David H. Coburn
202 429 8063
dcoburn@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com

Steptoe
STEPTOE & JOHNSON LLP

June 24, 2014

VIA E-MAIL

Ms. Victoria Rutson
Director
Office of Environmental Analysis
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

Re: Docket No. FD 30186, Tongue River Railroad Company, Inc.—Rail Construction and Operation—in Custer, Powder River and Rosebud Counties, Mont.; Information Request #4

Dear Ms. Rutson:

In reference to your March 13, 2014 letter forwarding a fourth information request in connection with the environmental review of the Tongue River Railroad project, and the responses to that request submitted on April 14, 2014, please find attached a document which provides updated responses based on further information. Another copy of the same document is attached which, in red font, shows the specific portions of the letter that have been revised. In addition, a revised exhibit 2 spreadsheet and associated KMZ file showing the location of various structures along each alternative is also attached.

Please let us know if you have any questions about the attached revisions.

Sincerely,

David H. Coburn
Attorney for Tongue River Railroad Company, Inc.

cc: Mr. Ken Blodgett, OEA
Mr. Alan Summerville, ICF

June 24, 2014

The Tongue River Railroad Company, Inc. (TRRC) offers the following revisions to its April 14, 2014 responses to the request for information dated March 13, 2014 regarding the Tongue River Railroad Project (Docket No. FD 30186). Responses to Questions 1, 3, 6, 15, and 20 have been revised based on updated data. Questions related to grading quantities have been modified to reflect incorporation of the Revised Colstrip Alignment as submitted January 17, 2014. Grading quantities for Ashland East and Terminus 1 Variations have also been revised to reflect data provided with respect to the ICF-versions of these alignments rather than the TRRC-developed versions described in the Supplement to Alternatives Screening Analysis dated August 23, 2013. These answers are based on engineering that has been undertaken to date at a conceptual level:

1. *STB Request: Information regarding the construction duration for the Tongue River Alternative and Colstrip Alternative was presented in the October 16,2012 Revised Application and the December 17, 2012 Supplemental Application (respectively). Confirm that the construction durations for these alternatives are still valid and provide the anticipated construction duration for the remaining alternatives identified above. Indicate if the use of the variations listed above (Tongue River, Colstrip, Tongue River Road, Moon Creek, Decker, Ashland East Variation, Terminus 1 Variation) would affect the construction duration for the alternatives and, if so, provide the construction duration for the alternatives when paired with the variations.*[1]

   TRRC Response: The possible construction durations for each of the alternatives are provided below, given similar size and type of contractor work force assuming a construction season of eight months per year. In all likelihood, the construction durations could be reduced by increasing the contractor work force, which could be done if warranted by economic analysis and market conditions at the time the construction is undertaken. However, the following possible construction period durations are based on a roughly linear relationship between the amount of grading required to construct each alternative and the construction duration because the grading volumes will typically control the overall construction schedule:

   - Colstrip Alternative – 20 months over approximately 2.5 years
   - Tongue River Alternative – 24 months over approximately three years
   - Tongue River Road Alternative – 36 months over approximately five years (about 1.9 times as much grading would be required to construct the Tongue River Road Alternative compared to the Colstrip Alternative)
   - Moon Creek Alternative – 36 months over approximately five years (about 1.9 times as much grading would be required to construct the Moon Creek Alternative compared to the Colstrip Alternative)

[1] As a clarification, the Revised Decker files were provided by OEA/ICF on September 25, 2013 rather than July 26, 2013 as indicated in the data request letter.

- Revised Decker Alternative – 45 months over approximately six years (about 2.2 times as much grading required to construct the Revised Decker Alternative compared to the Colstrip Alternative)
- Ashland East and Terminus 1 Variations with Colstrip (which we now refer to as the "Colstrip East Alternative") – 30 months over approximately four years (about 1.4 times as much grading required to construct the Colstrip East Alternative compared to the Colstrip Alternative)

Alternately, around the clock, year-round construction may be considered if project economics and market conditions dictate. Around the clock construction would be required for winter grading activities to prevent deep freeze from setting in to the embankment. This approach would significantly reduce construction duration for any alternative and avoid costly mobilization and demobilization of heavy equipment at the beginning and end of each construction season. For example, the Colstrip Alternative could be completed in approximately 16 consecutive months rather than 20 seasonal months over 2.5 years and the Revised Decker Alternative could be completed in approximately three years rather than six were winter construction to be utilized.

2. *STB Request: Identify the number and types of construction equipment TRRC anticipates using for the construction of the proposed rail line.*

   TRRC Response: TRRC will invite a group of qualified contractors to bid on the grading and drainage aspects of the project and each will likely have a different approach to constructing the project, including their proposed equipment fleet. However, all Contractors will likely utilize a fleet of excavators, scrapers, bulldozers, dump trucks, motor graders, compactors, and other miscellaneous equipment. Preliminary discussions with contractors familiar with projects of similar size and scope indicate a potential equipment fleet that could be used to construct any of the various alternatives within the durations described in the response to Question 1 above would be as follows:

No. of Units	Equipment Type
7	CAT 777 (100-ton haul trucks)
1	CAT 992 Front-end loader
1	CAT D10 dozer
1	CAT D9 dozer
2	CAT D8 dozers
3	CAT 14G motor graders
1	CAT 825 compactor
3	CAT 10,000 gal. water wagons
2	4,000 gal. water trucks
1	Smooth drum roller
3	CAT 637 scrapers
1	CAT 345 excavators

2	CAT 966 front-end loaders
2	Fuel trucks
6	Mechanics service trucks
3	Generator sets
3	Rock drills
15	Pickups

Cranes and delivery tractor trailers would also be needed to support bridge and large culvert construction

3. *STB Request: Provide the number of truck trips anticipated during construction. Include truck trips for all purposes, identified by trip type or purpose, if possible. At a minimum, indicate the number of light and heavy truck trips.*

TRRC Response: We assume that the above question is designed to allow for an estimate of construction-related emissions. In that regard, we provide below a summary of the above potential equipment and an estimate of the associated total hours of operation needed to construct the Colstrip Alternative because that information is more readily ascertainable than the number of truck trips. The equipment hours necessary to construct the other alternatives would be approximately linear in relationship to the degree of grading associated with each alternative. The summary of equipment hours to construct the Colstrip Alternative is as follows:

No. of Units	**Equipment Type**	**Total Operated Hours**
7	CAT 777 (100-ton haul trucks)	38,000
1	CAT 992 Front-end loader	5,500
1	CAT D10 dozer	5,500
1	CAT D9 dozer	5,500
2	CAT D8 dozers	7,000
3	CAT 14G motor graders	12,500
1	CAT 825 compactor	5,500
3	CAT 10,000 gal. water wagons	14,500
2	4,000 gal. water trucks	7,000
1	Smooth drum roller	5,500
3	CAT 637 scrapers	7,500
1	CAT 345 excavators	10,600
2	CAT 966 front-end loaders	10,600
2	Fuel trucks	20,000
6	Mechanics service trucks	13,000
3	Generator sets	8,000
3	Rock drills	8,000
15	Pickups	2,500

The ratios of grading compared to Colstrip are as follows:

- Tongue River = 1.26 times Colstrip
- Tongue River Road = 1.87 times Colstrip
- Moon Creek = 1.85 times Colstrip
- Revised Decker = 2.21 times Colstrip
- Ashland East and Terminus 1 Variations with Colstrip (Colstrip East Alternative) = 1.38 times Colstrip

The estimated hours for cranes and delivery tractor trailers to support bridge construction would be as follows and are not affected by changes in grading quantities:

- Colstrip = 2,250 crane hours and 1,350 delivery tractor trailer hours
- Tongue River = 1,000 crane hours and 600 delivery tractor trailer hours
- Tongue River Road = 2,750 crane hours and 1,650 tractor trailer hours
- Moon Creek = 2,000 crane hours and 1,200 tractor trailer hours
- Revised Decker = 1,000 crane hours and 600 delivery tractor trailer hours
- Ashland East Variation with Colstrip = no additional bridges
- Terminus 1 Variation with Colstrip = no additional bridges

4. *STB Request: Provide the number of supply train trips anticipated to occur over the finished portions of the line during construction.*

   TRRC Response: The Colstrip Alternative, at 42.1 miles, would require approximately seven rail trains each holding 64,000 linear feet of rail, 12 tie trains each holding 10,000 ties, and approximately 62 ballast trains each holding 5,000 tons of ballast.

