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November 21, 2018

Via Electronic Mail and NTSB Accellion Upload

Honorable Robert L. Sumwalt, Chairman
National Transportation Safety Board
490 L'Enfant Plaza, SW
Washington, DC 20594
correspondence@ntsb.gov

Re: NTSB/HAR-18/01, Safety Recommendations R-18-14 and R-18-15 and Petition for Reconsideration Pursuant to 49 C.F.R. § 845.32. – NTSB Accident ID: HWY17MH010

Dear Chairman Sumwalt:

We are writing in response to the National Transportation Safety Board's ("NTSB") issuance of safety recommendations R-18-14 and R-18-15 to CSX Transportation, Inc. ("CSXT"). The NTSB issued the recommendations in connection with its investigation of a March 7, 2017 collision between a charter bus and a CSXT locomotive. The collision occurred at a railroad grade crossing located at the intersection of CSXT's mainline rail tracks and Main Street in Biloxi, Mississippi, DOT Crossing No. 340185W (the "Crossing").

Following its investigation, the NTSB issued its August 7, 2018 final accident report (the "Report") containing eleven safety recommendations, including two recommendations directed to all Class I railroads. Your August 28, 2018 email to CSX President and CEO Mr. James Foote requested that CSXT provide the actions it has taken or intends to take to implement these recommendations. CSXT worked cooperatively with the NTSB and its investigators throughout the investigation and I am pleased to provide this response on behalf of the Company.

Responses to Specific Recommendations to Class I Railroads

Recommendation R-18-14: Implement a process to notify and coordinate with the local and state transportation agencies responsible for highway maintenance at grade crossings as early as possible before conducting any planned maintenance work that has the potential to increase track elevation.

Response: It has been CSXT's longstanding practice to coordinate and cooperate with state and local transportation agencies to facilitate both railroad and highway maintenance projects at grade crossings. While CSXT strives to maintain consistent track profile when

performing such maintenance projects, there is always a potential that certain grade crossing maintenance projects may result in minor track elevation increases or decreases.

In response to the specific recommendation, each year CSXT develops a planned track maintenance schedule that contains projects it intends to complete across its entire system. Upon request from a state transportation agency, CSXT is willing to implement an additional process to provide a copy of its planned track maintenance schedule for the coming year for work to be performed in that particular state. CSXT will also continue its practice of coordinating with local officials and providing them notice as far in advance as practicable of planned track maintenance work at grade crossings. CSXT will strive to provide this notice at least 30 days prior to performing such planned maintenance, understanding that in some circumstances 30 days' notice may not be feasible.

Based on these actions, CSXT respectfully requests that the NTSB designate the status of R-18-14 as *Closed-Acceptable Action*.

Recommendation R-18-15: Implement a process to make information about incidents of vehicle groundings at grade crossings that did not result in a crash on your railroad available to the appropriate state departments of transportation.

Response: CSXT's Public Safety Coordination Center maintains records of reported instances where vehicles are stopped on CSXT tracks at grade crossings without a crash or collision. Upon request from a state transportation agency, CSXT is willing to periodically provide a list of those reported instances for a particular location or jurisdiction.

Based on these actions, CSXT respectfully requests that the NTSB designate the status of R-18-15 as *Closed-Acceptable Action*.

Request to Reconsider and/or Modify the Report Pursuant to 49 C.F.R. § 845.32[1]

CSXT appreciates the NTSB's efforts in this investigation and is committed to working cooperatively to improve grade crossing safety. That said, CSXT must respectfully note that the Board's findings are erroneous in at least four respects.

First, the Report's "finding" that the commercial bus driver's actions were "reasonable" in all respects is contrary to the evidence cited in the Report, as well as the guidance and regulations governing the safe operation of commercial vehicles at railroad grade crossings. *See* Finding Nos. 3, 4. Among other items, it is undisputed that the experienced commercial driver

[1] Under 49 C.F.R. § 845.32, "petitions for reconsideration or modification of [a] report **. . .** must be based on the discovery of new evidence or on a showing that the Board's findings are erroneous." Under 49 C.F.R. § 845.33, the "Board never officially closes an investigation, but provides for the submission of new and pertinent evidence by any interested person." Although CSXT believes that this letter satisfies the requirements for a petition for reconsideration under § 845.32, CSXT is prepared to submit its request for reconsideration via a formal petition to the extent the NSTB prefers that format.

observed the "Low Clearance" sign and plaque installed at the Crossing, and in fact stopped the motorcoach before the Crossing and raised the rear of the bus due to the low clearance at the Crossing. Given the plain and unambiguous wording of the signage, as well as the driver's decade-plus of experience and training as a motorcoach driver, the driver should have either: (i) followed the original highway route which would have avoided grade crossings; (ii) used a different crossing, such as the nearby Caillavet Street crossing, which the Report concluded "has a considerably lesser slope" (Report at 33, n. 65); or at a minimum (iii) exited the bus to visually confirm the downward slope of the Crossing *before* proceeding. The Report also fails to address ECHO Transportation's obligations under federal law to provide adequate training to ensure that its drivers comply with all applicable Federal Motor Carrier Safety Regulations and state law requirements promulgated thereto, including sections of the Texas Commercial Motor Vehicle Drivers' Handbook expressly instructing commercial drivers to exercise caution when navigating railroad grade crossings to avoid "getting hung up halfway across."

