

236370

BEFORE THE  
SURFACE TRANSPORTATION BOARD

ENTERED  
Office of Proceedings  
July 30, 2014  
Part of  
Public Record

\_\_\_\_\_  
SUNBELT CHLOR ALKALI PARTNERSHIP )

Complainant, )

v. )

NORFOLK SOUTHERN RAILWAY COMPANY )

Defendant. )  
\_\_\_\_\_

Docket No. NOR 42130

JOINT TECHNICAL CORRECTIONS PETITION OF SUNBELT CHLOR ALKALI  
PARTNERSHIP AND NORFOLK SOUTHERN RAILWAY COMPANY

Jeffrey O. Moreno  
Jason D. Tutrone  
Thompson Hine LLP  
1919 M Street, N.W., Suite 700  
Washington, D.C. 20036  
(202) 331-8800

G. Paul Moates  
Paul A. Hemmersbaugh  
Matthew J. Warren  
Sidley Austin LLP  
1501 K Street, N.W.  
Washington, D.C. 20005  
(202) 736-8000

*Counsel to SunBelt Chlor Alkali Partnership*

*Counsel to Norfolk Southern Railway Company*

Date: July 30, 2014

**BEFORE THE  
SURFACE TRANSPORTATION BOARD**

---

**SUNBELT CHLOR ALKALI PARTNERSHIP**

**Complainant,**

**v.**

**NORFOLK SOUTHERN RAILWAY COMPANY**

**Defendant.**

---

**Docket No. NOR 42130**

**JOINT TECHNICAL CORRECTIONS PETITION OF SUNBELT CHLOR ALKALI  
PARTNERSHIP AND NORFOLK SOUTHERN RAILWAY COMPANY**

Complainant SunBelt Chlor Alkali E.I. Partnership (“SunBelt”) and Defendant Norfolk Southern Railway Company (“NS”) submit this Joint Petition for Technical Corrections to the Surface Transportation Board’s (“STB” or “Board”) Decision in the above-captioned rate case. *See SunBelt v. NS*, STB Docket No. NOR 42130, Decision (served June 20, 2014) (“*Decision*”). Consistent with the Board’s direction and rules established in *Xcel Energy*, this joint Petition addresses only technical and computational errors—it does not address issues that are appropriately addressed in a reconsideration petition. *See Public Serv. Co. of Colorado d/b/a Xcel Energy v. Burlington N. & Santa Fe Ry. Co.*, STB Docket No. 42057 (served Dec. 14, 2004) (“*Xcel*”), slip op. at 1-2.<sup>1</sup> The revisions sought by the Petition would correct errors and

---

<sup>1</sup> Each party is also filing today a separate Reconsideration Petition, addressing what it believes to be erroneous Board rulings and findings in the primary *Decision* itself. Most of the technical corrections identified in this Joint Petition are designed to eliminate a discrepancy between rulings or statements in the text of the *Decision* and the Board’s implementing workpapers and computations. As discussed in the text, this is consistent with the parties’ understanding of the Board’s precedents and expectations for a joint technical corrections petition. However, the fact that a party has agreed to a “technical correction” to cause the Board’s workpapers to accurately implement a ruling or statement of the *Decision* does not mean the party agrees that the underlying ruling, finding, or conclusion of the *Decision* is correct, appropriate, or lawful. To the contrary, it is very likely if not certain that each party’s individual reconsideration petition

omissions in the Board's implementation of rulings and determinations set forth in the narrative text of the *Decision*, primarily through proposed changes to the Board's workpapers and calculations.

Below, SunBelt and NS describe technical errors identified by the parties and the parties' proposed corrections to those errors. The parties have attempted to group together items related to the same general SAC evidence category (*e.g.*, Operating Expenses, Road Property Investment, Discounted Cash Flow analysis), but otherwise the list is in no particular order. The parties also include as an Exhibit to this Petition detailed descriptions of how the proposed changes may be implemented using the Board's workpapers, as well as illustrative copies of the Board's workpapers highlighting those changes.

## **I. OPERATING EXPENSES**

### **1. Train and Engine Personnel Wages**

The *Decision* accepted NS's fringe benefit ratio, and stated that it applied the fringe benefit ratio to the train crew average wages calculated by SunBelt. *See Decision* at 44. However, the Board workpapers did not apply the fringe benefit ratio to the average train crew wages calculated by SunBelt; instead, it applied the ratio to the Board's figure for average T&E wages, which omitted conductors' wages. *See* STB WP "STB Operating Expense STB2.xlsx," worksheet "Summary." Exhibit 1 to this Petition illustrates how to correct this technical error. *See* Exhibit 1 at I(1), page 1.

---

will request that the Board change some of the very rulings or findings of the *Decision* that this Technical Corrections Petition would implement. This agreed joint petition simply serves the largely mechanical function of aiding the Board in conforming its workpapers and computations to the text of rulings and statements of the *Decision*. Each party fully reserves all rights to contest any and all rulings and findings made in the *Decision* (whether on reconsideration, judicial review, or otherwise) and nothing in this Petition is intended to waive or otherwise affect those rights.

**2. RMI Implementation Costs**

The *Decision* accepted SunBelt's RMI implementation costs, but the Board's workpaper calculations used NS's implementation expense of \$4.5 million. *Compare Decision at 150 with STB WP "STB Operating Expense STB2.xlsx," worksheet "IT capital."* See Exhibit 1 at I(2), page 1.

**3. Intermodal Lift and Ramp Costs**

The *Decision* accepted SunBelt's lift and ramp unit costs and its count of containers requiring this service from SunBelt's Rebuttal. *Decision at 68.* However, the Board's workpapers used the values from SunBelt's Opening evidence rather than its Rebuttal. See Exhibit 1 at I(3), page 1.

