressed concern about the distance to alternate crossings.

However, my assessment of the proposed crossing closures shows that it would not adversely impact local residents, farmers, and crossing users.

Q: You mentioned that commenters were concerned about farm use. What were some of their concerns?

A: If the railway crossings at Barnhart Road and North Stevens Road are closed, it is expected that farm equipment must use alternative routes. Local residents, farmers, and service providers have expressed concern that the closure of the Barnhart Road and North Stevens Road railway crossings will force them to use SR 22 for farm equipment access to their fields. They believe that highway speeds will create a safety issue for the slower moving farm equipment.

Q: What impact would crossing closure have on farm access?

A: Based on the number of farm access points on SR 22 between the two proposed closures, it can be argued that SR 22 is already being used extensively for farm equipment access. Specifically, there are currently approximately 30 access points on SR 22 that provide access for farm vehicles in this section of the highway. This does not include intersecting streets or residential driveways. Therefore, it can be assumed that there are already many farm vehicles using SR 22, and the closure of the two crossings would not dramatically increase the number of access points to SR 22 or the

1 number of farm vehicles using them. Furthermore, as discussed above, the current
2 accident history does not indicate there has been any collision between farm equipment
3 and motor vehicle traffic on SR 22 in the section of highway between Meyers Road and
4 Satus Longhouse Road.

5
6 Q: You also mentioned that commenters were concerned about access to the Satus
7 Longhouse. What were those concerns?

8 A: The Yakama Nation expressed concern regarding the closure of Barnhart Road railway
9 crossing as it was vital for access to tribal activities at the Satus Longhouse, located on
10 Drainbank Road west of Satus Longhouse Road.

11
12 Q: And what were your conclusions about the effect of the closures on access to the
13 Longhouse?

14 A: It will not significantly affect access to the Satus Longhouse. The nearest alternative
15 crossings to Barnhart Road are the Indian Church Road railway crossing 1.4 miles to
16 the west and the Satus Longhouse Road railway crossing 1.97 miles to the south. These
17 two adjacent crossings provide adequate alternate access from the north and south.

18
19 Q: What does "adequate alternate access" mean?

20 A: It means that using these adjacent crossings will not significantly affect access to the
21 Satus Longhouse facility. With closure of the Barnhart Road crossing, the Indian
22 Church Road or Satus Longhouse Road railway crossings will be used as alternate
23 routes to the Satus Longhouse from the west via SR 22. The driving distance to the
24 Satus Longhouse from SR 22 via the Barnhart Road crossing is 1.6 miles. Using the
25 Indian Church Road, the driving distance is 3.1 miles. Using the Satus Longhouse
26 Road, the driving distance is 3.6 miles. Using prevailing or posted speeds on each route,
27 the driving time using the Barnhart Road railway crossing route to the Satus Longhouse
is three minutes, and the routes using the Indian Church Road or Satus Longhouse Road

1 crossings are four minutes. Therefore, the additional travel time required to use the
2 alternate routes is one minute. In other words, it will not cause a significant increase in
3 travel time.

4
5 Q: You mentioned that you had examined emergency vehicle access. What impact would
6 closing the crossings have on emergency response?

7 A: Emergency service response will not be adversely affected by the closure of the two
8 crossings. According to Yakima County Public Services Department, there have been
9 no documented uses of either the North Stevens Road or Barnhart Road railway
10 crossings for emergency fire or medical response during the last five years.

11
12 Q: You have before you (Exhibit No. (GN-9), a map. Could you describe what it depicts?

13 A: Yes. This map (Figure 3, Emergency Services) shows the location of the closest
14 emergency service providers to the Barnhart Road and North Stevens Road crossings.
15 Emergency service providers, City of Granger and Toppenish fire departments, and Fire
16 District 5 locations are to the north, east, and south of the two railway crossings. Each
17 of these locations provides fire and emergency medical services and demonstrates that
18 emergency service response will not be adversely affected by the closure of the two
19 crossings.

20 The City of Toppenish fire department is located in downtown Toppenish, 2.3 miles
21 from the North Stevens Road railway crossing and 8.6 miles from the Barnhart Road
22 railway crossing. The nearest crossings to the North Stevens Road crossing are 1.4
23 miles to the west and 1.1 miles to the east. The nearest crossings to the Barnhart Road
24 crossing are 1.4 miles to the west and 1.97 miles to the south. None of these distances
25 are significant enough to impact emergency vehicle response times given the rural
26 nature of the area.

27
Q: What is the impact to other services, such as school bus service?

1 A: As part of the thorough review process required for crossing closures, all area school
2 districts were asked to comment on impacts to their bussing programs. Three agencies,
3 Granger School District, Toppenish School District, and Yakama Nation Transit were
4 asked if their routes used any of the crossings, how many routes, and the number of
5 daily crossings.