Second, the Report's finding that CSXT's track resurfacing work in 2014 "increased the Crossing's vertical profile and resulted in increased frequency of vehicle groundings" is not supported by any evidence in the public docket. *See* Finding No. 8. In fact, the Report does not contain any valid data or measurements comparing the Crossing's elevation profile before and after the track work in 2014. Rather, the Report primarily cites an unidentified CSXT engineer for the proposition that tie replacement work "typically" raises railroad tracks by approximately 1.5 inches. The Report's "measurements" that are included also contain material mathematical errors. In addition, the Report overlooks other plausible explanations for any purported change in the Crossing's vertical profile, including the City of Biloxi's (the "City") road improvement projects and/or reconstruction of adjacent parallel roadways.

Third, the Report's assertion that CSXT somehow "denied" the City and the Mississippi Department of Transportation ("MDOT") the "opportunity" to take "proactive action" to enhance safety at the Crossing after the 2014 track work is similarly unsupported. *See* Report at 43, Finding Nos. 10-11. Contrary to the Report's conclusions, the City and MDOT were aware of the Crossing's vertical profile after the 2014 track work. Specifically, the Report omits the fact that MDOT inspected and measured the Crossing's vertical profile in 2015 (nearly one year ***after*** the purported replacement of the ties in 2014, and more than two years ***before*** the accident at issue) and was therefore aware of any low ground clearance issues posed by the configuration of the Crossing. Although CSXT recognizes the importance of communication with all interested stakeholders, CSXT disagrees with the Report's unsupported suggestion that CSXT in any way prevented MDOT and the City from addressing any low clearance issues at the Crossing.

Fourth, and finally, the Report appears to state several erroneous legal conclusions, all of which should be struck from the Report.

Consistent with the NTSB's core mission to determine the facts necessary to prevent future accidents, CSXT respectfully requests that the Report be amended and/or modified pursuant to 49 C.F.R. §§ 845.32 and 845.33 to address and correct these erroneous findings.

At a Minimum, the Bus Driver's and ECHO Transportation's Actions Contributed to the Accident

As a threshold matter, the Report's conclusion that the bus driver's actions were "reasonable" is contrary to the NTSB's own findings, as well as well-known guidance and regulations governing safety at railroad grade crossings. *See* Finding Nos. 3, 4. According to the Report, the experienced commercial driver: (i) deviated from both the established itinerary route instructing him to take Interstate 10 as well as the tour company's alternate scenic route instructions, both of which would have avoided the Crossing (Report at 37); (ii) had a Texas commercial driver's license (CDL) with passenger and school bus endorsements for more than a decade (*id.* at 36); (iii) observed the "Low Clearance" sign and plaque installed at the Crossing (signage which the NTSB previously recommended in a prior investigation of a high profile crossing collision) (*id.* at 34); (iv) likely received auditory and visual notifications from his commercial GPS unit that the Crossing presented a "risk of grounding" (*id.* at 39, n. 71); (v) stopped before the Crossing and raised the rear of the bus to avoid scraping the rear bumper due to the low clearance at the Crossing (*id.* at 34, n. 66); (vi) proceeded onto the Crossing when the CSXT locomotive was purportedly only approximately 1,364 feet away without first confirming the downward slope of the north side of the Crossing (*id.* at 35, 38); and (vii) initially attempted to dislodge the bus and waited to evacuate the passengers until mere seconds before the collision. *Id.* at 35.

Notwithstanding these numerous findings, the Report nevertheless concludes that the driver's actions were reasonable because he likely could not have perceived the steepness of the Crossing's downward slope on the north side as he approached. Finding No. 4. Respectfully, this finding is erroneous. As the Report expressly concludes, the driver deviated from his planned route, stopped the bus at the Crossing stop line, and "decided to raise the rear of the motorcoach to avoid scraping the rear bumper when crossing . . . because of the incline." Report at 34, n. 66. As such, the driver clearly recognized the risk of grounding the bus due to the low clearance at the Crossing. If the driver truly did not or could not perceive the Crossing's profile on the north side despite the low clearance signage and potential warnings from his GPS, the reasonable and prudent action would have been to use a route without grade crossings, or at a minimum, to use a different crossing, such as the nearby Caillavet Street crossing, which the Report concluded "has a considerably lesser slope." Report at 33, n. 65. Alternatively, the driver should have exited the vehicle and visually confirmed that the motorcoach could safely navigate the Crossing *before* attempting to cross with a bus full of passengers.