**II. ROAD PROPERTY INVESTMENT**

**4. Removal of Team Overhaul Costs**

The *Decision* rejected embankment quantities based on Team Overhaul proposed by NS. See *Decision at 112.* The STB workpapers did not delete these quantities from its calculation of roadbed preparation costs. See STB WP "No.2\_STB - SBRR Open Grading NS Reply.xlsx," worksheet "Eng Rep Input." Deleting these quantities would affect SBRR costs for earthwork (including finish grading), clearing and grubbing, land for waste quantities, and subgrade preparation. Correcting this technical error would reduce roadbed preparation costs by \$17.409 million. See Exhibit 1 at II(1), page 1.

**5. Elimination Of NS's Adjustments To Clearing Costs**

The *Decision* declined to accept NS's adjustments to Means clearing costs. See *Decision at 108-09.* However, the Board's workpapers included those adjustments. Correcting this technical error would reduce SBRR clearing costs by approximately \$6 million. See Exhibit 1 at II(2), page 2.

**6. Eliminate Stripping Costs**

The *Decision* rejected NS's costs for stripping. *See Decision* at 109. However, the Board's workpapers included those stripping quantities and costs. *See* STB WP No.2\_STB - SBRR Open Grading NS Reply.xlsx," worksheet "EW Cost." Eliminating the stripping quantities affects the costs for earthwork and land for waste quantities. Correcting this technical error would reduce roadbed preparation costs by approximately \$1.4 million. *See* Exhibit 1 at II(3), page 2.

**7. Understated Earthwork Costs**

The *Decision* rejected NS's adjustments to Means unit costs for loose rock and solid rock, except for the fine grading additive. *See Decision* at 116-17. The STB's workpapers linked its development of loose rock and solid rock earthwork unit costs to SunBelt's Rebuttal spreadsheet unit costs and then included the finish grading additive. *See* STB WP "No.2\_STB - SBRR Open Grading NS Reply.xlsx," worksheet "Unit Cost Modified." However, the STB linked to SunBelt's unit costs after the application of indexing and the Means location factor and these costs were then adjusted again by indexing and the location factor. *See* STB WP "No.2\_STB - SBRR Rebuttal Grading.xlsx," worksheet "Unit Costs;" STB WP "No.2\_STB - SBRR Open Grading NS Reply.xlsx" at worksheet "Unit Cost Modified." The Board's workpapers also failed to include costs to excavate and load blasted rock. The cumulative effect of these technical errors is to understate SBRR earthwork costs. Correcting these unit costs for excavating loose rock and solid rock would increase roadbed preparation costs by approximately \$1.8 million. *See* Exhibit 1 at II(4), pages 2-3.

**8. Weight of Ties**

The *Decision* accepted SunBelt's evidence on the weight of ties. *See Decision* at 132-33. But the Board's workpapers did not use SunBelt's weights in some of the formulas used to

calculate tie transportation costs. *See* STB WP “No.2\_STB - SBRR Track Construction NS Reply.xls,” worksheets “Ties Running” and “Ties Yard.” Correcting this technical error would increase SBRR construction costs by \$1.228 million. *See* Exhibit 1 at II(5), page 3.

**9. Transportation Costs for Ties**

The formulas used in the Board’s workpapers for on-line transportation costs for ties contain errors. *See* STB WP “No.2\_STB - SBRR Track Construction NS Reply.xls,” worksheets “Ties Running” and “Ties Yard.” Correcting the formulas would decrease SARR construction costs by approximately \$3.36 million. *See* Exhibit 1 at II(6), page 3.

**10. Set-Out Track Miles**

The *Decision* accepted SunBelt’s set-out track miles. *See Decision* at 20. However, the Board’s workpapers did not use SunBelt’s set-out track miles to calculate roadbed preparation costs. *See* STB WP “No.2\_STB - SBRR Open Grading NS Reply.xlsx,” worksheet “Miles.” Substituting SunBelt’s set-out track miles for NS’s set-out track miles affects the costs for earthwork, clearing and grubbing, land for waste quantities and subgrade preparation. Correcting this technical error would reduce SBRR roadbed preparation costs by approximately \$2.6 million. *See* Exhibit 1 at II(7), page 4.

**11. Industrial and Siding Track Ballast Area Square Feet**

The *Decision* states that the Board accepted the parties agreed-upon 13.9 square feet for the ballast cross-section area for industrial and siding tracks. *See Decision* at 130. However, the Board’s work papers used 15.11 square feet, a value that appeared in the parties’ cross-sectional drawings.<sup>2</sup> The difference between the Board’s workpapers and the text of the

---

<sup>2</sup> *See* STB WP “No.2\_STB - SBRR Track Construction NS Reply.xlsx,” worksheet “Track Quantity Calculator.”

*Decision* appears to be a technical error that resulted in an overstatement of ballast costs.<sup>3</sup>

Substituting 13.9 square feet for the cross-section area would reduce the track construction costs by \$1.872 million. *See* Exhibit 1 at II(8), page 4.

**12. Transportation Costs for Plates, Spikes, and Anchors**

While the *Decision* indicates that the Board accepted SunBelt’s transportation costs of \$0.035 per ton-mile for plates, spikes, and anchors (*see Decision* at 136), the Board’s workpapers used NS’s transportation costs of \$0.0934 per ton-mile. Correcting this inconsistency to use SunBelt’s costs would decrease SARR construction costs by approximately \$2.303 million. *See* Exhibit 1 at II(9), page 4-5.

