INTRODUCTION

Pursuant to Section 50.3 of the Concession Agreement ("CA") this Dispute Resolution Panel was selected to consider claims submitted by Denver Transit Partners ("DTP") against The Regional Transportation District ("RTD"). The members of the Dispute Resolution Panel have reached the following unanimous decision after consideration of the information presented by the parties.

In late February, 2018 the Panel received the Initial submittals from each party which included briefs, expert statements and supporting exhibits. In May, 2018 the parties submitted rebuttal materials which again included briefs, supplemental expert reports and additional exhibits. At the hearings held on May 24 and 25, 2018 counsel for the parties presented additional arguments and documents and the Panel heard presentations from a number of fact and expert witnesses. Those witnesses were:
Finally, subsequent to the May hearings, the parties submitted chronologies of key events related to the claims and proposed questions to be addressed by the Panel.

The Panel has considered all of the submissions in reaching this Decision. The Panel appreciates the hard work that went into developing the briefs and expert presentations and into condensing the extensive documentation into key exhibits relevant to this dispute. The Panel recognizes that, unlike a presentation at trial or arbitration, the amount of information presented to the Panel is not as complete as might be developed after discovery and with a longer timetable for hearing the evidence. Our decision is based on the best information we have and the time we had to evaluate it. There are portions of the dispute, including elements of the damage claims, on which the Panel has insufficient information to render an opinion. Those areas are highlighted below.

We approached our assignment with the following methodology:

1. What are the relevant provisions of the CA that apply to this dispute?
2. What are the relevant statutes, regulations and standards that apply to this dispute?
3. What was the baseline from those CA provisions and the statutes, regulations and standards against which to judge the events that occurred during the project?
4. Were there Changes in Law or Force Majeure events as those terms are defined in
the CA and, if so, when did they occur and what damages flowed from them?

5. Were there actions of the RTD, FRA and/or CPUC that initially were not Changes
in Law or Force Majeure events, but which became Changes in Law or Force
Majeure events due to actions taken during the course of the project and, if so, what
damages flowed from them?

6. What impact did the Stipulation and Limited Waiver Side Agreements ("Side
Agreements") for the A-line and the B-line have on DTP's claims?

7. Can the Panel offer any decision with regard to the non-operation of the G-line?

**RELEVANT PORTIONS OF THE CA**

1. **The Work.**

22.1 The concessionaire will carry out and complete the Work:

(a) in accordance with provisions of this Agreement, the
Project Requirements and Good Industry Practice to ensure that the
Work and each part of the commuter Rail Projects and the
Commuter Rail Maintenance Facility are in compliance with the
Project Requirements and Good Industry Practice.

2. **Design Requirements – CA Attachment 7, Part B §9.10.2**

(a) The design of each highway-rail grade crossing shall
be determined based upon site specific requirements. Crossing
designs shall be consistent with those measures necessary for the
establishment of a quiet zone defined in 49 CFR 222.35, where
designated in the Environmental Permits. Crossings equipped for
quiet zones shall have constant warning train detection. Except as
directed otherwise by PUC, the total warning time shall be 20
seconds, plus any additional warning time that may be required for
clearance and/or traffic preemption. Where a station platform is
within the start of a highway-rail grade crossing, location of the
approach circuits shall take into consideration a station dwell time of
35 seconds.

3. **Changes in Law.**

1.1 Change in Law means the introduction or repeal (in
whole or in part) of or amendment, alteration or modification to or
change in interpretation of (in each case including, to the extent
applicable, by retroactive effect), any Law or standards, practices or
guidelines issued or published by any Relevant Authority that are
either binding on the Concessionaire or if non-binding on the
Concessionaire are both typically complied with in the construction
and/or railroad industries and are necessary in order to comply with Good Industry Practice, that occurs on or after 30 days before the Final Proposal Due Date; provided that the coming into effect or repeal (in whole or in part) of or amendment, alteration or modification to or change in interpretation of any Law or standards, practices or guidelines issued or published by any Relevant Authority that have been enacted and published as of the date falling 30 days before the Final Proposal Due Date but have not come into effect by such date, shall not constitute a Change in Law.

4. Notice of Change in Law.

37.1 (a) Where a Change in Law occurs, either Party may (provided it does so no later than 30 days after becoming aware of the occurrence of such Change in Law) notify the other Party in writing (a Change in Law Notice) of its opinion (and the basis and supporting details for such opinion, including advice of advisers, in particular with respect to the matters set out in Section 38.8(b)(i) and Section 38.8(b)(ii)(A) to (C)) as to whether such Change in Law:

(i) constitutes a Discriminatory Change in Law;

(ii) will result in a material delay or increase in the cost of the carrying out the Work during the Design/Build Period;

(iii) will result in an increase in costs of performing the Concessionaire's obligations under this Agreement with respect to the Concessionaire-operated Components during the Operating Period; and/or (iv) will have an adverse effect on the financial position of the Concessionaire as established in the Financial Model immediately prior to the occurrence of such Change in Law, taking into account each of the factors set out in Section 38.8(b)(i) and Section 38.8(b)(ii)(A) to (C) inclusive (together with the results and effects set forth in Sections 37.1(a)(ii) and 37.1(a)(iii), each a Change in Law Effect).