Put simply, the only reasonable and prudent action for a commercially licensed driver carrying a bus full of passengers was to first confirm that the bus could safely proceed before attempting to navigate the Crossing. As discussed further below, commercial drivers are well-versed in the potential low clearance hazards for commercial vehicles when navigating railroad grade crossings. Based on the evidence, if the bus driver had taken a more reasonable and prudent approach that day, the collision could have been avoided. As the Report acknowledges, the driver made the decision to stop the bus just short of the Crossing in order to raise the rear of the vehicle due to clearance concerns. As such, it would have been easy for the driver to walk

toward the Crossing to visually observe the clearance on the north side before proceeding across. At a minimum then, the Report should be amended to acknowledge that the driver's actions constitute at least a contributing cause to the collision.

As a holder of a Texas CDL since 2006, the driver should have been familiar with the Texas Commercial Motor Vehicle Drivers' Handbook (the "Handbook"), which expressly instructs commercial drivers to cross railroad tracks only ***after*** first confirming it is safe to do so.[2] In fact, the Handbook's sections on "Railroad-highway Crossings" expressly state that: (i) "Railroad crossings with steep approaches can cause your unit to hang up on the tracks . . . ***Be sure you can get all the way across the tracks before you start across***"; and (ii) "[m]any drivers forget about the space under their vehicles . . . Railroad tracks can also cause problems . . . ***Don't take a chance on getting hung up halfway across*** . . . ." Handbook, §§ 2.15.5; 2.7.5 (Revised June 2014) (emphasis added). A driver's CDL will even be temporarily revoked for "***fail[ure] to negotiate a crossing because of insufficient undercarriage clearance***." *Id.* at § 1.3.5 (emphasis added). The Handbook (as well as other publicly available resources, such as the Federal Motor Carrier Safety Administration's "7 Steps for Safety-Highway Rail Grade Crossings" ("FMCSA Safety Brochure")) also emphatically state that a driver of a stalled vehicle must immediately evacuate (unless a collision is imminent) and call the emergency phone number posted at the Crossing or call 911. *Id.* at § 2.15.6.

The driver's actions were also inconsistent with governing federal and state regulations similarly requiring commercial drivers to stop at all railroad crossings and only proceed after ***first*** confirming that it is safe to do so. The NTSB's docket includes the driver's August 24, 2015 acknowledgment in which he "agree[d] to familiarize [himself] with the Federal Motor Carrier Safety Regulations (FMCSR) of the U.S. Department of Transportation, Parts 40, 380, 382, 383, 387, 390-396, Title 49 of the Code of Federal Regulations and/or Part 655 of the Federal Transit Authority as contained therein." *See* Motor Carrier Attachment – Accident Driver's Driver Qualification File, at 4. Under those regulations, motorcoach drivers must stop at grade crossings, and may proceed only after confirming "it is safe to do so" as long as there is "sufficient space to drive completely through the crossing without stopping." *See* 49 CFR §§ 392.10-392.12; *see also* Texas: Tex. Transp. Code § 545.253 (driver "may not proceed until it is safe to do so"); FMCSA Safety Brochure No. 4 ("If it won't fit, don't commit. Do not enter a crossing unless you can drive completely through without stopping! . . . ***Before you pull onto the track***, make sure there is enough room ***on the other side*** for the back of your vehicle (and any overhanging cargo) to be at least 6 feet beyond the furthest rail.") (emphasis added).

The Report primarily focuses on the lack of guidance in these authorities as to the meaning of the "Low Clearance" sign and plaque at the Crossing. Report at 30-31; *see also* Motor Carrier Factors Group Chairman's Factual Report at 15-16. Respectfully, CSXT disagrees with the Report's conclusion that the meaning of the sign and plaque are unclear to experienced CDL drivers. The plaque expressly and unambiguously states that the Crossing has "LOW GROUND CLEARANCE." As the Manual on Uniform Traffic Control Devices

[2] The Handbook is consistent with the Federal Motor Carrier Safety Regulations, which direct the States to ensure that drivers have certain specific knowledge and skills in order to obtain a CDL. *See* 49 C.F.R. §§ 383.110-383.111.