   The other alternatives would require a roughly linear increase in trains based on route length. The approximate number of anticipated supply train trips for the other alternatives are as follows:

   - Tongue River = 83.1 miles = 14 rail trains, 22 tie trains, and 123 ballast trains
   - Tongue River Road = 83.1 miles = 14 rail trains, 22 tie trains, and 123 ballast trains
   - Moon Creek = 81.7 miles = 14 rail trains, 22 tie trains, and 121
   - Revised Decker = 51.0 miles = 9 rail trains, 14 tie trains, and 75 ballast trains
   - Ashland East Variation with Colstrip = 44.1 miles = eight rail trains, 12 tie trains, and 65 ballast trains
   - Terminus 1 Variation with Colstrip = 42.9 miles = eight rail trains, 12 tie trains, and 63 ballast trains

5. *STB Request: Identify the number of workers TRRC anticipates employing during construction. Detail the number of full- and part-time workers that would be employed during each year of construction and provide the number of employees that are anticipated during peak*

employment. Indicate how many months peak employment would be expected to last and the year of construction in which peak employment is anticipated to occur.

TRRC Response: TRRC estimates that about 225 workers would be on site during peak construction. The approximate number of workers required for each major task (project management; civil/grading; track/signal/telecom) for each alternative and variation is reflected in the spreadsheet attached as Exhibit 1. That Exhibit is based on the same construction duration scenarios set forth in response to Question 1, above. The full contractor workforce shown on the Exhibit will be used until the grading, bridges, culverts and subballast/asphalt are substantially complete for the entire project. The partial force will be involved in clean-up work such as final fine grading, seeding, grade crossing approaches and such. The full track workforce will be involved in constructing the skeletonized track and installing turnouts. Once they are complete, the partial workforce will finish placing ballast in the track, surfacing the track to final line and grade, dressing the ballast, and de-stressing the rail.

It is anticipated that the construction and other workers would be employed by other entities under contract with TRRC, and thus in all or virtually all cases would not be TRRC employees. It is not possible to determine what ratio of those workers would be part-time, as this would be decided by the contractors. Peak employment would occur when grading construction and track/signal/telecom construction are taking place on site concurrently. The duration of this concurrent work is relatively short and varies by alternative.

6. *STB Request: Table 1 that accompanied the Applicant's May 3, 2013 response to OEA's information request identified preliminary bridge and culvert locations for a number of alternatives; however, the milepost locations for these features did not map correctly when input into the alternatives in GIS. Please provide a revised table of preliminary bridges and culverts and a corresponding GIS file mapping the locations of bridges and culverts for all alternatives and variations identified above.*

   TRRC Response: The table showing the list of structures based on conceptual engineering has been attached as Exhibit 2, along with a GIS KMZ file (part of that same Exhibit) showing the culvert locations.

   Revised structure tables and a revised GIS KMZ file have been attached to reflect the Revised Colstrip Alignment as submitted January 17, 2014. This alignment also affects the common portions of the Tongue River, Tongue River Road, and Moon Creek Alternatives south of the Colstrip Alternative crossing of the Tongue River. The structures tables and GIS KMZ also incorporate ICF-developed versions of the Ashland East and Terminus 1 variations.

7. *STB Request: The May 3, 2013 information request response indicates that culverts and bridges would comply with the American Railway Engineering and Maintenance-of-Way*

Association (AREMA) and BNSF design criteria guidelines; however, the method used to generate the locations and sizes of the culverts and bridges along the alternatives is not clear. Provide a description of the hydrologic review and methods used to determine the locations and sizes of these structures.

TRRC Response: Pipe locations were determined by studying topographic maps and aerial imagery to determine stream crossings. Once a location was determined, the drainage area was delineated. Then, depending on the area, the Rational Method, Nassick Regression Equations, or USGS Regression Equations for the region were used to determine peak flows. The minimum pipe size used at any culvert location was 36 inches. Culverts 72 inches in diameter or less are anticipated to be corrugated metal pipes (CMP) and culverts larger than 72 inches in diameter are anticipated to be structural plate pipes (SPP). Hydraulic parameters associated with culverts were approximated using HY-8 software. Culverts were designed to meet BNSF hydraulic design criteria and AREMA structural design criteria. The required hydraulic BNSF criteria to be met with culvert design are:

1. The 50-year water surface elevation will not come into contact with the crown of the culvert and
2. The 100-year water surface elevation will not overtop the track subgrade elevation at the lowest point of cross section.

All culverts were initially sized based on 50-year discharges. An initial tailwater condition of 0.4 times the diameter of the pipe was used to calibrate the capacity of each pipe size to meet the 50-year criterion, where the upstream water surface elevation did not reach the crown of the pipe. In the event that the 100-year criteria could not be met with a single pipe, multiple pipes were evaluated.

8. *STB Request: Confirm that the AREMA design criteria for floodplain and floodway crossings meets the standards required for development in Federal Emergency Management Agency-designated floodplains and floodways for compliance with the National Flood Insurance Program.*

TRRC Response: AREMA standards for floodplain and floodway crossings state that care must be taken to meet the local community adopted floodplain ordinances and requirements. The known requirements set forth by the Montana Department of Natural Resources (MTDNRC) and BNSF Hydraulic Design Criteria are more stringent than the requirements outlined in the NFIP. For instance, all bridge crossings over perennial and intermittent streams were sized such that the proposed bridge meets both BNSF Hydraulic Design Criteria and Montana Department of Natural Resources (MTDNRC) requirements of no more than 0.5-feet of increase in proposed water surface elevation for a 100-year event. This requirement was also defined in previous EIS Mitigation Measures #50 and #51. By NFIP standards, any stream that lies within a Zone A floodplain is allowed up to 1-foot of increase in water surface elevation. While there are Zone A floodplains within the project, only the lower five miles of the Tongue River near Miles City has a

Zone AE floodplain with base flood elevations mapped as part of a detailed study for the National Flood Insurance Program. No potential alignments cross Tongue River near this location; however, the Tongue River and Tongue River Road alignments would impact a portion of the Zone AE floodplain with fill between Spotted Eagle Lake and Branum Lake in Miles City. No other streams within the limits of the alternative alignments are mapped with base flood elevations as part of the NFIP.

9. *STB Request: If available, provide any floodplain area estimates for stream crossings for the modeling used to determine preliminary culvert and bridge size and locations along each alternative. If available, provide a shapefile or geodatabase depicting these potential floodplain areas.*

   TRRC Response: Existing floodplain areas are not available since very little public mapping is available as described above in the response to Question 8. None of the floodplain extents were mapped as part of the conceptual design phase for alternatives analysis and such mapping would not typically be prepared during subsequent engineering if no existing mapping is available as part of the NFIP.

10. *STB Request: Provide conceptual designs for bridges that would be constructed for each alternative and variation. Information provided should be sufficiently detailed to allow OEA to determine if bridge crossings would require in-water structures. If it is not possible to provide conceptual designs, describe the types of bridges anticipated to be built. For example, would bridge types include steel truss bridges, steel girder bridges, concrete tub-ballasted deck bridges, or another type of bridge? Identify which bridges would cross waterways using a clear-span design, and which bridges, if any, would require in-water structures.*

    TRRC Response: Generally, channels of the larger stream that are perennial or larger intermittent flows are to be spanned completely with no permanent in-water structures. It is possible that a temporary structure may be required to construct a bridge over the Tongue River. Bridge spans greater than 100 feet can be achieved with a deck-plate girder up to 200 feet, which spans the Tongue River channel for all of the alternatives except possibly the Revised Decker Alternative which appears to have a longer crossing due to skew angle and therefore could require a truss span, which would not be desirable due to long-term maintenance costs and initial construction costs. Shorter spans are planned to be pre-cast, pre-stressed concrete girders. See attached Exhibit 3, which reflects a concept for a Tongue River crossing that could apply for any of the alternatives other than the Revised Decker Alternative.

11. *STB Request: Indicate if the crossing of Interstate (I-94) for the Moon Creek Alternative would require I-94 to be raised as part of the railroad underpass design. Design files dated November 12, 2012 indicate that the grade of the railroad would be situated approximately 11 feet above the level of the roadway.*

TRRC Response: The concept design assumes I-94 would be raised since the amount of grading required to raise the highway was less than that required to significantly modify the track alignment due to adjacent topography and proximity to Moon Creek.