(b) No later than 30 days following the date of receipt of the Change in Law Notice, the Party that received the Change in Law Notice shall notify the Party that sent the Change in Law Notice that either:

(i) it agrees with the matters in the Change in Law Notice; or

(ii) it does not agree with the matters in the Change in Law Notice, in which case it will set out in its notice the grounds of objection.

(c) If the Party that received the Change in Law Notice:

(i) agrees with the matters in the Change in Law Notice; or

(ii) does not respond within the period specified in Section 37.1(b), then the provisions of Section 37.2 (Change in Law Change) shall apply.

(d) If the Party that received the Change in Law Notice does not agree with the Change in Law Notice, the Parties' Designated Senior Representative shall in accordance with Section 50.2(c), and as soon as practicable after receipt of the notice pursuant to Section 37.1(a) (and in any event within 10 days), discuss in good faith in order to agree the disputed matters contained in the Change in Law Notice and any ways in which the effects of the Change in Law may be mitigated
or avoided. If the Parties cannot agree on the disputed matters contained in the Change in Law Notice, the dispute shall be determined by the Technical Panel, the Financial Panel or arbitration, as appropriate, in accordance with the Dispute Resolution Procedure to determine whether a Change is necessary.

5. **Force Majeure.**

Force Majeure Events

39.1 For the purposes of this Agreement, the term Force Majeure Event means any of the following events or circumstances or any combination of such events or circumstances:

(a) the occurrence of force majeure under any Third Party Agreement or action (including a Change in Law) taken by any Project Third Party (or their respective agents or contractors) or any other Relevant Authority, including the Transportation Security Administration, the United States Department of Homeland Security, FRA, FTA or Federal Aviation Administration (or any successor entity of the foregoing agencies) in response to a threat to, or event affecting, the public health, safety, security or the Environment, in each case, the effect of which is to suspend, delay or disrupt the performance by the Concessionaire of any of its obligations under this Agreement;

(j) any other event outside the reasonable control of the Affected Party, and which was not reasonably foreseeable by the Affected Party as at the date of this Agreement, where such event materially and unavoidably prevents or delays the Affected Party from performing any of its obligations under this Agreement; provided that:

(i) the term "reasonably foreseeable" means any event or circumstance or category of events or circumstances specifically described in this Agreement or which the Affected Party knew, or should have known, may occur, and which is of a type that a construction contractor or operator, acting in accordance with Good Industry Practice and this Agreement, would have taken steps to avoid or protect itself against; and

(ii) an event shall not qualify as a Force Majeure Event under this Section 39.1(j) where:

(A) such event is a Force Majeure Event under paragraphs (a) to (i) above; or

(B) such event is an event of the same type as an event which is classified as a Relief Event, but in each case only to the extent that:

(I) the same is outside of the Concessionaire's control and does not arise from and is not contributed to by any breach by the Concessionaire of its obligations under this Agreement or the other Project Agreements or any other neglect, default, act or omission of the Concessionaire;

(II) such events or circumstances have arisen notwithstanding the Concessionaire complying with its obligations under this Agreement, and in accordance with its obligations under Attachment 9 (Project and Construction Management) or the O&M Submittals;
(III) the Concessionaire has at all times complied with its obligations under Section 39.7 (Mitigation in Case of a Force Majeure Event) with respect to minimizing and/or mitigating the consequences of the Force Majeure Event.

6. Revenue Service Commencement Date.

Revenue Service Commencement Date means, with respect to each Commuter Rail Service, the date on which the Revenue Service Commencement Requirements for such Commuter Rail Service and the relevant Commuter Rail Project have been satisfied by such Commuter Rail Service and the relevant Commuter Rail Project, as evidenced by the issuance of the Revenue Service Commencement Certificate for such Commuter Rail Service.

Revenue Service Commencement Certificates

28.2 (a) The Parties agree that the Independent Engineer shall issue the Revenue Service Commencement Certificate to the Parties in respect of a Commuter Rail Project and the associated Commuter Rail Service when the Concessionaire has demonstrated to the Independent Engineer’s satisfaction in the relevant System Performance Demonstration that the following requirements (the Revenue Service Commencement Requirements) have been satisfied:

(i) except with respect to the Punch List Items identified pursuant to Section 28.2(b), such Commuter Rail Project (excluding, for purposes of this Section 28.2, any Fare System Equipment related thereto) has been completed in accordance with the provisions of this Agreement, the Project Requirements and Good Industry Practice to ensure that the Work, such Commuter Rail Project and each part of them are completed and operate in compliance with the Project Requirements.
RELEVANT STATUTES, RULES AND STANDARDS

1. 49 C.F.R. §234.225.