("MUTCD") confirms, the language in the plaque was intended to clarify any purported ambiguity in the accompanying sign. May 2012 MUTCD, Section 8B.23 ("Because [the sign] might not be readily recognizable ***by the public***, the Low Ground Clearance Highway-Rail Grade Crossing (W10-5) warning sign shall be accompanied by an educational plaque, LOW GROUND CLEARANCE.") (emphasis added). The MUTCD further confirms that the "low clearance" sign and plaque are not intended to be limited to low-boy vehicles, but instead should be installed whenever "the highway profile conditions are sufficiently abrupt to create a hang-up situation ***for long wheelbase vehicles*** . . . ." *Id.* (emphasis added). Moreover, the NTSB expressly approved the same sign and plaque in a prior investigation arising from a collision at a high profile railroad crossing. *See* NTSB HAR-96-01, H-96-003.[3] As such, it is unreasonable for an experienced commercial motorcoach and school bus driver to claim ignorance as to the meaning of the plaque's unambiguous language, especially given that the driver stopped to raise the back of the motorcoach due to the Crossing's low clearance.

The Report also does not consider ECHO Transportation's compliance with federal regulations requiring motor carriers and employers to train their drivers to ensure that they comply with the above authorities. *See* 49 C.F.R. § 390.3. While ECHO Transportation provided the NTSB with written policies, including a railroad crossing policy addressing certain FMCSA requirements relating to traversing grade crossings, the Report notes that ECHO did not include any guidance or provide any training to drivers pertaining to crossings marked with Low Clearance warning signs. Report at 30. As the Report acknowledges, the long wheelbase motorcoach was designed and manufactured with a clearance of only 12-inches from the ground to the bottom step of its stairwell (Vehicle Factors Group Chairman's Factual Report at 5) with a rear raising system which can raise the motorcoach approximately 4-inches at the rear axles (*id.* at 6). If long wheelbase commercial vehicles are designed with similar low ground clearances, they should be accompanied by manufacturer's instructions or related driver training to ensure that drivers do not attempt to use clearly marked "Low Clearance" grade crossings.

In light of the foregoing, the Report should be amended or corrected to include an appropriate discussion of the driver's actions and compliance with the above regulations and guidance to prevent commercial drivers from making similar mistakes in the future.

The Report's Conclusions Regarding the Purported Effect of CSXT's Track Work in 2014 on the Crossing's Vertical Profile Are Unsupported

CSXT also respectfully requests that the NTSB reconsider the Report's finding that CSXT's track work in 2014 "increased the [C]rossing's vertical profile and resulted in increased frequency of vehicle groundings." *See* Finding No. 8. After careful review of the public docket, CSXT submits that this finding is not supported by any evidence. As support for this finding, the Report cites only a conversation with an unidentified CSXT engineer for the proposition that

[3] Specifically, on April 15, 2004, the NTSB notified the U.S. Department of Transportation that the FHWA had revised the 2003 edition of the MUTCD to include "sign design and placement standards for low ground clearance highway-rail grade crossings." Because this revision met the "intent" of Safety Recommendation H-96-3, the NTSB classified the Recommendation as "Closed—Acceptable Action."

replacing wooden railroad ties "typically" raises the track by "about 1.5 inches." Report at 20.[4] From this anecdotal, generalized information, the Report assumes that the 2014 tie replacement work raised the Crossing by approximately 1.5 inches. *See* Finding No. 8.

However, it is not possible to corroborate or substantiate the Report's "finding" from the evidence in the public docket. In fact, there is no information at all demonstrating the actual vertical profile of the Crossing either before or after the track work in 2014. Although the Highway Factors Group Chairman's Factual Report ("Highway Report") references two purported data points—the City's 1977 Main Street Improvement Plans and a 1999 City "survey"—these data points do not provide an "apples to apples" comparison. Highway Report at 21. Among other reasons, the 1977 Main Street Improvement Plans and 1999 City "survey" were prepared by different engineering firms, and do not reference the same survey monument. These purported "survey" measurements may vary by inches or even more depending where exactly the survey stakes were physically placed at or around the Crossing. There is no indication that the various survey stakes were placed in the same location. Moreover, the 1977 Main Street Improvement Plans appear to be drawn by hand, and are thus less accurate than the more recent 1999 "survey." The Highway Report's comparison also fails to take into account the changes in the National Geodetic Survey (NGS) survey monument data, with the 1977 Main Street Improvement Plans likely based on NGS data compiled in 1929 and the 1999 "survey" likely based on the updated NGS data compiled in 1988.[5]