**13. Incorrect Turnout Counts For Setout Tracks**

The *Decision* accepted SunBelt’s FED count and SunBelt’s number of set-out track miles. *See Decision* at 20, 158. However, the Board’s workpapers did not change the #10 turnout count in its track construction cost calculation, thereby overstating the #10 turnout count. Correcting this technical error would reduce SBRR track construction costs by \$4.442 million. *See* Exhibit 1 at II(10), page 5-6.

**BRIDGES**

**14. Movable Bridges**

The *Decision* rejected SunBelt’s argument that the SBRR would incur only ten percent of the costs of moveable bridges. *See Decision* at 142. The Board’s workpapers, however, failed to correct SunBelt’s bridge cost reduction and thus the Board’s construction costs include only ten percent of the costs of its movable bridges. *See* STB WP “No.2\_STB - SBRR Bridge

---

<sup>3</sup> NS notes that the Board’s workpaper “No.2\_STB-SBRR Track Construction NS Reply” suggests that its use of the 15.11 square feet figure may not have been an error, but rather an intentional revision. Specifically, cells C43 and C44 of the tab “Ballast for Yard Tracks” indicate an intention to use “STB Revised units per track foot.”

Construction Costs NS Reply.xlsx,” worksheet “Rebuttal.Special Bridges.” Correcting this technical error and applying the full cost for moveable spans increases SBRR bridge investment by \$56.779 million. *See* Exhibit 1 at II(11), page 6.

**15. Non-Movable Bridge Costs**

The Board’s workpapers double-counted the construction costs for major non-moveable structures over navigable waterways. The Board’s calculations included these costs as a separate item (based on NS Reply), and then included the same costs a second time in the costs for moveable bridge costs (based on SunBelt’s Rebuttal). Correcting this technical error would reduce SBRR bridge costs by \$37.672 million. *See* Exhibit 1 at II(12), page 6.

**16. Communications and Signals/Interlocker Costs**

The Board’s workpapers account for the costs of PTC locomotives in three different locations. The Board subtracted PTC locomotive costs from the total communication system costs, added the PTC locomotive costs to the Signals and Interlockers investment costs, and included it in future PTC communications costs. *See* STB WP "SunBelt DCF Transfer III-F Total STB No3.xlsx." The result of this approach was an overstatement of Communications investment in the DCF by \$4,312,924 and an understatement of Signals and Interlockers investment in the DCF by the same amount. Because of differences in useful lives and other parameters of the two asset classes, the Board’s effective misclassification resulted in an erroneous cumulative present value of the SBRR revenue requirement. In order to correctly account for the investments in the DCF Model, it is necessary to remove both the subtraction from the initial communication system investment and the corresponding addition to the initial signals and interlockers investment. *See* Exhibit 1 at II(13), page 6.

**17. Yard Drainage Costs**

The *Decision* accepted SunBelt's yard drainage costs for the main Birmingham yard and accepted NS's drainage costs at all other yards. *See Decision* at 120. But the Board's workpapers use NS's calculations for all yard drainage costs. *See* STB WP "No.2\_STB - SBRR Open Grading NS Reply.xlsx," worksheet "Yards NS." Correcting the Board's calculations to use SunBelt's drainage costs for the Birmingham yard would decrease SBRR construction costs by approximately \$3.469 million. *See* Exhibit 1 at II(14), pages 6-7.

**18. Fencing Costs**

The *Decision* states the Board accepts SunBelt's quantities and costs for fencing. *Decision* at 165. But the Board's workpapers omitted SBRR fencing costs. *See* STB WP "No.3\_STB - SunBelt Decision Tables.xlsx," worksheet "Buildings & Facilities." Correction of this technical error increases SBRR road property investment by \$5.076 million. *See* Exhibit 1 at II(15), page 7.

**19. Signage Double Count**

The *Decision* accepted SunBelt's public improvements costs, which included approximately \$1 million for roadway sign costs. *See Decision* at 165. In addition to including those signage costs in the public improvements calculations, however, the Board's workpapers added signage costs a second time, including them under "Fencing and Roadway Sign" investment.<sup>4</sup> Correction of this technical error would reduce SBRR investment costs by \$1 million. *See* Exhibit 1 at II(16), page 8.

---

<sup>4</sup> *See* STB work papers "SunBelt DCF Transfer III-F Total STB No3.xlsx," cell F19 and "No.2\_STB - SBRR Track Construction NS Reply.xlsx," worksheet "Summary," cell K108.

### III. DISCOUNTED CASH FLOW MODEL<sup>5</sup>

#### 20. Real Estate Costs

The *Decision* accepted NS's \$8.2 million in real estate acquisition costs, but it failed to include these costs in the DCF model's land investment values. *Compare Decision* at 104 with STB workpaper "D42130 Exhibit III-H-1 STB No3.xlsx," worksheet "Replacement," cell D5. *See Exhibit 1* at III(1), page 8.

#### 21. Depreciation Tax Shield On Replacement Assets

The Board incorrectly removed the present value of depreciation tax deductions on future asset replacements in the "Replacement" worksheet of its DCF model. Correcting this technical error would increase the cumulative present value of overpayments by approximately \$10.3 million. *See Exhibit 1* at III(2), page 8.

#### 22. Base Depreciation On Future PTC Investment

The Board's workpapers incorrectly removed the present value of depreciation tax deductions on 2012 to 2015 PTC investments.<sup>6</sup> Correcting this error would increase the cumulative present value of overpayments by approximately \$6.1 million. *See Exhibit 1* at III(3), page 8.