A highway-rail grade crossing warning system shall be maintained to activate in accordance with the design of the warning system, but in no event shall it provide less than 20 seconds warning time for the normal operation of through trains before the grade crossing is occupied by rail traffic.


Section 8C.08 Rail Traffic Detection Standard:

The devices employed in active traffic control systems shall be actuated by some form of rail traffic detection.

Rail traffic detection circuits, insofar as practical, shall be designed on the fail-safe principle.

Flashing-light signals shall operate for at least 20 seconds before the arrival of any rail traffic.

Guidance:

Where the speeds of different rail traffic on a given track vary considerably under normal operation, special devices or circuits should be installed to provide reasonably uniform notice in advance of all rail traffic movements over the grade crossing. Special control features should be used to eliminate the effects of station stops and switching operations within approach control circuits to prevent excessive activation of the traffic control devices while rail traffic is stopped on or switching upon the approach track control circuits.

3. 49 C.F.R. 222.35(b).

The following requirements apply to quiet zones established in conformity with this part.

(a) Active grade crossing warning devices.

(1) Each public highway-rail grade crossing in a New Quiet Zone established under this part must be equipped, no later than the quiet zone implementation date, with active grade crossing warning devices comprising both flashing lights and gates which control traffic over the crossing and that conform to the standards contained in the MUTCD. Such warning devices shall be equipped with constant warning time devices, if reasonably practical, and power-out indicators.
4. FRA Manual S-08—02. (RTD Ex 44)

"Title 49 CFR § 234.259 requires that each highway-rail grade crossing warning system be tested for the **prescribed warning time** at least once every 12 months and when the warning system is modified because of a change in train speeds. This section applies to all train detection equipment (including standby units, if equipped) used in each highway-rail grade crossing warning system.

For purposes of the application of this Technical Bulletin, prescribed warning time can be defined as follows: Prescribed warning time is the designed warning time less any associated "buffer time" and "equipment response time." Buffer time is added by the railroad to compensate for speed variance (e.g., accelerating train) and ballast impedance variances (e.g., for motion detection equipment). Equipment response time is the inherent delay in the equipment between the initial detection of a train and the actual activation of the warning system. In other words, prescribed warning time is the length of time from the moment that properly operating warning devices begin to provide their intended warning (e.g., the flashing lights begin to flash) until an approaching train operating at maximum authorized speed enters the crossing (i.e., reaches the edge of the crossing surface).

A warning system location is not considered fully tested for the prescribed warning time unless and until the crossing activation is proven for the required distance on all available approaches at the crossing (i.e., all routes and in each direction), including while operating on standby units, if so equipped. The standard for warning time is contained in 49 CFR § 234.225. This section requires that each highway-rail grade crossing warning system be maintained to activate in accordance with the design of the warning system, but in no event shall it provide less than 20 seconds warning time for the normal operation of through-train movements before the crossing is occupied by rail traffic. For example, a crossing warning system might be designed to activate 30 seconds before a train being operated at the maximum authorized speed arrives at the crossing. At another crossing, the crossing warning system might be designed to activate 35 seconds or more before a train being operated at the maximum authorized speed arrives at the crossing. The designed warning time typically utilizes railroad industry design standards but is, on occasion (as determined by an engineering study that involves the applicable highway agency and railroad representatives), calculated based on criteria such as equipment used, particular crossing intricacies, vehicular traffic patterns, and roadway configurations.

Title 49 CFR § 234.225 contains a defect classification (234.225.02) that may be applied when the crossing warning time is found to not be in accordance with
the design of the warning system. This defect applies in instances where the system warning time differs significantly from the prescribed warning time, not the ‘designed warning time’ as is indicated in the current Technical Manual. A ‘significant difference’ is one that is meaningful or important to the safety and/or credibility of the warning system and a situation in which an expected corrective action must be taken. This criteria is based on the fact that train detection systems, such as motion detectors, constant warning time devices, and other authorized systems, are designed to function for trains operating at varying authorized speeds by providing warning times within an acceptable range of the prescribed warning time (e.g., plus or minus 5 seconds or more). This fact is considered when the applicable parties determine what the prescribed warning time should be at each crossing. Thus, prudent judgment must be exercised when reviewing the results of warning time testing to determine whether the actual warning time provided during testing was compliant with the standard.”

The key CA provisions and statutes can be summarized as follows:

1. The design was to comply with the Project Requirements and Good Industry Practice.
2. This required a minimum warning time of 20 seconds plus time required for clearance of the crossing under both the Design Requirements of the CA and the provisions of the C.F.R.
3. The requirements for Quiet Zone crossings were to be met which included active grade crossing warning devices and constant warning time devices, if practical.
4. If DTP was required to conform to laws enacted after the CA was executed or required to comply with new interpretations of the law it was entitled to additional compensation and relief from other contract provisions as long as it gave notice in conformance with the CA.