The Report Includes Calculation and Mathematical Errors

Even if the measurements in the 1977 Main Street Improvement Plans and 1999 purported "survey" could be directly compared, the Highway Report appears to misread the relevant measurements. The Highway Report finds that Crossing's elevation was approximately 19.14 feet above mean sea level based on the 1977 Main Street Improvement Plans, which purportedly increased to 19.39 feet above mean sea level in 1999 based on the City "survey." Highway Report, at 21. In doing so, the Highway Report appears to misread the "legend" on the 1977 Main Street Improvement Plans by approximately half a foot.[6] *See* Highway Attachment – Selected Pages from: 1917 Railroad Right of Way and Track Map; 1977 Main Street Improvement Plans; 1999 Main Street Improvement Survey; 2012 Infrastructure Repair Program Plans; and 2014 Infrastructure Repair Program Plans, at 6. As the legend on the 1977 Main Street Improvement Plans shows, the Crossing's elevation was approximately 19.64 feet (not 19.14 feet) above mean sea level in 1977 (assuming the NTSB's measurement is accurate), indicating a potential ***decrease*** in elevation between the 1977 and the 1999 measurements.

[4] Although the Report also states that NTSB investigators "confirmed" the accuracy of the engineer's statements, the Report is devoid of any supporting documentation or explanation. Report at 20, n. 36.

[5] Moreover, the closest National Geodetic Survey (NGS) monument to the Crossing expressly states that all measurements are only valid ***at the time taken*** due to variability in the movement of the earth's crust in this location.

[6] Specifically, the NTSB appears to confuse the solid graph lines indicating each topographical elevation in feet with the lighter-shaded graph lines indicating each mid-point, i.e. half-foot.

Similarly, the Report's conclusions regarding the Crossing's "average vertical grade" between the track level and a point 30 feet out from the nearest rail contain a material miscalculation. According to the Report, the Crossing's vertical grade/slope on the north side was 13.3% shortly after the accident. Report at 17.[7] Respectfully, that is incorrect based on the measurements provided in the Report. Using the NTSB's measurements, it appears the slope should actually equal 12.6% (45.4 inches below the track level divided by 360 inches from the nearest rail). Moreover, the City's own 1977 Main Street Improvement Plans cited in the Report specifically contemplate a 12.3% grade on the north side of the Crossing. *See* 1977 Main Street Improvement Plans, at 6. In other words, the NTSB's measurements show that the Crossing's purported slope ***only increased by approximately .3% (or 1.12 inches)*** over the nearly 40 years since the 1977 reconstruction. Put differently, the NTSB's measurements show only a *de minimis* increase in the Crossing's slope by approximately .28 inches every decade. At a minimum, the Report should be amended to correct this math error.

The Report Overlooks Other Plausible Explanations for Any Purported Change in Vertical Profile

Based on the unsupported assumption that the track work in 2014 raised the Crossing's vertical profile, the Report then points to data purportedly demonstrating an increase in reported grounding incidents since 2014. Report at 21. Respectfully, this "finding" appears to conflate a mere correlation with causation. While CSXT acknowledges that there were more *reported* incidents in the 37 months following the tie replacement work in 2014 than in the 23 months before that work, there is no evidence in the record comparing the number of incidents over the equivalent time period before and after the 2014 work or historically over time.

To the extent the number of incidents has in fact increased over time, CSXT respectfully submits that it is equally or more plausible that any change in elevation was the result of public road improvement projects conducted by the City on the North Side of Esters Boulevard. Despite acknowledging the City's road improvement projects, the Report does not include any data on any elevation changes caused by that work (other than conducting a visual examination and concluding that there was purportedly no drop-off between the asphalt and milled surfaces). *See* Report at 20. In other words, the Report does not consider the possibility that the City's road improvement projects may have lowered the elevation of Esters Boulevard over time.

The Report's narrow focus on CSXT's track work in 2014 also overlooks other plausible contributors to the Crossing's vertical profile. By way of example, the two City roadways parallel to the tracks have different elevations and are located in close proximity to the outside rails, potentially limiting or constraining the ability to change the approach grade of the Crossing without impacting the parallel roadways. *See, e.g.*, Highway Report at 15, Fig. 9. In fact, the Highway Report acknowledged that any repair work "to provide less abrupt approach slopes" would "need to go back ***several hundred yards***" on either direction of the tracks – well beyond the parallel Esters Boulevard streets. Highway Report at 28 (emphasis added).

[7] The Report based this finding on the NTSB's purported measurements showing that the road surface on the north side of the Crossing was 45.4 inches below the track level at a point 30 feet from the nearest rail. Report at 17.