---

<sup>5</sup> Unless otherwise noted, approximate changes in the cumulative present value of "overpayments" (SBRR revenue requirements) are based on DCF results calculated in the Board's *Decision*, and do not reflect corresponding value of changes or other adjustments to the Board's DCF calculations. For convenience and brevity, this Petition describes corrections that would reduce the cumulative present value of the SBRR revenue requirement as having the effect of "increasing the present value of overpayments" and to corrections that would increase the cumulative present value of the SBRR revenue requirement as reducing "the present value of overpayments." By using this shorthand reference, NS does not concede that an appropriate and correct SAC analysis in this case would result in a finding that the cumulative present value of SBRR revenues would exceed the cumulative present value of SBRR revenue requirements.

<sup>6</sup> *See* STB workpaper "D42130 Exhibit III-H-1 STB No3.xlsx," worksheet "PTC," cell E17.

**23. MACRS Depreciation Schedules on PTC Investment**

In developing depreciation expenses for future PTC investment, the STB's DCF model incorrectly referenced PTC asset lives, which led to the use of incorrect Modified Accelerated Recovery System ("MACRS") depreciation schedules. Specifically, the STB's "PTC" worksheet incorrectly referenced asset lives from its "Replacement" worksheet.<sup>7</sup> This leads to an incorrect classification of the PTC signals and communication assets as 20-year assets instead of 7-year assets, and subsequently the use of the incorrect MACRS depreciation schedules. Correcting the PTC asset lives and MACRS schedules would increase the cumulative present value of "overpayments" by \$4.3 million. *See* Exhibit 1 at III(4), pages 8-9.

**24. Salvage on Future PTC Investment**

The STB's DCF model deducts salvage value when determining the net depreciation based on replacement assets, but does not deduct salvage when the assets are first installed on the SARR. In calculating the initial installation of PTC assets in the years 2012 to 2015, the STB incorrectly deducted salvage from the investment base. In other words, the STB treated the PTC as replacement assets and not initial investment.<sup>8</sup> Correcting this technical error by removing the salvage value from the initial PTC investment would increase the cumulative present value of "overpayments" by \$0.5 million. *See* Exhibit 1 at III(5), page 9.

**25. Interest Tax Shields on Future PTC Investment**

In calculating the 2012 to 2015 PTC investment, the Board's workpapers removed the interest deduction for PTC investment financed with debt. The interest tax deduction provides

---

<sup>7</sup> *See* STB workpaper "D42130 Exhibit III-H-1 STB No3.xlsx," worksheet "PTC," cells AD24 to AD38 and AF24 to AF38, which reference the "ANALYSIS" range included in the "Replacement" worksheet.

<sup>8</sup> *See* STB workpaper "D42130 Exhibit III-H-1 STB No3.xlsx," worksheet "PTC," cells AF24 to AF38.

a tax shield, and therefore lowers required cash flows.<sup>9</sup> The interest tax deduction should be added to the 2012 to 2015 PTC investment because the interest tax shields for these investments are not accounted for elsewhere in the DCF model. For instance, the interest tax deductions included in the "Investment SAC" worksheet for the first 40 quarters of the DCF period reflect the interest associated with the initial SARR investment. Adding the interest tax deductions to the 2012 to 2015 PTC investment would increase the cumulative present value of "overpayments" by approximately \$1 million. *See* Exhibit 1 at III(6), page 9.

**26. Future PTC Investment in the Investment SAC Worksheet**

The Board's DCF model incorrectly referenced the 2012 PTC investment values in the "Investment SAC" worksheet instead of the 2013 and 2014 investment values.<sup>10</sup> Correcting these technical errors would reduce the cumulative present value of "overpayments" by \$100,000. *See* Exhibit 1 at III(7), page 9.

**27. Incorrect Productivity Adjustment In Hybrid RCAF**

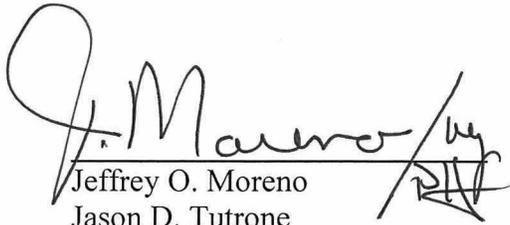
The Board's quarterly RCAF-A index calculations for the periods 1Q 2015 through 3Q 2021 (which it used to develop its Hybrid RCAF forecast) incorrectly used full-year productivity factors instead of quarterly productivity factors.<sup>11</sup> An appropriate correction of this technical error is described in Exhibit 1 at III(8), page 9-10.

---

<sup>9</sup> *See* STB workpaper "D42130 Exhibit III-H-1 STB No3.xlsx," worksheet "PTC," cells E18 and E22.

<sup>10</sup> *See* STB workpaper "D42130 Exhibit HHH-H-1 STB No3.xlsx, worksheet "Investment SAC," cells X6 and &6.

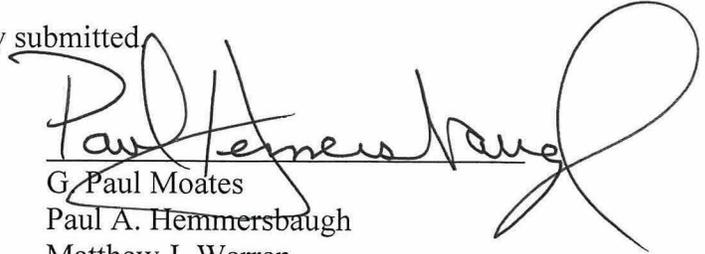
<sup>11</sup> *See* STB WP "Hybrid RCAF STB b.xlsx," worksheet "Hybrid DCF," cells H29 to H55 and cells Y36 to Y55.