12. *STB Request: Identify the number of set-out tracks and passing sidings that would be constructed for each alternative and variation. Provide the anticipated length and locations of set-out tracks and sidings. If available, provide GIS files for these features. Provide GIS files for the Colstrip Subdivision upgrade work that was described in the May 3, 2013 information request response. Include the locations where the 5 1/2-inch rail base would be relayed to a 6-inch base, where existing ties would be replaced, where the new 500-foot set-out track would be located, where the seven timber bridges would be repaired or replaced, and other signal and communication upgrade locations, if known at this time.*

    TRRC Response: Exact locations of set-out and siding tracks have not been determined as part of the current engineering effort, but will be located based on operational requirements, topography, and access. In general, the Colstrip Alternative would require three set-outs and one siding with two set-out tracks in the northern half of the alignment and the siding and third set-out track in the southern half of the alignment. The Tongue River, Tongue River Road, and Moon Creek Alternatives would require six set-out tracks and two sidings with two set-out tracks in each third of the alignment and the sidings in the northern and southern thirds of the alignment. The Ashland East and Terminus 1 Variations do not affect the number of set-out or siding tracks described above. The Revised Decker Alternative would require four set-out tracks and two sidings with two set-out tracks and one siding in each half of the alignment.

    Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

13. *STB Request: Provide the anticipated duration of the work required to upgrade the Colstrip Subdivision. Indicate if this work would occur when the Colstrip Alternative would be under construction.*

    TRRC Response: Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

14. *STB Request: Confirm that the cost of the Colstrip Alternative provided in the Supplement to Alternatives Screening Analysis - Evaluation of Additional Rail Alternatives under Consideration for Detailed Study dated April 30, 2013 includes upgrades to the Colstrip Subdivision. If not, provide the anticipated cost of the upgrades.*

    TRRC Response: Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

15. *STB Request: If available, provide conceptual design information for communications towers. For example, would they be freestanding or secured by guy-wires; would they consist of a single pole or steel-lattice structure; how tall would the towers be?*

    TRRC Response: Communication towers will be self-supported (no guy wires) steel lattice towers similar to that shown on the photo attached As Exhibit 4. Tower heights will vary based on topography, but for example, the Colstrip Alternative would require two 50' towers, one 80' tower and two 150' towers. The Tongue River, Tongue River Road, and Moon Creek Alternatives would be expected to require six 150' towers while the Revised Decker Alternative would likely require four 150' towers. The Ashland East and Terminus 1 Variations do not affect the number of towers required.

16. *STB Request: Indicate how the location of right-of-way fences would be determined. Describe how much of the right-of-way would be fenced.*

    TRRC Response: The right-of-way would be fenced continuously except at bridges, crossings, and cattle passes, where the fencing would turn in toward the track shoulder or tie into a cattle guard.

17. *STB Request: Provide cross-section diagrams for the typical maximum and minimum railroad rights-of- way that include elements and infrastructure expected to occur in each right-of-way. Provide a cross-section diagram for the right-of-way that includes the single-phase distribution line poles and an access road.*

    TRRC Response: The maximum and minimum railroad right-of-way does not occur at locations where access roads and single-phase distribution line poles are located since support tracks are not logically located in areas of largest cuts or fills. In that way, the minimum and maximum railroad right-of-way exhibits, which TRRC provided as attachments to its May 3, 2013 responses to OEA's April 5, 2013 requests, are still valid. However, TRRC has attached as Exhibit 5 to this response a diagram of a typical section at a setout track, which would require an access road and in some cases, the single-phase distribution line. As indicated in TRRC's May 3, 2013 response to Question 3 of the April 5, 2013 data response, the single-phase distribution line is not a continuous feature and only serves specific locations where signal infrastructure is planned. As indicated in the previous TRRC response to Question 4 of that May 3, 2013 response, the access roads are not a continuous feature and only serve specific locations where signal infrastructure is planned or track turnouts are to be located.

18. *STB Request: Identify the anticipated source of ballast that would be used in construction.*

    TRRC Response: Pipestone Quarry near Whitehall, Montana, which is about 200 miles west of Billings.

19. *STB Request: Describe how ballast would be transported to the construction site by train. Would it be transported by maintenance-of-way trains and spread on skeletonized track? Alternatively, would it be transported by rail along the existing main line and then transported to the construction site by truck?*

    TRRC Response: Ballast would be transported to the site by work trains via connection to the existing rail network and be dumped in place on new skeletonized track constructed by a Track-Laying Machine.

20. *STB Request: Estimate the total volume of water that would be required for rail construction activities.*

    TRRC Response: Water will be required during construction to provide compaction of fill material and dust suppression. Assuming 5% moisture needs to be added to the fill material to achieve an optimum soil density of 120 lbs/CF and provide dust suppression during construction, 19.45 gallons of water needs to be added for every cubic yard of fill material, or 59.69 Acre-Feet of water per million cubic yards.

    As noted in the TRRC response to Question #11 of the STB Data Response dated April 5, 2013, water needed during construction for dust suppression, soil compaction and other construction activities is anticipated to be obtained through contractor-coordinated purchase of water rights access to Tongue River, Yellowstone River, water wells, or a combination thereof. In order to provide a comparison of water needed during construction for the various alternatives, three USGS gages were analyzed to determine the flow volume of water that can be expected in Tongue River adjacent to the alternative alignments. The gages are located near Birney, MT (USGS gage #6307616), at the Brandenberg bridge north of Ashland, MT (USGS gage #6307830), and near Miles City, MT (USGS gage #6308500). The mean annual flow volume shown throughout the history of these three gages was averaged and it is estimated that the <u>average annual flow volume of the Tongue River near the project location is 371,896 Acre-Ft/Year.</u> Supporting information regarding these gages can be found at the USGS Web Site, <u>http://mt.water.usgs.gov/projects/tongueriver</u>. The flow volumes of these three locations were averaged as a reference for all alternatives under consideration due to their proximity to the study area.

    The Colstrip Alternative has an estimated 15.3 million cubic yards (mmcy) of embankment, which per the above calculations would require (15.3 mmcy x 59.69 AF/mmcy) = 912 Acre-Ft of water for compaction and dust suppression. This represents 0.25% of the average annual volume of the Tongue River near the project.

    The amount of water needed during construction is a function of the amount of fill required to construct the proposed rail line. The approximate amount of water required during

construction is listed below for each alternative in million gallons (MMGallons) and as a percentage of annual flow of the Tongue River at Ashland/Otter Creek, Montana:

- Colstrip Alt. - (15.3 MMCY Fill), (912 Acre-Feet), 0.25% of Tongue River
- Tongue River Alt. - (20.3 MMCY Fill), (1,214 Acre-Feet), 0.33% of Tongue River
- Tongue River Road Alt. - (30.4 MMCY Fill), (1,817 Acre-Feet), 0.49% of Tongue River
- Moon Creek Alt. - (30.2 MMCY Fill), (1,803 Acre-Feet), 0.48% of Tongue River
- Revised Decker Alt. - (37.3 MMCY Fill), (2,228 Acre-Feet), 0.60% of Tongue River
- Ashland East Variation and Terminus 1 Variations with Colstrip (Colstrip East Alternative) - (20.1 MMCY Fill), (1,198 Acre-Feet), 0.32% of Tongue River

21. *STB Request: Describe the anticipated design for cattle passes. Identify how the location of cattle passes would be determined.*

    TRRC Response: See attached Exhibit 6 for a typical cattle pass design. Cattle pass locations would be determined by agreements with landowners and based on topography. In general, areas where the proposed track is about 15 feet higher than the adjacent ground is preferred for cattle pass locations in order to avoid creating lower passes that can present drainage and cattle line-of-sight issues while minimizing crossing length.

22. *STB Request: In the January 11, 2013 Alternatives Screening Analysis, TRRC noted that BNSF is modeling locomotive emissions and fuel usage. Indicate when the modeling will be complete. If the modeling is complete, provide the results and comparative discussion identified in the screening analysis.*

    TRRC Response: Modeling of the many alternative and variation combinations for fuel consumption is complete. We anticipate the conversion of fuel consumption to emission estimates will be complete by the end of May 2014 and will provide the information to the STB at that time. .

23. *STB Request: Confirm that all staging areas would be located within the railroad right-of-way. If they would not be located in the right-of-way, identify where the staging areas would be located.*

    TRRC Response: It is currently anticipated that most, if not all, staging areas will be located within the railroad right-of-way. Although the exact locations of staging areas would be determined by the construction contractor, such areas would typically be somewhat level, preferably with public access.

24. *STB Request: Describe to what extent there would be activity, development, or disturbance outside of the daylight lines, but inside the right-of-way.*

TRRC Response: It is possible that some minor disturbance beyond the daylight lines would occur during construction for temporary activities such as bridge material and crane staging, installation of erosion control, and seeding. Fire breaks would be maintained as shown in the typical section exhibits.