The Report's finding also largely ignores the practical engineering and topographical constraints along this entire rail corridor. As the Highway Report accurately notes, the topography surrounding the rail corridor in the City varies significantly from crossing to crossing. Highway Report at 32, Table 8. During track work, CSXT strives to maintain a constant elevation profile for railroad operational and safety purposes. In other words, CSXT's engineering activities seek to maintain the relative constancy of the track's elevation profile along the rail corridor. In fact, certain federal regulations (which CSXT is in compliance with) limit the amount the track profile may change over specific longitudinal distances. *See* 49 CFR § 213.63.[8] The Report fails to acknowledge that these practical constraints and regulations may limit CSXT's ability to change the Crossing elevation without causing potential issues at any of the other nearby 29 grade crossings in the City.

For all of these reasons, CSXT respectfully requests that the NTSB reconsider or correct its unsupported "finding" regarding the purported effect of the 2014 track work on the Crossing's vertical elevation profile.

MDOT and the City were Aware of the Crossing's Vertical Profile

The Report's determination and conclusion that the City and MDOT were unaware of the Crossing's vertical profile is similarly erroneous. *See* Report at 43, Finding Nos. 10-11. According to the Report, "MDOT was not informed of the track maintenance that CSXT conducted in February 2014." Report at 43. The Report then extrapolates that, "with better communication, MDOT and the City of Biloxi would have had the opportunity to consider the potential for increased risk of vehicle groundings on the crossing." *Id.* "By not communicating effectively with MDOT and the city about the crossing maintenance and its consequences, CSXT denied them of this opportunity." *Id.*

CSXT recognizes the importance of communicating and coordinating with state and local transportation agencies with respect to track work at grade crossings. That said, CSXT respectfully disagrees with the Report's finding that CSXT in any way denied the City and/or MDOT the opportunity of taking additional steps to improve safety at the Crossing.[9]

As the Report acknowledges, "as part of the maintenance conducted in February 2014," the City "publicized the grade crossing closure on its traffic notifications website," and therefore had notice that such work was proceeding. *See* Report at 20, n. 38. MDOT also inspected the Crossing in March of 2015, *approximately 13 months after the 2014 tie replacement work*.[10] The MDOT Inspection Report expressly recognizes that the Crossing has a "high profile," includes

[8] Similarly, both the American Association of State Highway and Transportation Officials ("AASHTO") and the FHWA recommend that the crossing surface be level with the top of the rail to the extent possible. *See* Report at 17. CSXT's MWI 901-08 also recommends that "[p]aved road surface[s] should be level with the top of rail."

[9] This conclusion is premised entirely on the unsupported assumption that the 2014 tie replacement work raised the Crossing's vertical profile. As set forth above, that conclusion is incorrect and unsupported by the evidence.

[10] A copy of the 2015 MDOT inspection report (the "MDOT Inspection Report"), which does not appear in the NTSB public docket, is attached hereto as **Exhibit A**.

purported measurements of the Crossing's vertical height, and further notes that the appropriate MUTCD W10-5 "Low Clearance" sign and plaque are installed—the same sign that the NTSB expressly approved in a prior investigation. *See* NTSB H-96-003. As such, CSXT respectfully submits that the Report's suggestion that MDOT did not have notice of the Crossing's vertical profile prior to the 2017 accident is clearly erroneous. *See* Report at 20, 43.

Even before 2014, both the City and MDOT were aware that the Crossing had a low clearance. According to the Highway Report, the City's Fire Department has prohibited its vehicles from using the Crossing since at least 1999. *See* Highway Report at 34; *see also* Highway Attachment – City of Biloxi Fire Department Directive. Photographic evidence also demonstrates that the low ground clearance sign and plaque approved by the NTSB were installed by MDOT and/or the City at the Crossing no later than 2013, *i.e.* before the purported 2014 tie replacement work.[11] Despite having notice of the Crossing's profile and the exclusive regulatory authority over signage at grade crossings (Miss. Code Ann. §§ 65-1-175; 63-3-305), MDOT and the City did not install additional signage prohibiting buses and other long-wheelbase vehicles from using the Crossing until after the March 2017 collision. Report at 22.

The Report also overlooks CSXT's long-standing efforts to work with the City and MDOT to promote crossing closures and other grade crossing safety initiatives in the City and elsewhere. In accordance with the Federal Railroad Administration's ("FRA") stated goal of closing 25% of the nation's existing highway-rail grade crossings, CSXT remains committed to closing grade crossings where possible.[12] In fact, CSXT provides financial incentive to do so under its Crossing Closure Incentive Program, which is designed to assist municipalities with certain costs associated with closing highway-rail grade crossings. CSXT, the City, and Harrison County are currently exploring potential crossing closures in the City and beyond. Similarly, although the City commissioned a report in 2014 identifying potential grade crossing closures, the City made the decision not to close the Crossing at issue here. *See* Highway Attachment – Summary Information for Potential At-Grade Crossing Closure Locations.