Jeffrey O. Moreno  
Jason D. Tutrone  
Thompson Hine LLP  
1919 M Street, N.W., Suite 700  
Washington, D.C. 20036  
(202) 331-8800

*Counsel to SunBelt Chlor Alkali Partnership*

Respectfully submitted,



G. Paul Moates  
Paul A. Hemmersbaugh  
Matthew J. Warren  
Sidley Austin LLP  
1501 K Street, N.W.  
Washington, D.C. 20005  
(202) 736-8000  
(202) 736-8711 (fax)

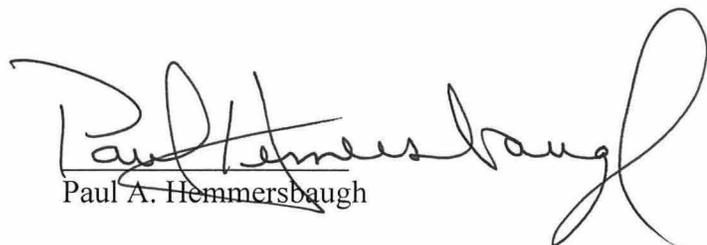
*Counsel to Norfolk Southern Railway Company*

Dated: July 30, 2014

## CERTIFICATE OF SERVICE

I hereby certify that on this 30th day of July 2014, I caused a copy of the foregoing Joint Technical Corrections Petition of SunBelt Chlor Alkali Partnership to be served by email and U.S. Mail upon:

Jeffrey O. Moreno  
Jason D. Tutrone  
Thompson Hine LLP  
1919 M Street, N.W., Suite 700  
Washington, D.C. 20036



Paul A. Hemmersbaugh

# EXHIBIT 1

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

The following explanations, listed in the order in which they appear in this Joint Technical Corrections Petition (“Petition”), describe steps to implement the technical corrections discussed in the text of that Petition. Work papers showing the affected cells, lines, and calculations are also included in this filing.

**I. Operating Expenses (SAC Evidence Section III-D)**

1. Train and Engine Personnel Wages (Petition No. 1) – The STB accepted NS’s wages and fringe benefits, however, it stated it applied the fringe benefit ratio to the NS average wages calculated by SunBelt. In actuality, the Board did not apply the fringe benefit ratio to the average NS wages calculated by SunBelt, but instead, it calculated its own average T&E wages for NS and in doing so omitted conductor’s wages when applying the fringe benefit ratio to the average wage. To correct this error, change cell G13 in STB work paper “STB Operating Expense STB2.xlsx”, worksheet “Summary” from “=T14” to “69,669.79.”
2. RMI Implementation Costs (Petition No. 2) – The Board states that it accepts SunBelt’s Rebuttal RMI, but incorrectly used NS’s implementation expense. The STB can correct this error in its work paper "STB Operating Expense STB2.xlsx" at worksheet "IT Capital" by changing the value in cell D13 to \$346,800.
3. Intermodal Lift and Ramp Costs (Petition No. 3) – The STB states that it accepts SunBelt’s lift and ramp unit costs and its count of containers requiring this service from SunBelt’s Rebuttal, but then uses the values from NS’s Reply evidence rather than SunBelt’s Rebuttal. To correct this error, make the following adjustments to the STB work paper "STB Operating Expense STB2.xlsx" at worksheet "Summary:"
  - a. Change the value in cell D354 from “14,358” to “13,204.”
  - b. Replace the formula in cell D356 with the value “\$387,692.27.”

**II. Road Property Investment (SAC Evidence Section III-F)**

1. Removal of Team Overhaul Costs (Petition No. 4) – The STB rejected the additional embankment quantities based on Team Overhaul proposed by NS. However, the STB did not delete these quantities from its calculation of roadbed preparation costs. To correct this error, make the following adjustments to the STB work paper ““No.2\_STB - SBRR Open Grading NS Reply.xlsx” at worksheet "Eng Rep Input:" delete the values in cells O18 through O30.

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

2. Clearing Costs (Petition No. 5) - The STB rejected NS's adjustments to the Means clearing costs. However, the STB included NS's Reply clearing and grubbing costs which included these adjustments. To correct this error make the following adjustments:
  - a. In the STB workpaper "No.2\_STB - SBRR Open Grading NS Reply.xlsx" at worksheet "Other Items:"
    - a. Change the formula in cell AA76 from "=AA72 + AE71" to "=AA71 + AE71."
    - b. Change the formula in cell AA50 from "=AA72" to "=AA71."
  - b. In the STB workpaper "No.3\_STB – SunBelt Decision Tables.xlsx" at worksheet "Roadbed Preparation Costs" change cell E6 from ="D6" to ="[No.2\_STB - SBRR Open Grading NS Reply.xlsx]Summary!\$F\$15"
3. Eliminate Stripping Costs (Petition No. 6) - The STB rejected NS's proffered costs for stripping. However, the STB did not eliminate the stripping quantities and costs from its calculations, which impact the costs for earthwork (including finish grading) and land for waste quantities. To correct this error, delete the value in cell L38 of STB workpaper "No.2\_STB - SBRR Open Grading NS Reply.xlsx" at worksheet "EW Cost."
4. Earthwork Unit Costs (Petition No. 7) - The STB rejected NS's modifications to the unit costs for loose rock and solid rock, except for the finish grading additive. In its calculations, the STB linked its development of loose rock and solid rock earthwork unit costs to SunBelt's Rebuttal spreadsheet unit costs and then included the finish grading additive. However, the STB linked to SunBelt's unit costs after the application of indexing and the Means location factor and these costs were then adjusted again by indexing and the location factor. The STB also failed to include costs to excavate and load the blasted rock. To correct this error, make the following adjustments to the STB workpaper "No.2\_STB - SBRR Open Grading NS Reply.xlsx" at worksheet " Unit Cost Modified:"
  - a. Change the reference to Sunbelt Rebuttal costs in cell P36 from "\$H\$50" to "\$E\$50."
  - b. Change the reference to Sunbelt Rebuttal costs in cell P54 from "\$H\$74" to "\$E\$74."