**DTP’S CLAIMED CHANGES IN LAW**

DTP’s first claim of a Change in Law relates to the position of the CPUC that bicycles were “vehicles” under C.R.S. 42-1-102(112) and that, therefore, the design of the warning system needed to account for bicycles. It is undisputed that the system as originally designed by DTP did not detect the presence of bicycles on the tracks and that the closing times for the safety gates did not account for the time it might take for a bicycle to clear the tracks. It is unclear when this issue
first began, but it is clear that by March 2016 the issue of bicycle detection had arisen. The solution of that issue was part of the March 11, 2016 submission to the CPUC for an Amended Application. As the CPUC’s March 30, 2016 Decision (RTD Exhibit 40) states:

“RTD proposes that it be allowed to temporarily address the issue of potential bicyclist interaction with the crossing exit gates by placing a person at each exit gate. The duty of those personnel would be to assist bicyclists as they leave the active crossing.”

The CPUC also noted in its Decision that:

“RTD proposes to add a timed exit gate delay of 14 seconds after the activation of the flashing lights and bells at the crossing. Once the flashing lights and bells activate at the crossing, the exit gates would be held up for 14 seconds after crossing activation. This timed exit gate delay is intended to provide time for certain types of vehicles, such as bicycles, which are unable to be detected by the existing installed exit gate management system to exit the crossing before being trapped in the crossing by the exit gates. The current exit gate management system design and installed by RTD is not capable of detecting all types of vehicles.”

The first question presented is the correctness of the CPUC’s determination that the design should have accounted for bicycles the same as vehicles such as autos and trucks. The only support for that proposition is the reference to the C.R.S. section cited above. We have not been cited any statute, regulation or standard that equates bicycles to other vehicles for all purposes, especially with regard to grade crossings. Obviously there are different licensing requirements for the operation of bicycles and autos and/or trucks; the speed limits that apply to autos and/or trucks would not apply to bicycles; nor would the insurance provisions for operators of autos and/or trucks be the same as for bicycle riders. Without more evidence that the design should have detected bicycles, we believe that requiring the design modification to include the 14 second delay referenced in the CPUC Decision was a Change in Law under the CA.

The engineering changes to accomplish this 14 second delay were apparently relatively easy to accomplish. We have not been presented with any costs for those changes but the material we were provided supports the conclusion that they were performed in a matter of days. As DTP points out in its Chronology submitted after the hearing dates, by April 19, 2016 when the FRA’s Waiver was issued (RTD Exhibit 39) the only reason crossing guards remained on the project was
to provide safety until the wireless function of the WCAS was operational. The clear implication of this is that the exit gate issue with the bicycles had been successfully resolved. The Panel is unable to find any damages relating to this Change in Law from the materials presented.

DTP argues that the crossing guards were initially placed on the project only because of the bicycle issues. This appears to be true. As the CPUC Decision states:

"Because it is possible that the amendments proposed herein may not be granted in time to allow for implementation of the proposed exit gate management system by the April 22, 2016 opening date, RTD proposes that it be allowed to temporarily address the issue of potential bicyclist interaction with the crossing exit gates by placing a person at each exit gate. The duty of those personnel would be to assist bicyclists as they leave the active crossing."

Since the exit gate issue for bicycles was quickly resolved, the crossing guards could have been removed in April 2016 if their sole function was to deal with the Change in Law actions associated with bicycle detection. As discussed below, the reasons for the lengthy and costly continued use of crossing guards, however, turns on issues unrelated to bicycles.

In summary, the Panel concludes that there was a Change in Law in requiring that the crossing gate design account for bicycles but that the costs of that Change in Law were minimal and not established to a degree that we can quantify them. The Panel does not criticize the parties or the CPUC for concern that bicycles be detected and that the design allow time for bicyclists to clear the tracks before a train arrived. We do believe, however, that the CA, the statutes, regulations and standards did not require that DTP account for bicycle detection in its approved design.

The second alleged Change in Law was the FRA and CPUC’s requirement that the Warning System be designed with a maximum warning time.

The parties agree on several points related to this aspect of the dispute:

1. 49 C.F.R. 234-225 requires that a highway-grade crossing warning system insure that the gates close at least 20 seconds before a train enters the crossing.

2. That in addition to the 20 second design advance closing, the gates must allow time for vehicles to clear the crossing
before the train arrives. The amount of this additional
closing time varies with the configuration of the crossing,
including such factors as the distance between the entrance
and exit gates.

3. There is no law or regulation that specifies the maximum
time between the closing of the gates and the arrival time of
the train.

Where the parties have their major disagreement is whether the design should have included a
standard for the maximum time that the gates would remain closed in advance of a train arriving at
the crossing, and whether that standard could allow a range of maximum warning times. The
implications of that disagreement involve millions of dollars spent on crossing guards (also at
times referred to as “flagmen”), the reduction in payments to DTP due to the provisions of the
Side Agreements, the ability of DTP to meet the Revenue Service Deadline Dates under the CA,
as well as other issues.