Accordingly, CSXT respectfully requests that the NTSB reconsider its findings that MDOT and the City were not aware of the Crossing's vertical profile.

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[11] Specifically, the docket contains a Google Maps Street View image dated April 2013. Highway Factors Group, Photographs, Photograph No. 15. The image in the docket is closely cropped and therefore does not show the sign and plaque. The identical, albeit zoomed out, version of the April 2013 Street View image available on Google Maps shows the sign and plaque in its current location. A copy of that image is attached hereto as **Exhibit B**.

[12] Federal grade crossing mandates, closure programs, and policies are contained, among other places, in: (i) the August 2007 FHWA Revised Railroad-Highway Grade Crossing Handbook; (ii) the 2004 Secretary of Transportation Action Plan for Highway-Rail Crossing Safety and Trespass Prevention; (iii) the July 1994 FRA Guide to Crossing Consolidation and Closure; and (iv) the June 1994 FRA Action Plan – Highway-Rail Safety.

The Report Should be Amended to Remove Any Legal Conclusions

Finally, the Report appears to include several legal conclusions regarding: (i) CSXT's obligations and duties at public grade crossings (*see* Report at 43-44); and (ii) the effect of certain recommended practices or guidelines for the design of highway-rail grade crossings offered by the American Railway Engineering and Maintenance-of-Way Association ("AREMA") and AASHTO (*see* Report at 17). CSXT respectfully submits that these purported conclusions are incorrect and/or legally erroneous.

While acknowledging that it "is outside the scope of this investigation to make a definitive determination as to which entity bears the responsibility for maintenance" of the Crossing, the Report goes on to suggest that Mississippi "case law indicates a railroad may not contract away its duties and liabilities concerning the safety of public grade crossings." Report at 44. In doing so, the Report fails to acknowledge Mississippi Supreme Court case law holding that: (i) a railroad's ability to make changes to grade crossings may be constrained or affected by the close proximity of adjacent city streets, *Gulf & S. I. R. Co. v. Simmons*, 117 So. 345, 351 (Miss. 1928); and (ii) "railroad companies are not responsible for maintaining roads leading to crossings." *Ill. Cent. Gulf R.R. Co. v. Travis*, 106 So. 3d 320, 339-40 (Miss. 2012).

Moreover, while the Report acknowledges that both AREMA and AASHTO only provide "guidance" on the "maximum acceptable vertical profile for a *new or newly reconstructed grade* crossing," the Report nevertheless appears to suggest that AREMA and AASHTO provide "design standards" governing the existing Crossing at issue here. *See* Report at 17, 42. CSXT disagrees. As both AREMA and AASHTO recognize in their respective guidance publications, given the myriad topographical and physical conditions and variations that exist across the national freight rail network and surrounding communities, it is simply not feasible from an engineering or economic perspective for railroads to meet the AREMA/AASHTO aspirational guidelines at every new and existing grade crossing in the United States.[13] Like the Crossing at issue here, many railroad grade crossings have existed for more than a century, and changes in surrounding topography and urbanization often make it impracticable if not impossible to materially alter grade crossing elevations without impacting other grade crossings, parallel roadways or other adjoining property and infrastructure.

[13] By way of example, the AASHTO Green Book expressly states that the "surface of the highway should also not be more than 75 mm [3 in] higher or lower than the top of nearest rail at a point 9 m [30 ft] from the rail ***unless track superelevation makes a different level appropriate*** . . . Rails that are superelevated, or ***a roadway approach section that is not level***, will necessitate ***a site specific analysis*** for rail clearances. AASHTO, A Policy on Geometric Design of Highways and Streets (6th ed. 2011), Chapter 9, at § 9.12.2 (emphasis added).

Conclusion

CSXT respectfully states that the above requested clarifications and modifications are offered with the intent of assisting the NTSB with its core mission to determine the facts necessary to prevent future accidents. CSXT reiterates that it continues to support the NTSB's efforts to improve communications between CSXT and the surrounding localities and communities where it operates across the United States. CSXT is further fully committed to working with the NTSB to improve grade crossing safety. That said, CSXT requests the NTSB reconsider and correct its Report with respect to the above erroneous findings.

Please let me know if you require additional information from CSXT. We appreciate the work of the NTSB in connection with this matter.

Respectfully submitted,

[redacted]

Brad Spencer

cc: Peter Kotowski, IIC

**CSXT'S NOVEMBER 21, 2018 LETTER RE NTSB/HAR-18/01,
SAFETY RECOMMENDATIONS R-18-14 AND R-18-15 AND
PETITION FOR RECONSIDERATION PURSUANT TO 49 CFR § 845.32**

EXHIBIT A

2015 MDOT Inspection Report

MDOT Railroad Crossing Inspection

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

- Date of Survey: 3/4/2015
- Prepared by: R Hutchins
- Crossing ID: 340185W
- Street name: MAIN ST
- City: Biloxi
- County: Harrison
- District: 6
- Railroad: CSS Transport
- Railroad Milepost: 726.61
- Lat: 30.399127
- Long: -88.885669
- Active or Passive Crossing: Active

- Is this crossing in service? Yes

  If No, is it abandoned?