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

- c. Change the reference to Sunbelt Rebuttal costs in cell P55 from "\$H\$75" to "\$E\$75."
  - d. Change the reference to Sunbelt Rebuttal costs in cell P56 from "\$H\$76" to "\$E\$76."
  - e. Add in cell P59 "+P57" at the end of the formula.
  - f. Change the reference to Sunbelt Rebuttal costs in cell P63 from "\$H\$81" to "\$E\$81."
5. Weight of Ties (Petition No. 8) – The Board accepted SunBelt’s evidence on the weight of ties, but the Board did not use SunBelt’s weight in all of the formulas used to calculate tie transportation costs. Correcting this technical error increases SARR construction costs by \$1.2 million.
- a. Correction: In the STB workpaper “No.2\_STB - SBRR Track Construction NS Reply.xls,” tab “Ties Running,” change the formula in cell H15 from “=255.5/2000” to “=223.125/2000.” In tab “Ties Yard,” change the formula in cell C9 from “=255.5\*C6/2000” to “=223.125\*C6/2000.”
6. Transportation Costs for Ties (Petition No. 9) – The Board’s formulas for adding on-line transportation costs to the costs of ties contains errors. Correcting the formula decreases SARR construction costs by approximately \$3.4 million.
- a. Correction: In the STB workpaper “No.2\_STB - SBRR Track Construction NS Reply.xls,” tabs “Ties Running” and “Ties Yard,” update the formulas in line 30 of each tab to add tons to on-line transportation costs:
    - a. Change cell C30 from  
“=C24\*\$C\$9\*C23+C18\*\$C\$6+(C26\*C27)” to  
“=C24\*\$C\$9\*C23+C18\*\$C\$6+(C26\*C27\*C9)”
    - b. Change cell D30 from  
“=D24\*\$C\$9\*D23+D18\*\$C\$6+(D26\*D27)” to  
“=D24\*\$C\$9\*D23+D18\*\$C\$6+(D26\*D27\*C9)”
    - c. Change cell E30 from “=E24\*\$C\$9\*E23+E18\*\$C\$6+(E26\*E27)” to “=E24\*\$C\$9\*E23+E18\*\$C\$6+(E26\*E27\*C9)”

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

7. Set-Out Track Miles (Petition No. 10) – The STB accepted SunBelt’s set-out track miles, but it did not use SunBelt’s set-out track miles in calculating the roadbed preparation costs. Substituting SunBelt’s set-out track miles for NS’s set-out track miles affects the costs for earthwork (including finish grading), clearing and grubbing, land for waste quantities and subgrade preparation. To correct this error, make the following adjustments to the STB workpapers;
  - a. Add the file "SUNBELT RR Route Miles Opening Grading NS Reply.xlsx" from NS Reply to STB workpapers.
  - b. Add the file "SUNBELT RR Route Miles Rebuttal Grading.xlsx" from SunBelt Rebuttal to STB workpapers.
  - c. In the file "SUNBELT RR Route Miles Opening Grading NS Reply.xlsx," tab "GRADING OUTPUT," change the set-out track values in cells P12 through P32 to equal the set-out track values in file "SUNBELT RR Route Miles Rebuttal Grading.xlsx," tab "Segments for Grading," cells J12 through J32.
  - d. In the file "No.2\_STB - SBRR Open Grading NS Reply.xlsx," tab "Miles," cells I6 through I26, change source to file "SUNBELT RR Route Miles Opening Grading NS Reply.xlsx," tab "GRADING OUTPUT," cells J12 through J32.
8. Industrial and Siding Track Ballast Area Square Feet (Petition No. 11) – The STB accepted the parties agreed-upon 13.9 square feet for the ballast cross-section area for industrial and siding tracks, and noted that while both parties utilized the 13.9 value in their work papers, this value was not what appeared in the parties’ cross-sectional drawings. Even though it stated that it accepted the 13.9 square foot cross-section used by both parties, the STB work papers utilize the 15.11 square feet value from the cross-sectional drawings. Note that cells C43 and C44 of the “Ballast for Yard Tracks” tab indicate that the Board intended to use “STB Revised units per track foot”. Please clarify. To use the 13.9 square feet consistent with the narrative, change cell R64 in STB work paper “No.2\_STB - SBRR Track Construction NS Reply.xls”, worksheet “Track Quantity Calculator” from “15.11” to “13.9.”
9. Transportation Costs for Plates, Spikes, and Anchors (Petition No. 12) – While the Board’s decision indicates that it accepted SunBelt’s transportation costs of \$0.035 per ton-mile for plates, spikes, and anchors, *see Decision* at 136, the Board’s workpapers use NS’s transportation costs of \$0.0934 per ton-mile.

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

Correcting this inconsistency to use SunBelt’s costs decreases SARR construction costs by approximately \$2.3 million.