In evaluating this portion of the dispute, the Panel has looked at the CA, statutes,
regulations and standards. The CA calls for a constant warning system. It does not define
whether the constant warning system is only for the minimum warning that a train is coming. But
the positions the parties took at the time provide light on this issue. The non-revenue testing had
shown that there was great variation in the length of time the gates were closed. While the
introduction of crossing guards was in connection with the failure of the design to recognize that
bicyclists were at the crossing gates it was almost immediately clear that the guards would remain
until the problem of excessive and inconsistent gate closure times was resolved. As noted before,
the crossing guards were added as a “temporary” part of the gate management system until
changes were made in the exit gate closing times. If the issue of bicycle detection was the only
issue with the functioning of the warning system, the crossing guards would have been discharged
in early April 2016.

As pointed out in the Decision of the CPUC (RTD Exhibit 40), there were a number of
problems with the operation of the warning system that are described on pages 3-5 of that
decision. As the A-line approached the April 22, 2016 date for passenger operations, other problems with the design became apparent. The most important of these problems was that the Wireless Crossing Activation System (WCAS) was not operating properly. The combination of the problems with the WCAS, along with operator errors, had led to a number of potentially deadly occurrences during the testing of the system. These problems also led to extended gate closing times that the FRA found unacceptable. DTP did not argue that these long closing times were irrelevant or that they were consistent with its design. Instead, DTP and its consultants went about redesigning the warning system to reduce the maximum closing times and to make them more consistent.

To begin passenger service, the parties took several steps. First, they sought a waiver from the FRA to operate the system without the WCAS functioning. This permission was granted on April 19, 2016 in RTD Exhibit 39. As the FRA noted, “RTDC seeks to temporarily operate passenger trains along the University of Colorado’s A Line while highway-rail grade crossings provide longer-that-designed warning times.” This is an early indication that the FRA believed the warning times design was to include minimum warnings and maximum warnings. Neither RTD nor DTP contested the concept that system must have both a minimum and a maximum design warning time.

Because the WCAS was not functioning as designed, the FRA imposed conditions before allowing passengers service. This included the requirement for “grade crossing attendants” to “warn motorists, pedestrians, and cyclists of non-functioning warning equipment and to deter unsafe behavior from the general public.” Again, neither RTD nor DTP protested this condition, nor claimed that it was beyond what the law required.

Contemporaneously with the waiver granted by the FRA, the parties entered into the Side Agreement for the A-Line. In that agreement they stipulated that:

“The constant warning time function for the grade crossing activation system may not be fully complete prior to April 22, 2016 but shall be completed prior to issuance of the Revenue Service Commencement Certificate by the Independent Engineer.”
They further agreed that:

"Concessionaire shall comply with all applicable requirements of the FRA and the Public Utilities Commission regarding operations prior to the completion of the constant warning time function for the grade crossing activation system."

When this language in the Side Agreement is put in context with the waiver issued by the FRA, the Panel concludes that both minimum and maximum constant warning times needed to part of the completed system before a Revenue Service Commencement Certificate could be issued.

Consistent with the waiver and the Side Agreement, DTP and its consultants began working to revise the design so that minimum and maximum “constant warning times” could be achieved. In RTD Exhibits 53-57 (and in other documents for other crossings), DTP certified that its design minimum warning time had been met. The certifications stated that “actual warning times cannot be less than (the minimum warning time) and will be over by a moderate percentage.” If the design did not have to account for maximum closing times, there would be no need to mention that the actual closing times might be over the minimum time by a moderate percentage or any percentage. The documents submitted with those certifications, graphically, demonstrated that the average and median warning times greatly exceeded what DTP called the “Designed Warning Time”. The data presented in those charts show the maximum warning time, at each location. If DTP felt there was not requirement for the design to account for maximum warning times there would have been no reason to include that data in its certifications.

As the summer of 2016 continued, DTP had Wabtec revise its programing to shorten the maximum warning times and to bring consistency to the maximum warning times. In July 2016 Wabtec issued it Crossing Warning Time Overview (RTD Exhibit 61) summarizing its work to date. It included a chart categorizing the crossings and indicating whether the gates were “functioning as intended.” In a large portion of the instances the answer was “no”. Again, this chart related to maximum warning times. If there was no need to deal with maximum warning times in the design, there would be no need for this analysis by Wabtec.

DTP’s analysis and modification of the design continued into the Fall of 2016. In October 2016 its Implementation Plan (RTD Exhibit 66) identified the scope of its work to “achieve
constant warning times on the A-Line”. Later that month, HNTB presented its “Plan Forward” PowerPoint to the FRA describing what it planned to do with regard to the warning system. As HNTB described its work it stated “the modifications described in this presentation will enable the system to deliver design warning time.” HNTB reported that the changes to design were necessary because “WCAS is delivering inconsistent Constant Warning Time which may result in extensive gate down time.”

Each of these reports by DTP’s consultants deals with maximum warning times. None of the reports allege that there was no requirement for the design to include maximum warning times. At no time during this period did DTP claim that a Change in Law had occurred with regard to maximum closing times and/or constant warning times. All this time, crossing guards were on site being paid for by DTP and the revenue reductions were being applied pursuant to the Side Agreements.