25. *STB Request: Identify the anticipated support facility locations for each alternative. Indicate if support facilities would be constructed in Ashland independent of the rail alternative licensed.*

TRRC Response: It is anticipated that all alternatives would require a support facility near Ashland and expansion of one existing maintenance-of-way facility, which is addressed in the response to Question 26 below.

26. *STB Request: Identify the anticipated maintenance-of-way headquarters for each alternative. Indicate if maintenance-of-way headquarters in Forsyth would be constructed independent of the rail alternative licensed.*

TRRC Response: The Colstrip Alternatives would require a small expansion of the existing maintenance-of-way facility in Forsyth, Montana. The Tongue River, Tongue River Road, and Moon Creek Alternatives would require a similar expansion of the existing maintenance-of-way facility in Miles City, Montana. The Revised Decker Alternative would require a similar expansion of the existing maintenance-of-way facility near Sheridan, Wyoming.

27. *STB Request: Does the preliminary design account for changes in weather extremes over the life of the proposed rail line (e.g. the effects on bridges, culverts, and roadbed from potential increases in the number, duration, and intensity of floods, or the effects of higher temperatures in the future on the rail), and if so, how?*

TRRC Response: The preliminary design is based on discharges calculated for the current 50-year and 100-year rainfall events. This approach follows accepted design standards and guidelines based on historical and foreseeable conditions.

28. *STB Request: Are bank engineered structures such as rip-rap or bank armoring planned along the banks of the Tongue River below the T&Y dam or anywhere else along the Tongue River?*

TRRC Response: TRRC has previously responded to this request by letter dated April 3, 2014.

29. *STB Request: Does TRRC anticipate nighttime construction or would construction be limited to daylight hours?*

TRRC Response: TRRC does not at present anticipate the need for nighttime construction if grading occurs outside of winter months. However, as described in the response to Question 1, the option of working through the winter may be implemented based on economic or other

factors requiring a more compressed construction schedule, which would require working around the clock during winter months, generally assumed to be November 1 through March 1.

June 24, 2014

The Tongue River Railroad Company, Inc. (TRRC) offers the following revisions to its April 14, 2014 responses to the request for information dated March 13, 2014 regarding the Tongue River Railroad Project (Docket No. FD 30186). Responses to Questions 1, 3, 6, 15, and 20 have been revised based on updated data. Questions related to grading quantities have been modified to reflect incorporation of the Revised Colstrip Alignment as submitted January 17, 2014. Grading quantities for Ashland East and Terminus 1 Variations have also been revised to reflect data provided with respect to the ICF-versions of these alignments rather than the TRRC-developed versions described in the Supplement to Alternatives Screening Analysis dated August 23, 2013. These answers are based on engineering that has been undertaken to date at a conceptual level:

1. *STB Request: Information regarding the construction duration for the Tongue River Alternative and Colstrip Alternative was presented in the October 16,2012 Revised Application and the December 17, 2012 Supplemental Application (respectively). Confirm that the construction durations for these alternatives are still valid and provide the anticipated construction duration for the remaining alternatives identified above. Indicate if the use of the variations listed above (Tongue River, Colstrip, Tongue River Road, Moon Creek, Decker, Ashland East Variation, Terminus 1 Variation) would affect the construction duration for the alternatives and, if so, provide the construction duration for the alternatives when paired with the variations.*[1]

   TRRC Response: The possible construction durations for each of the alternatives are provided below, given similar size and type of contractor work force assuming a construction season of eight months per year. In all likelihood, the construction durations could be reduced by increasing the contractor work force, which could be done if warranted by economic analysis and market conditions at the time the construction is undertaken. However, the following possible construction period durations are based on a roughly linear relationship between the amount of grading required to construct each alternative and the construction duration because the grading volumes will typically control the overall construction schedule:

   - Colstrip Alternative – 20 months over approximately 2.5 years
   - Tongue River Alternative – 24 months over approximately three years
   - Tongue River Road Alternative – 36 months over approximately five years (about 1.9 times as much grading would be required to construct the Tongue River Road Alternative compared to the Colstrip Alternative)

[1] As a clarification, the Revised Decker files were provided by OEA/ICF on September 25, 2013 rather than July 26, 2013 as indicated in the data request letter.

- Moon Creek Alternative – 36 months over approximately five years (about 1.9 times as much grading would be required to construct the Moon Creek Alternative compared to the Colstrip Alternative)
- Revised Decker Alternative – 45 months over approximately six years (about 2.2 times as much grading required to construct the Revised Decker Alternative compared to the Colstrip Alternative)
- Ashland East and Terminus 1 Variations with Colstrip (which we now refer to as the "Colstrip East Alternative") – 30 months over approximately four years (about 1.4 times as much grading required to construct the Colstrip East Alternative compared to the Colstrip Alternative)

Alternately, around the clock, year-round construction may be considered if project economics and market conditions dictate. Around the clock construction would be required for winter grading activities to prevent deep freeze from setting in to the embankment. This approach would significantly reduce construction duration for any alternative and avoid costly mobilization and demobilization of heavy equipment at the beginning and end of each construction season. For example, the Colstrip Alternative could be completed in approximately 16 consecutive months rather than 20 seasonal months over 2.5 years and the Revised Decker Alternative could be completed in approximately three years rather than six were winter construction to be utilized.

2. *STB Request: Identify the number and types of construction equipment TRRC anticipates using for the construction of the proposed rail line.*

   TRRC Response: TRRC will invite a group of qualified contractors to bid on the grading and drainage aspects of the project and each will likely have a different approach to constructing the project, including their proposed equipment fleet. However, all Contractors will likely utilize a fleet of excavators, scrapers, bulldozers, dump trucks, motor graders, compactors, and other miscellaneous equipment. Preliminary discussions with contractors familiar with projects of similar size and scope indicate a potential equipment fleet that could be used to construct any of the various alternatives within the durations described in the response to Question 1 above would be as follows:

No. of Units	Equipment Type
7	CAT 777 (100-ton haul trucks)
1	CAT 992 Front-end loader
1	CAT D10 dozer
1	CAT D9 dozer
2	CAT D8 dozers
3	CAT 14G motor graders
1	CAT 825 compactor
3	CAT 10,000 gal. water wagons
2	4,000 gal. water trucks

1	Smooth drum roller
3	CAT 637 scrapers
1	CAT 345 excavators
2	CAT 966 front-end loaders
2	Fuel trucks
6	Mechanics service trucks
3	Generator sets
3	Rock drills
15	Pickups

Cranes and delivery tractor trailers would also be needed to support bridge and large culvert construction

3. *STB Request: Provide the number of truck trips anticipated during construction. Include truck trips for all purposes, identified by trip type or purpose, if possible. At a minimum, indicate the number of light and heavy truck trips.*

TRRC Response: We assume that the above question is designed to allow for an estimate of construction-related emissions. In that regard, we provide below a summary of the above potential equipment and an estimate of the associated total hours of operation needed to construct the Colstrip Alternative because that information is more readily ascertainable than the number of truck trips. The equipment hours necessary to construct the other alternatives would be approximately linear in relationship to the degree of grading associated with each alternative. The summary of equipment hours to construct the Colstrip Alternative is as follows:

No. of Units	**Equipment Type**	**Total Operated Hours**
7	CAT 777 (100-ton haul trucks)	38,000
1	CAT 992 Front-end loader	5,500
1	CAT D10 dozer	5,500
1	CAT D9 dozer	5,500
2	CAT D8 dozers	7,000
3	CAT 14G motor graders	12,500
1	CAT 825 compactor	5,500
3	CAT 10,000 gal. water wagons	14,500
2	4,000 gal. water trucks	7,000
1	Smooth drum roller	5,500
3	CAT 637 scrapers	7,500
1	CAT 345 excavators	10,600
2	CAT 966 front-end loaders	10,600
2	Fuel trucks	20,000
6	Mechanics service trucks	13,000

3	Generator sets	8,000
3	Rock drills	8,000
15	Pickups	2,500

The ratios of grading compared to Colstrip are as follows:

- Tongue River = 1.26 times Colstrip
- Tongue River Road = 1.87 times Colstrip
- Moon Creek = 1.85 times Colstrip
- Revised Decker = 2.21 times Colstrip
- Ashland East and Terminus 1 Variations with Colstrip (Colstrip East Alternative) = 1.38 times Colstrip

The estimated hours for cranes and delivery tractor trailers to support bridge construction would be as follows and are not affected by changes in grading quantities:

- Colstrip = 2,250 crane hours and 1,350 delivery tractor trailer hours
- Tongue River = 1,000 crane hours and 600 delivery tractor trailer hours
- Tongue River Road = 2,750 crane hours and 1,650 tractor trailer hours
- Moon Creek = 2,000 crane hours and 1,200 tractor trailer hours
- Revised Decker = 1,000 crane hours and 600 delivery tractor trailer hours
- Ashland East Variation with Colstrip = no additional bridges
- Terminus 1 Variation with Colstrip = no additional bridges

4. *STB Request: Provide the number of supply train trips anticipated to occur over the finished portions of the line during construction.*

TRRC Response: The Colstrip Alternative, at 42.1 miles, would require approximately seven rail trains each holding 64,000 linear feet of rail, 12 tie trains each holding 10,000 ties, and approximately 62 ballast trains each holding 5,000 tons of ballast.