6
7 Q: You have before you Exhibit (GN-10), a series of emails. Are you familiar with this
8 document?

9 A: Yes. These are emails from the school districts responding to the request for comments
10 on the proposed closure.

11
12 Q: And what did those responses indicate?

13 A: Toppenish School District responded that they do not currently use either crossing. The
14 Granger School District stated that they occasionally use the Barnhart Road crossing,
15 but expressed no concern about the proposed closure. And Yakama National Transit did
16 not respond.

17
18 Q: Were there other considerations in your examination of the proposed closures?

19 A: I reviewed the entire background and history of the petition to close the crossings. Of
20 particular interest is Yakima County's issuance of Declarations of Non-Significance in
21 accordance with SEPA for the proposed closures. This action implies that Yakima
22 County's environmental review process, which included consideration of public
23 comments, determined that there were no significant adverse impacts associated with
24 the proposed closures.

25
26 Q: In light of your review of information, what were your conclusions about public
27 necessity with respect to these crossings?

A: The traffic volumes crossing the railway at the two proposed crossing closure locations

1 are negligible. Existing volumes on the surrounding roadway are also negligible. The
2 volume on SR 22 adjacent to the crossings is only 1,600 vehicles per day, which is
3 about one vehicle every 23 seconds during the afternoon peak hour—a volume that
4 would be considered negligible. The closure of these two crossings would not result in
5 the diversion of enough vehicles to affect traffic operations or capacity at adjacent
6 crossings and roadways. Therefore, diverting the volumes from the crossings to the
7 surrounding roadways will not create an adverse impact.

8 Based on responses from emergency service providers, there does not appear to be a
9 need to maintain these crossings. There are no documented records of the use of these
10 crossings for emergency response during the last five years. Similarly, the crossings are
11 not significant for school bus service. Both school districts near these crossings
12 indicated that they were not important.

13
14 Q: And what were your conclusions about public convenience?

15 A: With the proposed closure of the two at-grade railway crossings, some farmers will be
16 required to use SR 22 to access their fields adjacent to the highway. As I said before,
17 the number of individual accesses to the fields is sufficient evidence that farmers
18 currently use SR 22 for access. With the closure, rerouting may be required, but it is not
19 expected to create a significant adverse condition.

20 Access to the Satus Longhouse could be impacted by closure of Barnhart Road, but the
21 impact is expected to be negligible.

22
23 Q: And finally, what were your findings about public safety.

24 A: As I mentioned earlier, future train/vehicle crashes at these at-grade crossings are
25 predictable. I don't believe any of the residents, farmers, or users of the crossing would
26 suggest that it would be acceptable for a member of their family or friends to be
27 involved in such an accident. The potential for a collision between a train and a vehicle
is significant. The result of a crash would be horrific with train speeds of 49 miles per

1 hour. The result would be expected to be fatal.

2
3 Q: What is your recommendation?

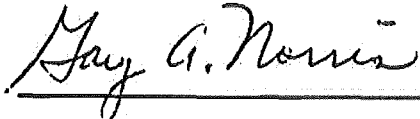
4 A: Considering all of these factors, I recommend that the North Stevens Road and Barnhart
5 Road BNSF railway crossings be closed. Any adverse impact to public necessity,
6 convenience and safety, are not significant enough to warrant leaving the crossing open.
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DECLARATION

I, Gary Norris, declare under penalty of perjury under the laws of the State of Washington that the foregoing PREPARED TESTIMONY OF GARY NORRIS is true and correct to the best of my knowledge and belief.

DATED this 29th day of December 2014, at Preston, Washington.



GARY NORRIS

DATED this 30th day of December 2014.

Montgomery Scarp, PLLC



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CERTIFICATE OF SERVICE

I am over the age of 18; and not a party to this action. I am the assistant to an attorney with Montgomery Scarp, PLLC, whose address is 1218 Third Avenue, Suite 2500, Seattle, Washington, 98101.

I hereby certify that the original and 3 copies of PREFILED TESTIMONY OF GARY NORRIS has been sent by FedEx to WUTC and a PDF version filed electronically. I also certify that true and complete copies have been sent via electronic mail to the following interested parties:

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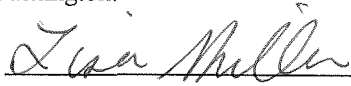
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I declare under penalty under the laws of the State of Washington that the foregoing information is true and correct.

DATED this 31 day of December 2014 at Seattle, Washington.



Lisa Miller, Paralegal