DTP’s redesign of the warning gate closing times continued into the spring of 2017. In March 2017 Wabtec issued its “White Paper” (RTD Exhibit 9) whose purpose was “to describe the limitations of the wireless design and additional buffers that should be applied to the design warning time calculations.” This is the first time that buffers to establish the maximum warning time appear to have been included in the Wabtec design. Had this “White Paper” been presented when the issue of constant maximum warning time first arose, the Panel believes that a year of crossing guard costs and revenue reductions under the Side Agreements could have been avoided.

DTP rightfully points out that even after Wabtec presented its concept for buffer times, there was confusion whether the FRA would apply that buffer or would use another formula to evaluate whether the maximum warning time system was working properly. Yet all of this was resolved in May 2017. On May 25, 2017 RTD advised the FRA that its concessionaire, the designer of record (Wabtec) and DTP’s independent assessor (HNTB) were all satisfied that the system would meet the 20 minimum warning time requirement and would fall within a 15 second buffer time which they wanted established as the range for the maximum warning time (DTP Exhibit G). RTD indicated that “The B Line is ready for FRA to witness its wireless and conventional (wireless turned off) operations of the B Line. We also will be ready to demonstrate
the A line corridor to the FRA and CPUC in the very near future.”

This was RTD’s first indication to the FRA that the design was complete and ready to function as intended.

On May 26, 2017, almost immediately after the RTD letter, DTP sent in its Change in Law Notice letter (DTP Exhibit H). This was approximately one year after the efforts to set a range for acceptable maximum warning times had begun. Until that letter, there is no indication that DTP had advised anyone that it believed the efforts to set a maximum warning time was a Change in Law. In the Change in Law Notice letter, DTP focused its attention on the uncertainty over what standard would be applied to verify that the design met the requirement of “constant warning time.” Even in this letter DTP did not emphasize any dispute over whether a maximum constant warning standard was a Change in Law.

Key statements in the letter include:

“A central point of debate and confusion at present is the meaning of the words ‘constant warning time.’ The resolution of that issue alone, however, will not signal the timely achievement of needed regulatory approvals. The CPUC, for example cautioned in a very recent meeting that it expects further cycles of modification, applications, reviews and inspections that cannot all be put through at once given staffing constraints and the volume of effort required. Similarly, discussions with the FRA regarding methods of warning time measurement have not been solidified in writing by the FRA and DTP has become aware that the matter is interpreted differently in the various FRA regions. It is unknown how long it may take for the FRA to reconcile those differences and issue guidance.”

The letter goes on to state:

“The current regulatory environment is simply one in which designers cannot know if the exercise of historically permitted engineering judgement will be honored and operators cannot operate without waivers from prosecution until crossing designs and control systems are approved. More specifically, DTP and its Contractors are unable to manage or reasonably control the approval process as originally envisioned by the CA.”

Finally, DTP wrote:

“As mentioned above, the Parties are awaiting word from FRA on how the term “constant warning time” will be applied in determining future compliance and for purposes of potentially further revising CPUC applications.”
DTP made it clear that its concerns were whether the standard for the maximum closing time was a moving target. Had the FRA continued to be vague and indecisive about these standards, DTP might have been able to establish a Change in Law. DTP had now certified that its design met the minimum warning gate closure requirement. It had provided a design standard to test the functioning of the maximum closing designs. The FRA, however, did respond on June 16, 2017 (RTD Exhibit 25) and made the following key approvals:

1. It approved RTD’s design
2. It left it to RTD to establish the criteria for the maximum warning time
3. It permitted the criteria to “provide wide variations in warning times as long as the system is operating as designed and the minimum warning time is not less than 20 seconds.”

In other words, RTD/DTP could use the 15 second buffer standard proposed by Wabtec or any other standard for the maximum time and could even have wide variations in the maximum warning times.

It appears that it took DTP and its consultants until September 2017 to finalize its procedures for measurement and performance criteria for the maximum warning time. In early September 2017 DTP submitted RTD Exhibit 26 establishing “Grade Crossing Warning Time Measurement and Performance Criteria” which explained the planned 15 second buffer time that would be used. Later that month DTP submitted data in the form of bell curves in RTD Exhibit 27 demonstrating that the activation system was performing with the buffer zone for the maximum warning time. On September 28, 2017 the FRA accepted the data from DTP, accepted the 15 second buffer standard, and approved the removal of the crossing guards subject to the development of a plan from DTP for removal of the guards.

As of September 28, 2017 DTP had satisfied that it had a properly functioning constant warning gate activation system. The design and functioning of the system met the minimum warning requirements. The design of the system had an accepted buffer to measure whether the gates were open an excessive time before train arrival and DTP had established through bell curves and raw data that the system was functioning properly. The presence of bicycles had been
adequately accounted for. When combined with the use of a quad gate system, DTP had satisfactorily established that the system met all contractual and statutory requirements. All that was left was for DTP to develop a procedure for a crossing-by-crossing removal of the guards and for the CPUC to also permit the removal of the crossing guards.