The other alternatives would require a roughly linear increase in trains based on route length. The approximate number of anticipated supply train trips for the other alternatives are as follows:

- Tongue River = 83.1 miles = 14 rail trains, 22 tie trains, and 123 ballast trains
- Tongue River Road = 83.1 miles = 14 rail trains, 22 tie trains, and 123 ballast trains
- Moon Creek = 81.7 miles = 14 rail trains, 22 tie trains, and 121
- Revised Decker = 51.0 miles = 9 rail trains, 14 tie trains, and 75 ballast trains
- Ashland East Variation with Colstrip = 44.1 miles = eight rail trains, 12 tie trains, and 65 ballast trains
- Terminus 1 Variation with Colstrip = 42.9 miles = eight rail trains, 12 tie trains, and 63 ballast trains

5. *STB Request: Identify the number of workers TRRC anticipates employing during construction. Detail the number of full- and part-time workers that would be employed during each year of construction and provide the number of employees that are anticipated during peak employment. Indicate how many months peak employment would be expected to last and the year of construction in which peak employment is anticipated to occur.*

TRRC Response: TRRC estimates that about 225 workers would be on site during peak construction. The approximate number of workers required for each major task (project management; civil/grading; track/signal/telecom) for each alternative and variation is reflected in the spreadsheet attached as Exhibit 1. That Exhibit is based on the same construction duration scenarios set forth in response to Question 1, above. The full contractor workforce shown on the Exhibit will be used until the grading, bridges, culverts and subballast/asphalt are substantially complete for the entire project. The partial force will be involved in clean-up work such as final fine grading, seeding, grade crossing approaches and such. The full track workforce will be involved in constructing the skeletonized track and installing turnouts. Once they are complete, the partial workforce will finish placing ballast in the track, surfacing the track to final line and grade, dressing the ballast, and de-stressing the rail.

It is anticipated that the construction and other workers would be employed by other entities under contract with TRRC, and thus in all or virtually all cases would not be TRRC employees. It is not possible to determine what ratio of those workers would be part-time, as this would be decided by the contractors. Peak employment would occur when grading construction and track/signal/telecom construction are taking place on site concurrently. The duration of this concurrent work is relatively short and varies by alternative.

6. *STB Request: Table 1 that accompanied the Applicant's May 3, 2013 response to OEA's information request identified preliminary bridge and culvert locations for a number of alternatives; however, the milepost locations for these features did not map correctly when input into the alternatives in GIS. Please provide a revised table of preliminary bridges and culverts and a corresponding GIS file mapping the locations of bridges and culverts for all alternatives and variations identified above.*

   TRRC Response: The table showing the list of structures based on conceptual engineering has been attached as Exhibit 2, along with a GIS KMZ file (part of that same Exhibit) showing the culvert locations.

   Revised structure tables and a revised GIS KMZ file have been attached to reflect the Revised Colstrip Alignment as submitted January 17, 2014. This alignment also affects the common portions of the Tongue River, Tongue River Road, and Moon Creek Alternatives south of the Colstrip Alternative crossing of the Tongue River. The structures tables and GIS KMZ also incorporate ICF-developed versions of the Ashland East and Terminus 1 variations.

7. *STB Request: The May 3, 2013 information request response indicates that culverts and bridges would comply with the American Railway Engineering and Maintenance-of-Way Association (AREMA) and BNSF design criteria guidelines; however, the method used to generate the locations and sizes of the culverts and bridges along the alternatives is not clear. Provide a description of the hydrologic review and methods used to determine the locations and sizes of these structures.*

   TRRC Response: Pipe locations were determined by studying topographic maps and aerial imagery to determine stream crossings. Once a location was determined, the drainage area was delineated. Then, depending on the area, the Rational Method, Nassick Regression Equations, or USGS Regression Equations for the region were used to determine peak flows. The minimum pipe size used at any culvert location was 36 inches. Culverts 72 inches in diameter or less are anticipated to be corrugated metal pipes (CMP) and culverts larger than 72 inches in diameter are anticipated to be structural plate pipes (SPP). Hydraulic parameters associated with culverts were approximated using HY-8 software. Culverts were designed to meet BNSF hydraulic design criteria and AREMA structural design criteria. The required hydraulic BNSF criteria to be met with culvert design are:

   1. The 50-year water surface elevation will not come into contact with the crown of the culvert and
   2. The 100-year water surface elevation will not overtop the track subgrade elevation at the lowest point of cross section.

   All culverts were initially sized based on 50-year discharges. An initial tailwater condition of 0.4 times the diameter of the pipe was used to calibrate the capacity of each pipe size to meet the 50-year criterion, where the upstream water surface elevation did not reach the crown of the pipe. In the event that the 100-year criteria could not be met with a single pipe, multiple pipes were evaluated.

8. *STB Request: Confirm that the AREMA design criteria for floodplain and floodway crossings meets the standards required for development in Federal Emergency Management Agency-designated floodplains and floodways for compliance with the National Flood Insurance Program.*

   TRRC Response: AREMA standards for floodplain and floodway crossings state that care must be taken to meet the local community adopted floodplain ordinances and requirements. The known requirements set forth by the Montana Department of Natural Resources (MTDNRC) and BNSF Hydraulic Design Criteria are more stringent than the requirements outlined in the NFIP. For instance, all bridge crossings over perennial and intermittent streams were sized such that the proposed bridge meets both BNSF Hydraulic Design Criteria and Montana Department of Natural Resources (MTDNRC) requirements of no more than 0.5-feet of increase in proposed water surface elevation for a 100-year event. This requirement was also defined in previous EIS

Mitigation Measures #50 and #51. By NFIP standards, any stream that lies within a Zone A floodplain is allowed up to 1-foot of increase in water surface elevation. While there are Zone A floodplains within the project, only the lower five miles of the Tongue River near Miles City has a Zone AE floodplain with base flood elevations mapped as part of a detailed study for the National Flood Insurance Program. No potential alignments cross Tongue River near this location; however, the Tongue River and Tongue River Road alignments would impact a portion of the Zone AE floodplain with fill between Spotted Eagle Lake and Branum Lake in Miles City. No other streams within the limits of the alternative alignments are mapped with base flood elevations as part of the NFIP.

9. *STB Request: If available, provide any floodplain area estimates for stream crossings for the modeling used to determine preliminary culvert and bridge size and locations along each alternative. If available, provide a shapefile or geodatabase depicting these potential floodplain areas.*

   TRRC Response: Existing floodplain areas are not available since very little public mapping is available as described above in the response to Question 8. None of the floodplain extents were mapped as part of the conceptual design phase for alternatives analysis and such mapping would not typically be prepared during subsequent engineering if no existing mapping is available as part of the NFIP.

10. *STB Request: Provide conceptual designs for bridges that would be constructed for each alternative and variation. Information provided should be sufficiently detailed to allow OEA to determine if bridge crossings would require in-water structures. If it is not possible to provide conceptual designs, describe the types of bridges anticipated to be built. For example, would bridge types include steel truss bridges, steel girder bridges, concrete tub-ballasted deck bridges, or another type of bridge? Identify which bridges would cross waterways using a clear-span design, and which bridges, if any, would require in-water structures.*

    TRRC Response: Generally, channels of the larger stream that are perennial or larger intermittent flows are to be spanned completely with no permanent in-water structures. It is possible that a temporary structure may be required to construct a bridge over the Tongue River. Bridge spans greater than 100 feet can be achieved with a deck-plate girder up to 200 feet, which spans the Tongue River channel for all of the alternatives except possibly the Revised Decker Alternative which appears to have a longer crossing due to skew angle and therefore could require a truss span, which would not be desirable due to long-term maintenance costs and initial construction costs. Shorter spans are planned to be pre-cast, pre-stressed concrete girders. See attached Exhibit 3, which reflects a concept for a Tongue River crossing that could apply for any of the alternatives other than the Revised Decker Alternative.