- a. Correction: In the STB workpaper “No.2\_STB - SBRR Track Construction NS Reply.xls,” change cells C24, D24 and E24 from \$0.0934 to \$0.035 in each of the following tabs:
  - a. 14” Tie Plates
  - b. 14” Tie Plates for Track Yards
  - c. 18” Tie Plates
  - d. Spikes - Tangent up to 3 Deg
  - e. Spikes - 3 to 6 Deg
  - f. Spikes - Over 6 Deg
  - g. Anchors - Up to 3 Deg
  - h. Anchors - Over 3 Deg
  
10. Turnout Counts For Set-Out Tracks (Petition No. 13) - The STB accepted SunBelt’s failed equipment detector count and number of set-out track miles. However, the STB did not change the #10 turnout count in the track construction cost, which are based on NS Reply quantities. To correct this error, make the following adjustments to the STB workpaper "No.2\_STB - SBRR Track Construction NS Reply.xls" at worksheet "Reply Turnout Count;"
  - a. Add the following in Cell A34 “=’NS Total #10.”
  - b. Add the following in Cell A35 “=’Less NS Set-out.”
  - c. Add the following in Cell A36 “=’Plus SB Set-out.”
  - d. Add the following in Cell A37 “=’Corrected Total.”
  - e. Add the following in Cell C34 “=B32.”
  - f. Add the following in Cell C35 “=121.”
  - g. Add the following in Cell C36 “=32.”

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

- h. Add the following in Cell C37 “=C34-C35+C36.”
    - i. Correct the formula in cell B16 from “=B32” to “=C37.”
- 11. Movable Bridges (Petition No. 14) - The Board’s decision rejected SunBelt’s argument that the SBRR would only incur 10% of the costs of moveable bridges. *See Decision* at 142. The Board’s workpapers, however, failed to correct SunBelt’s adjustment and thus the Board’s construction costs only include 10% of the costs of its movable bridges. Applying the full cost for moveable spans increases bridge investment by \$57 million.
  - a. Correction: In the STB workpaper “No.2\_STB - SBRR Bridge Construction Costs NS Reply.xlsx,” tab “Rebuttal.Special Bridges,” change cell E11 from 10% to 100%.
- 12. Non-Movable Bridge (Petition No. 15) - The STB included the costs for non-movable bridges as a separate investment item based on NS Reply evidence, and then included the same costs a second time in the costs for moveable bridge cost based on SunBelt’s Rebuttal investment. To correct this error, change the formula in cell C7 of "No.2\_STB - SBRR Bridge Construction Costs NS Reply.xlsx" at worksheet "NS Cost Summary" from “='Rebuttal.Special Bridges'!D9” to “='Rebuttal.Special Bridges'!AQ20”
- 13. Communications and Signals/Interlocker Costs (Petition No. 16) - The STB file “SunBelt DCF Transfer III-F Total STB No3.xlsx” accounts for the costs of PTC locomotives in three (3) different locations. The STB subtracts PTC locomotive costs unnecessarily from the total communication system costs, adds the PTC locomotive costs unnecessarily to the Signals & Interlockers investment costs, and includes it correctly in the future PTC communications costs. In order to reflect the correct investment in the DCF Model, it is necessary to remove the unnecessary subtraction from the initial communication system investment and remove the unnecessary addition to the initial signals & interlockers investment. To correct this error, make the following adjustments to the STB workpaper "SunBelt DCF Transfer III-F Total STB No3.xlsx" at worksheet "Sheet 1;"
  - a. Remove the “-J24” from the end of the formula in cell F24.
  - b. Change the end of the formula in cell F25 from “-I24” to “-H24”
- 14. Yard Drainage Costs (Petition No. 17) – The Board’s decision indicates that it accepted SunBelt’s yard drainage costs for the main Birmingham yard and

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

accepted NS's drainage costs at all other yards. But the Board's workpapers use NS's calculations for all yard drainage costs. Correcting the Board's calculations so as to use SunBelt's costs for the Birmingham yard decreases SARR construction costs by approximately \$3.5 million.

- a. Correction: In the STB workpaper "No.2\_STB - SBRR Open Grading NS Reply.xlsx," in tab "Yards NS," subtract "(56.26\*5280)" from the formula in cell B18, which represents 56.26 miles of track in the NS Reply Birmingham yard, converted to track feet. In the same tab, add \$1,450,976 to the amount in cell B20. This amount equals the sum of cells J10:J15 in the "Major" tab and cells G20:G23 in the "Construct Major" tab of STB workpaper "No.2\_STB - SBRR Facilities Cost Rebuttal.xlsx."
  - b. In the STB workpaper "No.3\_STB - SunBelt Decision Tables.xlsx," in tab "Roadbed Construction Costs," change the reference from NS's reply workpaper to the corrected amount. Change the formula in cell E14 in this tab from "=[SBRR Open Grading NS Reply.xlsx]Summary!\$F\$26" to "=[No.2\_STB - SBRR Open Grading NS Reply.xlsx]Summary!\$F\$26"
15. Yard Fencing (Petition No. 18) – Page 165 of the Board's decision explains that the Board was unable to find any costs for fencing in the NS reply submission so it accepts SunBelt's fencing quantities and costs. However the Board's decision workpapers omitted these fencing costs. This technical error understates construction costs by approximately \$5.1 million.
- a. Correction: In the STB workpaper "No.3\_STB - SunBelt Decision Tables.xlsx," in tab "Buildings & Facilities," add these amounts to the following cells:
    - a. Add \$ 984,780 to the amount in cell E11. This added amount equals the sum of cells J29 and J30 in the "Major" tab of STB workpaper "No.2\_STB - SBRR Facilities Cost Rebuttal.xlsx."
    - b. Add \$ 3,503,441 to the amount in cell E12. This added amount equals the sum of cells J27 and J28 in the "Minor" tab of STB workpaper "No.2\_STB - SBRR Facilities Cost Rebuttal.xlsx" multiplied by 4, which is the number of minor yards.
    - c. Add \$ 588,143 to the amount in cell E14. This added amount equals cell J26 in the "Auto Yards Small" tab of STB workpaper "No.2\_STB - SBRR Facilities Cost Rebuttal.xlsx."