Even before the FRA approval, RTD filed a Motion for Permission to Amend Application with the CPUC asking for, among other things, permission to include the 15 second buffer in the wireless crossing gate activation system. The Commission, without hearing testimony or receiving statements from experts, concluded that the 15 second buffer time did not provide a safe crossing environment. By that time DTP had a design that properly provided a minimum warning time before gate closure and properly provided a criteria for the maximum time between gate closure and train arrival. DTP had established through bell curves and other data that the system was functioning properly so that the closures met the design.

The Panel cannot determine if RTD should have anticipated the need to present testimony as part of its motion or whether the CPUC should have continued the hearing on the motion to permit the introduction of this testimony and evidence. What is clear, however, is that more than half a year was lost between the September 2017 hearing and the next consideration of the matter by the CPUC in March 2018. The information considered by the CPUC at that time was no different than what had previously been presented to the FRA in 2017 and which could have been presented to the CPUC in September 2017. Because of the delay in submitting full information to the CPUC, DTP was required to retain crossing guards and to lose Revenue Service Payments for many months even though its design and operations met all contractual and statutory requirements. The Panel concludes that there was a Change in Law in late September 2017 when the CPUC refused to adopt the 15 second buffer and to permit the process of guard removal to begin.

It is impossible given the record presented to the Panel to determine the damages suffered by DTP from this Change in Law. The FRA waiver required RTD to develop a plan for the removal of the crossing guards (see RTD Exhibit 28) and set forth elements to be included in that plan. The Panel has not seen that plan and we assume that it was not developed until the CPUC
also approved the gradual removal of the crossing guards. Likewise, we have not seen a plan
prepared in the months since the CPUC decision in April 2018. For this reason, while we believe
that the crossing guards are no longer needed to provide a safe environment, we cannot conclude
that DTP has acted reasonably to develop a removal plan or that either FRA or CPUC have acted
unreasonably in delaying the removal of the crossing guards.

DTP’s experts also opined that the FRA’s use of stop watches to determine the time
between gate activation and train arrival was not authorized by the relevant statutes and
regulations and constituted a Change in Law. The experts explained that the stop watch
measurements did not account for factors that might delay train arrival such as extended loading
and unloading time at stations, obstacles on the tracks or other anomalies. 49 CFR 234.259
provides several methods for the FRA to test the functioning of the gate activation systems. One
of those methods is “observation of train movements.” Since the trains were operating with
passengers when the stop watch readings were being taken, the Panel believes this was one of
several possible ways to get accurate readings of the relationship between gate activation and train
arrival. We believe that field observations and stop watch measurement would be a proper form
of “observation of train movement.” If the stop watch measurements showed a long delay
between gate activation and train arrival, we assume DTP would have been able to explain the
reason for the delay and establish that it did not reflect a defect in the design or performance of the
gate activation system. We saw no evidence that the FRA denied DTP that opportunity. We
believe, therefore, that the use of stop watches by the FRA did not constitute a Change in Law.

**IMPACT OF THE FAST ACT**

DTP has also claimed that the FAST Act enacted by Congress constituted a Change in Law
for which it is entitled to compensation. It is undisputed that the FAST Act was signed into law
many years after the CA was executed and after DTP’s original design was approved. According
to RTD Exhibit 36, the FAST Act was signed in December 2015 but DTP did not become aware
of the Act and its application to this project until September 22, 2016. Notice of a Change in Law
was submitted by DTP on October 21, 2016. RTD rejected the notice on December 16, 2016 on
two grounds: first, that DTP should have been aware of the FAST Act prior to the Revenue
Service Dates of both the A and B-lines and second, the FAST Act did not impose a burden on DTP.

With regard to the first issue, the Panel has insufficient information to conclude that DTP waived any claim for a Change in Law. The CA defines a Change in Law as including “the introduction...of...any Law...that occurs on or after 30 days before the Final Proposal Due Date....” From the information presented to the Panel, the Final Proposal Due Date was long before the FAST Act was enacted.

With regard to the second basis for RTD’s denial of the Change in Law notice, the only information presented to the Panel came from Anne Herzenberg. Her presentation explained how the FAST Act’s requirements that the Automatic Train Control and Positive Train Control be separated resulted in longer runtimes than permitted by the CA and in a potential loss of revenue to DTP. The presentation, however, including the chart presented by Ms. Herzenberg on slide 5 of her presentation, also demonstrated that DTP was able to overcome the impacts of the FAST Act at least within a year and that beginning in mid-2017 the revenue losses due to the FAST Act were only several thousand dollars per month. Ms. Herzenberg was able to explain revenue losses of $103,497.10 (the major portion of which occurred by March 2017) but was unable to explain DPT’s previous claim of $207,900.

Whatever the actual revenue losses from the Change in Law caused by the FAST Act, the amount is relatively small compared to the other claims. In addition, since Ms. Herzenberg stated that the runtimes now meet the requirements of the CA, the loss of revenue should cease and the FAST Act should have no impact on the Independent Engineer’s certification of the system.