11. *STB Request: Indicate if the crossing of Interstate (I-94) for the Moon Creek Alternative would require I-94 to be raised as part of the railroad underpass design. Design files dated November*

12, 2012 indicate that the grade of the railroad would be situated approximately 11 feet above the level of the roadway.

TRRC Response: The concept design assumes I-94 would be raised since the amount of grading required to raise the highway was less than that required to significantly modify the track alignment due to adjacent topography and proximity to Moon Creek.

12. *STB Request: Identify the number of set-out tracks and passing sidings that would be constructed for each alternative and variation. Provide the anticipated length and locations of set-out tracks and sidings. If available, provide GIS files for these features. Provide GIS files for the Colstrip Subdivision upgrade work that was described in the May 3, 2013 information request response. Include the locations where the 5 1/2-inch rail base would be relayed to a 6-inch base, where existing ties would be replaced, where the new 500-foot set-out track would be located, where the seven timber bridges would be repaired or replaced, and other signal and communication upgrade locations, if known at this time.*

    TRRC Response: Exact locations of set-out and siding tracks have not been determined as part of the current engineering effort, but will be located based on operational requirements, topography, and access. In general, the Colstrip Alternative would require three set-outs and one siding with two set-out tracks in the northern half of the alignment and the siding and third set-out track in the southern half of the alignment. The Tongue River, Tongue River Road, and Moon Creek Alternatives would require six set-out tracks and two sidings with two set-out tracks in each third of the alignment and the sidings in the northern and southern thirds of the alignment. The Ashland East and Terminus 1 Variations do not affect the number of set-out or siding tracks described above. The Revised Decker Alternative would require four set-out tracks and two sidings with two set-out tracks and one siding in each half of the alignment.

    Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

13. *STB Request: Provide the anticipated duration of the work required to upgrade the Colstrip Subdivision. Indicate if this work would occur when the Colstrip Alternative would be under construction.*

    TRRC Response: Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

14. *STB Request: Confirm that the cost of the Colstrip Alternative provided in the Supplement to Alternatives Screening Analysis - Evaluation of Additional Rail Alternatives under Consideration for Detailed Study dated April 30, 2013 includes upgrades to the Colstrip Subdivision. If not, provide the anticipated cost of the upgrades.*

TRRC Response: Information related to the BNSF Colstrip Subdivision will be provided by BNSF under separate cover.

15. *STB Request: If available, provide conceptual design information for communications towers. For example, would they be freestanding or secured by guy-wires; would they consist of a single pole or steel-lattice structure; how tall would the towers be?*

    TRRC Response: Communication towers will be self-supported (no guy wires) steel lattice towers similar to that shown on the photo attached As Exhibit 4. Tower heights will vary based on topography, but for example, the Colstrip Alternative would require two 50' towers, one 80' tower and two 150' towers. The Tongue River, Tongue River Road, and Moon Creek Alternatives would be expected to require six 150' towers while the Revised Decker Alternative would likely require four 150' towers. The Ashland East and Terminus 1 Variations do not affect the number of towers required.

16. *STB Request: Indicate how the location of right-of-way fences would be determined. Describe how much of the right-of-way would be fenced.*

    TRRC Response: The right-of-way would be fenced continuously except at bridges, crossings, and cattle passes, where the fencing would turn in toward the track shoulder or tie into a cattle guard.

17. *STB Request: Provide cross-section diagrams for the typical maximum and minimum railroad rights-of- way that include elements and infrastructure expected to occur in each right-of-way. Provide a cross-section diagram for the right-of-way that includes the single-phase distribution line poles and an access road.*

    TRRC Response: The maximum and minimum railroad right-of-way does not occur at locations where access roads and single-phase distribution line poles are located since support tracks are not logically located in areas of largest cuts or fills. In that way, the minimum and maximum railroad right-of-way exhibits, which TRRC provided as attachments to its May 3, 2013 responses to OEA's April 5, 2013 requests, are still valid. However, TRRC has attached as Exhibit 5 to this response a diagram of a typical section at a setout track, which would require an access road and in some cases, the single-phase distribution line. As indicated in TRRC's May 3, 2013 response to Question 3 of the April 5, 2013 data response, the single-phase distribution line is not a continuous feature and only serves specific locations where signal infrastructure is planned. As indicated in the previous TRRC response to Question 4 of that May 3, 2013 response, the access roads are not a continuous feature and only serve specific locations where signal infrastructure is planned or track turnouts are to be located.

18. *STB Request: Identify the anticipated source of ballast that would be used in construction.*

TRRC Response: Pipestone Quarry near Whitehall, Montana, which is about 200 miles west of Billings.

19. *STB Request: Describe how ballast would be transported to the construction site by train. Would it be transported by maintenance-of-way trains and spread on skeletonized track? Alternatively, would it be transported by rail along the existing main line and then transported to the construction site by truck?*

    TRRC Response: Ballast would be transported to the site by work trains via connection to the existing rail network and be dumped in place on new skeletonized track constructed by a Track-Laying Machine.

20. *STB Request: Estimate the total volume of water that would be required for rail construction activities.*

    TRRC Response: Water will be required during construction to provide compaction of fill material and dust suppression. Assuming 5% moisture needs to be added to the fill material to achieve an optimum soil density of 120 lbs/CF and provide dust suppression during construction, 19.45 gallons of water needs to be added for every cubic yard of fill material, or 59.69 Acre-Feet of water per million cubic yards.

    As noted in the TRRC response to Question #11 of the STB Data Response dated April 5, 2013, water needed during construction for dust suppression, soil compaction and other construction activities is anticipated to be obtained through contractor-coordinated purchase of water rights access to Tongue River, Yellowstone River, water wells, or a combination thereof. In order to provide a comparison of water needed during construction for the various alternatives, three USGS gages were analyzed to determine the flow volume of water that can be expected in Tongue River adjacent to the alternative alignments. The gages are located near Birney, MT (USGS gage #6307616), at the Brandenberg bridge north of Ashland, MT (USGS gage #6307830), and near Miles City, MT (USGS gage #6308500). The mean annual flow volume shown throughout the history of these three gages was averaged and it is estimated that the average annual flow volume of the Tongue River near the project location is 371,896 Acre-Ft/Year. Supporting information regarding these gages can be found at the USGS Web Site, http://mt.water.usgs.gov/projects/tongueriver. The flow volumes of these three locations were averaged as a reference for all alternatives under consideration due to their proximity to the study area.

    The Colstrip Alternative has an estimated 15.3 million cubic yards (mmcy) of embankment, which per the above calculations would require (15.3 mmcy x 59.69 AF/mmcy) = 912 Acre-Ft of water for compaction and dust suppression. This represents 0.25% of the average annual volume of the Tongue River near the project.

The amount of water needed during construction is a function of the amount of fill required to construct the proposed rail line. The approximate amount of water required during construction is listed below for each alternative in million gallons (MMGallons) and as a percentage of annual flow of the Tongue River at Ashland/Otter Creek, Montana:

- Colstrip Alt. - (15.3 MMCY Fill), (912 Acre-Feet), 0.25% of Tongue River
- Tongue River Alt. - (20.3 MMCY Fill), (1,214 Acre-Feet), 0.33% of Tongue River
- Tongue River Road Alt. - (30.4 MMCY Fill), (1,817 Acre-Feet), 0.49% of Tongue River
- Moon Creek Alt. - (30.2 MMCY Fill), (1,803 Acre-Feet), 0.48% of Tongue River
- Revised Decker Alt. - (37.3 MMCY Fill), (2,228 Acre-Feet), 0.60% of Tongue River
- Ashland East Variation and Terminus 1 Variations with Colstrip (Colstrip East Alternative) - (20.1 MMCY Fill), (1,198 Acre-Feet), 0.32% of Tongue River

21. *STB Request: Describe the anticipated design for cattle passes. Identify how the location of cattle passes would be determined.*

    TRRC Response: See attached Exhibit 6 for a typical cattle pass design. Cattle pass locations would be determined by agreements with landowners and based on topography. In general, areas where the proposed track is about 15 feet higher than the adjacent ground is preferred for cattle pass locations in order to avoid creating lower passes that can present drainage and cattle line-of-sight issues while minimizing crossing length.

22. *STB Request: In the January 11, 2013 Alternatives Screening Analysis, TRRC noted that BNSF is modeling locomotive emissions and fuel usage. Indicate when the modeling will be complete. If the modeling is complete, provide the results and comparative discussion identified in the screening analysis.*

    TRRC Response: Modeling of the many alternative and variation combinations for fuel consumption is complete. We anticipate the conversion of fuel consumption to emission estimates will be complete by the end of May 2014 and will provide the information to the STB at that time. .