- Road/Street cross-section widths:

  Crossing Surface: 32 ft.

  Shoulder: 4 ft.

  Median: No ft.

  Sidewalk: 0 ft.

- Distance of nearest rail to nearest intersection within 100' of crossing: 24

- Is the road/street multilane? No

  If so, # of through lanes: No

- Is there a Two Way Left Turn Lane on the road/street? No

- Is there a median? No

  If so, is the median raised?

- Is there a posted speed limit sign? Yes

  If so, what is the posted speed limit?

- Is the road/street paved? Yes

- What is the smallest angle of crossing? 60° - 90°

- Trains per day (avg.):

  Freight: 15

  Passenger: 0

- Max train speed:

  Time Table: 60 mph

  Freight: 50 mph

Passenger: 0 mph

- Are there nighttime train movements through the crossing? Yes

  If so, how many trains? 8

- General Condition of the crossing surface from end of tie to end of tie: Smooth

- Is the length of the crossing surface entirely across the pavement and normal shoulder widths of the road? Yes

- Is the full width of the approach road shoulders brought entirely to the crossing? Yes

- Is the crossing in a horizontal curve? No

- Does the crossing have multiple tracks? No

  If so, are multiple track signs in place?

  How far apart are the tracks C/L to C/L?

- Type of railroad crossing surface: Asphalt

  If multiple surfaces, list types:

- Is the track super-elevated at the crossing? No

- Is the crossing high profile? Yes

  If so, is a W10-5 sign in place? Yes

  How far below the tack elevation is the road elevation a 30' from the nearest rail on each approach? 72 in. / 60 in.

- Is there overhead street lighting within 50' of the crossing? Yes

- Missing street signs that are needed:

- Are the conditions of all the crossing approach signs acceptable? Yes

- Signs that need to be replaced:

- Are the conditions of all the approach pavement markings and stop lines acceptable? No
- List any additional issues with the pavement marking that are not acceptable and need improvement or replacement:

  Needs pavement markings and stop lines

Active Crossing

- Total sets of signal lights facing both road/street approaches: 8
- Are the signal lights clean? Yes
- Are the signal lights LED? Yes
- Are the signal lights cantilevered? No
- Is there a bell? Yes
- Are there gates at the crossing? Yes

  If so, are there 3 lights on each gate? 8
- Are the gate stripes ok? Yes
- Is a signalized road/street intersection within 100' of the signalized crossing? No
- Are the conditions of the crossbucks and signs and the number of signs at the crossing acceptable? Yes

Passive Crossing

- If the time table speed is < 10 mph, is the railroad row cleared from a point on the road C/L a distance of 25' from the C/L of the railroad track to a point on the C/L of the railroad track 100' from the C/L of the road?

- If the time table speed is > 10 mph, is the railroad row cleared from a point on the road C/L a distance of 25' from the C/L of the railroad track to a point on the C/L of the railroad 300' from the C/L of the road?

- Is either a STOP sign or a YIELD sign installed on the crossbucks post or a separate support post? No

- If a separate post is being used to support the STOP or YIELD sign, is a vertical 2" wide retroreflectorized strip on the front of the support post? Yes

- Is a retroreflectorized 2" wide strip on the front and back of each crossbuck support post? No

- Is a retroreflectorized 2" wide strip on the back of each crossbuck sign? Yes

- Is the condition of the crossbucks, the signs and the number of signs at the crossing acceptable? Yes

- RHGCH recommended minimum sight distances:
  Clearing SD: ft.
  Corner SD: ft.

- Quadrant with the minimum Clearing SD:

- Measured minimum Clearing SD: ft.
- Quadrant with the minimum Corner SD:

- Measured minimum Corner SD: ft.

- Additional Comments:

**CSXT'S NOVEMBER 21, 2018 LETTER RE NTSB/HAR-18/01,
SAFETY RECOMMENDATIONS R-18-14 AND R-18-15 AND
PETITION FOR RECONSIDERATION PURSUANT TO 49 CFR § 845.32**

EXHIBIT B

April 2013 Google Maps Street View of Crossing


198 Main St
Biloxi, Mississippi
Google, Inc.
Street View - Apr 2013
Main St
198 Main
Google
Image capture: Apr 2013 © 2018 Google United States Terms Report a problem