**DTP’s G-Line Claims**

DTP has requested four items related to the G-Line:

1. Immediate commencement of G-Line Revenue Service Payments
2. Retroactive Revenue Service Payments from October 26, 2016 through June 30, 2018
3. That RTD immediately assume the costs of crossing guards and
4. Reimbursement for costs including crossing guards and DTP overhead costs from
September 1, 2016 through April 15, 2018.

The Panel is unable to offer an opinion on these requests. From the presentations, it appears that while the G-Line has not operated, crossing guards were required because freight trains were using these grade crossings. We assume the original warning systems were removed and replaced by DTP systems, but that can only be assumed from the materials we were presented. We were not presented with information regarding attempts to obtain approval to open the G-Line. To the extent the crossing guards were required for the same reasons that applied to the A-Line, the conclusions of the Panel would be the same: until September 2017 the design had not been finalized and DTP had not demonstrated that the warning system was functioning as designed. Beyond that comment, the Panel is unable to reach conclusions whether revenue service should have begun and/or whether the costs of crossing guards should be borne by RTD.

**IMPACT OF THE SIDE AGREEMENTS ON DTP'S CLAIMS**

RTD contends that the Side Agreements entered into for the A and B-Lines (DTP Exhibits E and F) included a waiver of each of the claims being made by DTP. Both Side Agreements contain the following language:

> “As between RTD and Concessionaire, Concessionaire is responsible for all increased costs necessitated by this stipulation and limited waiver, and such increased costs do not create the basis for a Relief Event. The Concessionaire agrees that its full compensation is the established Construction Payments and Service Payments as set forth in the Concession Agreement, as amended and as modified in Section 5 of this Side Agreement.”

On this basis, RTD contends that DTP cannot seek to recover the cost of the crossing guards or seek reimbursement for the deductions made pursuant to Section 5 of the Side Agreements.

As with all contracts, the terms have to be interpreted in light of the language used and the circumstances surrounding the execution of the contract. At the time the Side Agreements were signed, both parties were anxious to begin passenger service. This could not be achieved without a functioning WCAS. To permit DTP time to get the WCAS functioning, permission was obtained from the FRA to begin passenger service as long as guards were placed at each grade crossing. Through the Side Agreements, DTP agreed to be responsible for the crossing guards.
until such time as the WCAS was functioning properly. Since this was expected to occur within a matter of months, a 90 day waiver was requested from the FRA. The Panel concludes that DTP waived claims for the cost of these crossing guards until the “constant warning time function for the grade crossing activation system” was “fully complete” so that a Revenue Service Commencement Certificate could be issued by the Independent Engineer.

Had the WCAS constant warning activation system functioned properly when DTP submitted its first certificates in June 2016, the terms of the Side Agreements would have been clear – the costs between the execution of the Side Agreements and the certifications would have been DTP’s responsibility. As explained earlier in this Decision, however, the design was not functioning properly in June 2016. It was not until September 2017 that DTP established that the system was performing as designed – with minimum closing times that met the requirements of the CA and with maximum closing times that fell within the buffer zone established in the design. Until the system was performing as designed the constant warning time function for the grade activation system was not complete and the cost of the crossing guards was DTP’s responsibility and the deductions from the Revenue Service Payments were appropriate.

Had the Panel concluded that a Change in Law occurred at a date earlier than September 2017, DTP would be entitled to reimbursement for the crossing guards and return of the deductions from the Revenue Service Payments from the date of the Change in Law. We do not, however, believe that such a Change in Law occurred prior to September 2017.

**CONCLUSION**

The Panel concludes that there were three Changes in Law which would entitle DTP to provable damages:

1. The redesign of the crossing gate timing to account for bicycles. The Panel concludes, however, that there were no damages demonstrated from this design change nor any evidence that the design changes delayed the commencement of passenger service or revenue generation.
2. The FAST Act. The Panel concludes that DTP was able to quickly adjust its operations to account for the impacts of the FAST Act and that the damages, if any, were approximately $100,000.

3. The refusal of the CPUC to permit DTP and RTD to begin the process of removing the crossing guards in September 2017 when the FRA granted its 5 year waiver and accepted the removal of the crossing guards once DTP developed a plan to accomplish that. We are unable to quantify the amount of reimbursement to which DTP is entitled for either the cost of crossing guards or the revenue reductions for the reasons expressed above.

Other than the three items mentioned above, the Panel concludes that DTP has not established a change in law or a force majeure entitling DTP to compensation from RTD.

Dated: June 27, 2018

By:

Alan E. Harris, Chair
Dispute Resolution Board Panel

Dated: June __, 2018

By:

Kenneth C. Gibbs, Member
Dispute Resolution Board Panel

Dated: June __, 2018

By:

Deborah Mastin, Member
Dispute Resolution Board Panel
Dated: June 26, 2018

By: [Signature]

Deborah Mastin; Member
Dispute Resolution Board Panel