23. *STB Request: Confirm that all staging areas would be located within the railroad right-of-way. If they would not be located in the right-of-way, identify where the staging areas would be located.*

    TRRC Response: It is currently anticipated that most, if not all, staging areas will be located within the railroad right-of-way. Although the exact locations of staging areas would be determined by the construction contractor, such areas would typically be somewhat level, preferably with public access.

24. *STB Request: Describe to what extent there would be activity, development, or disturbance outside of the daylight lines, but inside the right-of-way.*

TRRC Response: It is possible that some minor disturbance beyond the daylight lines would occur during construction for temporary activities such as bridge material and crane staging, installation of erosion control, and seeding. Fire breaks would be maintained as shown in the typical section exhibits.

25. *STB Request: Identify the anticipated support facility locations for each alternative. Indicate if support facilities would be constructed in Ashland independent of the rail alternative licensed.*

    TRRC Response: It is anticipated that all alternatives would require a support facility near Ashland and expansion of one existing maintenance-of-way facility, which is addressed in the response to Question 26 below.

26. *STB Request: Identify the anticipated maintenance-of-way headquarters for each alternative. Indicate if maintenance-of-way headquarters in Forsyth would be constructed independent of the rail alternative licensed.*

    TRRC Response: The Colstrip Alternatives would require a small expansion of the existing maintenance-of-way facility in Forsyth, Montana. The Tongue River, Tongue River Road, and Moon Creek Alternatives would require a similar expansion of the existing maintenance-of-way facility in Miles City, Montana. The Revised Decker Alternative would require a similar expansion of the existing maintenance-of-way facility near Sheridan, Wyoming.

27. *STB Request: Does the preliminary design account for changes in weather extremes over the life of the proposed rail line (e.g. the effects on bridges, culverts, and roadbed from potential increases in the number, duration, and intensity of floods, or the effects of higher temperatures in the future on the rail), and if so, how?*

    TRRC Response: The preliminary design is based on discharges calculated for the current 50-year and 100-year rainfall events. This approach follows accepted design standards and guidelines based on historical and foreseeable conditions.

28. *STB Request: Are bank engineered structures such as rip-rap or bank armoring planned along the banks of the Tongue River below the T&Y dam or anywhere else along the Tongue River?*

    TRRC Response: TRRC has previously responded to this request by letter dated April 3, 2014.

29. *STB Request: Does TRRC anticipate nighttime construction or would construction be limited to daylight hours?*

    TRRC Response: TRRC does not at present anticipate the need for nighttime construction if grading occurs outside of winter months. However, as described in the response to Question 1, the option of working through the winter may be implemented based on economic or other

factors requiring a more compressed construction schedule, which would require working around the clock during winter months, generally assumed to be November 1 through March 1.

TRR Alternatives - Concept Bridge Locations and Culvert Locations/Sizes
SPP denotes Structural Plate Pipe and CMP denotes Corrugated Metal Pipe (dimensions in inches)