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

16. Roadway Sign Investment (Petition No. 19) – The STB accepted SunBelt’s public improvements costs, which included costs for roadway signs. However, the STB work papers added the roadway sign costs a second time under “Fencing and Roadway Sign” investment. To correct this error, delete the formula in cell K108 of the STB work paper “STB - SBRR Track Construction NS Reply.xlsx,” at worksheet “Summary.”

**III. Discounted Cash Flow (SAC Section III-F)**

1. Real Estate Acquisition Costs (Petition No. 20) – The Board accepted NS real estate acquisition costs, but failed to include these costs in the DCF model’s land investment values. To correct this error, add “+8,233,100” to the formula in cell D5 of the “Inputs” worksheet of “D42130 Exhibit III-H-1 STB No3.xls”.
2. Depreciation Tax Shields on Replacement Assets (Petition No. 21) – The Board incorrectly removed the present value of depreciation tax deductions on future asset replacements in the “Replacement” worksheet of the DCF model. To correct this error, add “=H130” to cell E17 of the “Replacement” worksheet of “D42130 Exhibit III-H-1 STB No3.xls”.
3. Base Depreciation On Future PTC Investment (Petition No. 22) – The Board incorrectly removed the present value of depreciation tax deductions on 2012 to 2015 PTC investments.. To correct this error, add “=H130” to cell E17 of the “PTC” worksheet of “D42130 Exhibit III-H-1 STB No3.xls”.
4. MACRS Depreciation Schedules on PTC Investment (Petition No. 23) – In developing depreciation expenses for future PTC investment, the STB’s “PTC” worksheet incorrectly references asset lives from the “Replacement” worksheet. This leads to the model incorrectly classifying the PTC signals and communication assets as 20-year assets instead of 7-year assets, and subsequently using the incorrect MACRS depreciation schedules. To correct this error, make the following adjustments to “D42130 Exhibit III-H-1 STB No3.xls” at worksheet “PTC”:
  - a. Change the formula in cell AD36 from “=IF(ANALYSIS=26,\$AT\$9,0)” to “=IF(\$AQ\$9=VALUE(Z36),\$AT\$9,0).”
  - b. Change the formula in cell AD37 from “=IF(ANALYSIS=27,\$AT\$9,0)” to “=IF(\$AQ\$9=VALUE(Z37),\$AT\$9,0).”

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

- c. Change the formula in cell AF36 from “=IF(ANALYSIS=26,(\$AT\$9-\$AU\$9)\*(1-AC36),0)” to “=IF(\$AQ\$9=VALUE(Z36),(\$AT\$9-\$AU\$9)\*(1-AC36),0).”
  - d. Change the formula in cell AF37 from “=IF(ANALYSIS=27,(\$AT\$9-\$AU\$9)\*(1-AC37),0)” to “=IF(\$AQ\$9=VALUE(Z37),(\$AT\$9-\$AU\$9)\*(1-AC37),0).”
5. Future PTC Investment (Petition No. 24) – In calculating the initial installation of PTC assets in the years 2012 to 2015, the STB incorrectly deducted salvage from the investment base. In other words, the STB treated the PTC as replacement assets and not initial investment. To correct this error, replace the “5%” included in cell O38 of “D42130 Exhibit III-H-1 STB No3.xls” at worksheet “PTC” with “0.”
6. Interest Tax Shields on Future PTC Investment (Petition No. 25) – In calculating the 2012 to 2015 PTC investment, the STB removed the interest deduction on the PTC investment financed with debt. The interest tax deduction needs to be added to the 2012 to 2015 PTC investment because the interest tax shields for these investments are not accounted for anywhere else in the DCF model. To correct this error, make the following adjustments to “D42130 Exhibit III-H-1 STB No3.xls” at worksheet “PTC”:
  - a. Add “=G130” to cell E18.
  - b. Add “-E18” to the formula in cell E22.
7. PTC Investment in the Investment SAC Worksheet (Petition No. 26) – The STB’s DCF model “Investment SAC” worksheet incorrectly references the 2012 PTC investment values in the “PTC” worksheet instead of the 2013 and 2014 PTC investment values. To correct this error, make the following adjustments to “D42130 Exhibit III-H-1 STB No3.xls” at worksheet “Investment SAC”:
  - a. Change cell Y6 from “=PTC!\$AN\$11” to “=PTC!\$AN\$12.”
  - b. Change cell Z6 from “=PTC!\$AN\$11” to “=PTC!\$AN\$13.”
8. Productivity Adjustment In Hybrid RCAF (Petition No. 27) – The STB incorrectly used full year productivity and RCAF-U factors instead of quarterly factors when calculating the quarterly RCAF-A for the periods 1Q 2015 to 3Q 2021. To correct the issue, the parenthetical portions of the formulae contained in cells H29 to H55 of the STB work paper “Hybrid RCAF STB b.xlsx,” worksheet

**Exhibit 1: SunBelt and NS Joint Description of Steps to Correct Technical Errors in STB Decision, *SunBelt v. Norfolk Southern*, STB No. NOR 42130 (served June 20, 2014).**

“Hybrid DCF,” should be raised to the one-quarter power. For example, the formula contained in cell H29 of the “Hybrid DCF” worksheet that currently reads “H28 + (1 + S38)” should be changed to ““H28 + (1 + S38)^0.25”. The change can then be copied down to the other cells to correct the issue.