Revised Exhibit 2

Colstrip Alternative			Tongue River Alternative			Tongue River Road Alternative			Moon Creek Alternative		
Mile Post	Size	Comment	Mile Post	Size	Comment	Mile Post	Size	Comment	Mile Post	Size	Comment
0.62	84 SPP		1.21	36 CMP		11.60	78 SPP		2.07	BRIDGE	Moon Creek
0.84	78 SPP		1.73	36 CMP		11.71	84 SPP		2.58	96 SPP	
1.24	84 SPP		1.81	36 CMP		12.18	BRIDGE	Tongue River	3.27	78 SPP	
1.41	78 SPP		1.86	54 CMP		13.42	90 SPP		3.84	102 SPP	
1.63	78 SPP		2.28	36 CMP		14.02	90 SPP		4.5	108 SPP	
2.33	90 SPP		2.73	48 CMP		14.52	144 SPP	Dry Creek	4.86	90 SPP	
2.66	84 SPP		3.38	48 CMP		14.90	54 CMP	Added per ICF comments	5.11	BRIDGE	Moon Creek
2.84	84 SPP		4.14	108 SPP		14.99	72 CMP	Added per ICF comments	5.46	78 SPP	
3.34	84 SPP		4.55	84 SPP		15.06	60 CMP	Added per ICF comments	5.71	90 SPP	
3.53	54 CMP		4.95	72 CMP		15.27	60 CMP		5.97	72 CMP	
3.76	66 CMP		5.82	48 CMP		15.38	54 CMP		6.1	54 CMP	
3.91	54 CMP		5.97	120 SPP	Paddy Fay Creek	15.80	72 CMP	Added per ICF comments	6.31	66 CMP	
4.22	102 SPP		6.41	36 CMP		16.01	156 SPP	Prat Creek	6.6	96 SPP	
4.59	96 SPP		6.56	36 CMP		17.05	84 SPP		6.96	78 SPP	
5.78	78 SPP		7.00	36 CMP		17.36	102 SPP		7.13	60 CMP	
5.91	60 CMP	Added per ICF comments	7.70	96 SPP		18.27	156 SPP	Nelson Creek	7.48	102 SPP	
6.43	72 CMP		8.63	48 CMP		18.73	96 SPP		7.85	78 SPP	
7.43	BRIDGE	Rosebud Creek	9.06	48 CMP		19.06	78 SPP		8.29	72 CMP	
7.87	72 CMP		9.48	96 SPP		19.50	108 SPP		8.55	102 SPP	
8.01	60 CMP		9.82	36 CMP		19.87	60 CMP	Added per ICF comments	8.76	72 CMP	
8.3	60 CMP		9.97	36 CMP		20.15	84 SPP	Added per ICF comments	9.16	126 SPP	
8.57	90 SPP		10.71	36 CMP		20.46	108 SPP		9.65	84 SPP	
8.96	90 SPP		11.05	108 SPP		20.60	84 SPP	Added per ICF comments	10.26	72 CMP	
9.42	96 SPP		11.52	48 CMP		21.27	BRIDGE	Ash Creek	10.49	96 SPP	
10.21	90 SPP		11.73	36 CMP		22.31	84 SPP		10.76	72 CMP	
10.92	96 SPP		12.02	36 CMP		22.55	90 SPP		11.27	72 CMP	
11.24	96 SPP		12.20	36 CMP		22.99	90 SPP		11.54	78 SPP	
11.49	90 SPP		12.28	48 CMP		23.57	114 SPP	Dry Creek	11.94	90 SPP	
11.86	48 CMP		12.43	36 CMP		23.75	96 SPP		12.12	60 CMP	
12.15	102 SPP	Greenleaf Creek	12.60	36 CMP		24.67	138 SPP	Jack Creek	12.2	60 CMP	
12.19	96 SPP		12.77	54 CMP		25.16	108 SPP		12.51	126 SPP	
12.49	84 SPP		12.94	36 CMP		25.37	96 SPP		13.01	66 CMP	
12.85	90 SPP		13.55	96 SPP		26.38	84 SPP		13.18	66 CMP	
13.21	90 SPP	Added per ICF comments	13.81	48 CMP		26.73	150 SPP	Brown Creek	13.58	72 CMP	
14.01	48 CMP	Added per ICF comments	14.23	42 CMP		27.37	96 SPP		14.1	90 SPP	
15.32	60 CMP		14.65	120 SPP	Wolf Creek	28.09	156 SPP	Haddow Creek	14.6	72 CMP	
15.56	60 CMP		15.10	54 CMP		28.48	78 SPP		15.08	66 CMP	
15.72	60 CMP		15.63	72 CMP		28.78	96 SPP		15.65	60 CMP	
15.96	BRIDGE	Lay Creek	15.77	36 CMP		29.48	102 SPP	Cheever Creek	15.98	84 SPP	
16.69	78 SPP		16.30	36 CMP		29.86	60 CMP		16.39	54 CMP	
17.14	84 SPP		16.56	108 SPP	Circle L Creek	30.11	126 SPP	Sand Creek	16.62	60 CMP	
17.29	66 CMP		17.02	36 CMP		30.68	BRIDGE	Foster Creek	16.84	60 CMP	
17.71	66 CMP		17.09	60 CMP		31.66	60 CMP		17.14	60 CMP	
17.89	54 CMP		17.32	72 CMP		31.83	66 CMP		17.36	66 CMP	
18	60 CMP		18.00	48 CMP		31.93	72 CMP		18.07	102 SPP	
18.26	60 CMP		18.41	108 SPP	Added per ICF comments	32.24	78 SPP		18.41	150 SPP	Thorpe Creek
18.6	72 CMP		18.51	150 SPP	Thorpe Creek	32.74	90 SPP		18.44	150 SPP	Thorpe Creek
18.88	72 CMP		18.89	36 CMP		33.10	84 SPP		18.48	150 SPP	Thorpe Creek
19.21	BRIDGE	Tongue River	19.10	48 CMP		33.37	84 SPP				
19.79	54 CMP		19.38	54 CMP		33.51	102 SPP	Stoney Creek			
19.97	84 SPP		19.61	36 CMP		34.49	96 SPP				
20.03	96 SPP		19.82	54 CMP		34.77	90 SPP				
20.22	54 CMP		20.12	36 CMP		35.37	102 SPP				
20.33	54 CMP		20.58	108 SPP	Kennedy Creek	35.79	144 SPP	Elk Creek			
20.42	36 CMP		20.80	36 CMP		36.16	96 SPP				
21.06	72 CMP	Colbert Coulee	21.13	48 CMP		36.66	90 SPP	Added per ICF comments			
21.25	36 CMP		21.39	60 CMP		37.24	96 SPP				
21.38	54 CMP		21.69	36 CMP		37.89	84 SPP				
21.86	54 CMP		22.11	72 CMP	Plunket Creek	38.03	114 SPP				
22.08	36 CMP		22.81	48 CMP		38.40	72 CMP	Added per ICF comments			
22.48	36 CMP		23.04	72 CMP		38.63	102 SPP	Added per ICF comments			
22.73	36 CMP		23.45	36 CMP		38.98	96 SPP				
22.94	72 CMP		23.89	42 CMP		39.25	BRIDGE	Lay Creek			
23.15	36 CMP		24.08	72 CMP	Geddes Creek	39.33	102 SPP				
23.33	36 CMP		24.65	42 CMP		39.52	66 CMP				
23.75	48 CMP		25.03	72 CMP	Yank Creek	39.74	60 CMP				
24.57	120 SPP	Double E Coulee	25.69	36 CMP		40.01	78 SPP				
24.76	36 CMP		25.88	36 CMP		40.26	48 CMP	Added per ICF comments			
24.96	36 CMP		26.13	48 CMP		40.35	60 CMP	Added per ICF comments			
25.19	36 CMP		26.43	48 CMP		40.63	72 CMP				
25.51	36 CMP		25.79	120 SPP	Mills Creek	40.74	72 CMP				
25.8	96 SPP	Cook Creek	27.13	54 CMP		41.42	108 SPP				
26.25	36 CMP		27.49	36 CMP		41.81	84 SPP	Added per ICF comments			
26.5	36 CMP		27.77	36 CMP		42.35	150 SPP	Coon Creek			
26.82	48 CMP		28.08	60 CMP		43.51	84 SPP				
27.07	36 CMP		28.66	36 CMP		43.89	66 CMP				
27.16	36 CMP		28.87	120 SPP	Forest Creek	44.31	144 SPP	Garden Creek			
27.31	36 CMP		27.91	48 CMP		44.44	78 SPP				
27.54	36 CMP		29.06	48 CMP		44.99	BRIDGE	Liscom Creek			
27.71	36 CMP		30.03	72 CMP		45.66	78 SPP				
27.94	48 CMP		30.33	114 SPP	Horse Creek	45.86	72 CMP				
28.45	BRIDGE	Otter Creek	30.52	36 CMP		46.20	96 SPP				
29.4	48 CMP		30.65	36 CMP		46.91	102 SPP				
30.54	36 CMP		31.03	72 CMP		47.25	66 CMP				
30.9	48 CMP		31.33	42 CMP		47.38	78 SPP				
31.16	36 CMP		31.54	48 CMP		47.52	90 SPP				
31.34	96 SPP		31.98	36 CMP		47.73	108 SPP	Big John Creek			
31.58	36 CMP		32.09	42 CMP		48.22	114 SPP	Freda Creek			
32	36 CMP		32.45	120 SPP	Six-Mile Creek	48.48	60 CMP				
32.26	96 SPP	Sawmill Creek	33.00	48 CMP		48.78	126 SPP	Goodale Creek			
32.57	36 CMP		33.30	36 CMP		49.25	72 CMP				
32.84	48 CMP		33.47	36 CMP		49.64	120 SPP				
33.19	36 CMP		33.61	36 CMP		49.80	72 CMP				
33.29	96 SPP		34.08	36 CMP		49.96	78 SPP				
33.35	84 SPP		34.40	180 SPP	Miller Creek	50.19	66 CMP				
33.39	48 CMP	Added per ICF comments	34.61	36 CMP		50.57	84 SPP				
33.66	36 CMP		34.69	36 CMP		50.70	78 SPP				
33.83	36 CMP		34.84	36 CMP		51.15	114 SPP	Straight Creek			
34.19	36 CMP		35.03	36 CMP		52.03	138 SPP	Diamond R Creek			
34.48	120 SPP	McIntosh Creek	35.25	36 CMP		52.14	72 CMP	Added per ICF comments			
34.8	48 CMP		35.48	48 CMP		52.98	BRIDGE	Beaver Creek			
Spur to TP1			35.78	48 CMP		53.51	66 CMP				
0.58	54 CMP		36.20	108 SPP		53.73	90 SPP				
1.32	60 CMP		36.52	108 SPP	Pump Creek	54.27	90 SPP				
1.68	48 CMP		36.86	36 CMP		54.75	96 SPP				
2.13	36 CMP		37.02	36 CMP		55.23	144 SPP				
2.49	120 SPP	Spring Creek	37.19	36 CMP		55.60	90 SPP				
2.53	54 CMP		37.26	54 CMP		57.06	96 SPP				
2.7	36 CMP		37.43	96 SPP	Cow Creek	57.33	90 SPP				
2.8	36 CMP		38.17	42 CMP		57.77	156 SPP	Bringoff Creek			
2.89	48 CMP		38.57	54 CMP		58.60	96 SPP				
3.17	120 SPP	Bridge Creek	38.70	48 CMP		58.84	96 SPP				
4.05	42 CMP		38.80	120 SPP	Ranch Creek	59.16	138 SPP				
4.39	36 CMP		39.34	36 CMP		59.89	36 CMP				
4.5	36 CMP		39.69	54 CMP							
4.9	96 SPP	Bowman Creek	40.20	54 CMP							
5.07	36 CMP		40.44	36 CMP							
5.22	72 CMP		40.63	54 CMP							
5.41	96 SPP	Added per ICF comments	40.70	108 SPP	Coal Creek						
6.24	120 SPP	King Creek	40.81	54 CMP	Added per ICF comments						
6.6	48 CMP		41.22	36 CMP							
6.72	48 CMP		41.66	36 CMP							
6.92	36 CMP		41.81	36 CMP							
7.06	36 CMP		42.07	84 CMP							
7.28	72 CMP	Cedar Creek	42.36	84 SPP							
7.49	36 CMP		42.56	36 CMP							
			42.68	36 CMP							
			42.91	36 CMP							
			43.15	108 SPP	Cottonwood Creek						
			43.57	48 CMP							
			43.83	42 CMP							
			44.02	72 CMP							
			44.40	72 CMP							
			45.08	120 SPP	Dry Creek						
			45.39	36 CMP							
			45.99	48 CMP							
			46.11	54 CMP							
			46.41	54 CMP							
			46.87	96 SPP	Added per ICF comments						
			47.56	96 SPP	Trail Creek						
			47.85	96 SPP	Alfalfa Creek						
			48.47	54 CMP							
			49.29	96 SPP	Hart Creek						
			49.88	36 CMP							
			50.46	36 CMP							
			50.86	36 CMP							
			51.05	48 CMP							
			51.37	36 CMP							
			51.71	48 CMP							
			52.02	108 SPP	Joe Leg Creek						

52.43	36 CMP	
52.94	42 CMP (POND)	
53.23	36 CMP	
Tongue River Alternative		
Mile Post	**Size**	**Stream**
53.42	36 CMP	
53.55	36 CMP	
53.85	36 CMP	
54.57	60 CMP	Hammond Draw
54.84	36 CMP	
55.42	36 CMP	
55.84	36 CMP	
56.05	36 CMP	
56.35	48 CMP	
56.54	96 SPP	Roe and Cooper Creek
56.86	36 CMP	
57.01	48 CMP	Added per ICF comments
57.17	54 CMP	
57.58	36 CMP	
57.73	48 CMP	
58.09	36 CMP	
58.30	48 CMP	
58.57	36 CMP	
58.72	36 CMP	
58.91	36 CMP	
59.06	BRIDGE	Tongue River
59.65	36 CMP	
59.82	48 CMP	
59.89	36 CMP	
60.23	36 CMP	
60.42	36 CMP	