Bridge Factors Factual Report Attachment 36 – Email from Mr. Joaquin (Jake) Perez of BPA to Mr. Dan Walsh of NTSB dated August 7, 2018

Miami, FL

HWY18MH009

(3 pages)

Walsh Daniel

Subject: Question on Inspection of Destressing Diagonal Members #2 and #11

From: Jake Perez [redacted]
Sent: Tuesday, August 7, 2018 9:45 AM
To: Walsh Daniel [redacted]
Subject: RE: Question on Inspection of Destressing Diagonal Members #2 and #11

Dan, please see below, we revised the last sentence of the email to include that Jose Morales did not see any increase in length or size of the cracks in Member 11.

Thanks,

Joaquin (Jake) Perez, PE | Principal, Director of Engineering
Bolton Perez & Associates
Consulting Engineers
7205 Corporate Center Drive, Suite 201
Miami, Florida 33126
[redacted]

From: Jake Perez
Sent: Monday, August 06, 2018 5:49 PM
To: 'Walsh Daniel' [redacted]
Subject: RE: Question on Inspection of Destressing Diagonal Members #2 and #11

Dan,

As a follow up to our conversation, below please find additional information and clarifications on the stressing and de-stressing of the bar-tendons in Members 2 and 11.

As shown on the contract plans, the vertical and diagonal members consist of one, two, or four bar-tendons each, depending on the member design.

Members 2 and 11 consist of two bar-tendons each and are designated as A and B on the plans. There is no post-tensioning sequence for stressing each of the bar-tendons in each member. From our stressing records, it is not apparent which of the two bar-tendons were stressed first, only the date of stressing is shown. For Member 11, bar-tendons A and B were both stressed on 1/29/2018 and for Member 2, bar-tendons A and B were stressed on 1/30/2018. All bar-tendons in all members were each stressed in a single step up to 280K.

Similarly, there is no sequence for de-stressing of the bar-tendons A and B in Members 2 and 11 after erection of the truss. The de-stressing or removal of the post-tensioning force occurred in one step for each of the bar-tendons and there is no record of which one of the bar tendons was de-stressed first or last.

The re-stressing of bar-tendons A and B in Member 11 after erection was verbally communicated by the EOR during the meeting on the morning of March 15, 2018. We assume that the EOR and the contractor had exchanged information regarding the re-stressing operations before the meeting since we now know this work was being set up during the

same time the meeting was taking place. The work was part of the Design/Build Team's remedial plan for correcting the cracking occurring at the joint between Members 11 and 12. In addition to the re-stressing work in Member 11, other aspects of the remedial plan was discussed by the EOR during the meeting, including adding additional longitudinal post-tensioning along the bottom of the truss, as well as, attaching steel stiffening elements along the top of the truss. This remedial work was not included in the contract plans and it was requested during the meeting that this remedial work be reviewed and approved for implementation, including peer reviewed, prior to performing the work.

During the meeting we were informed for the first time that preparations for re-stressing of bar-tendons A and B in Member 11 were on-going and that the work would be taking place immediately. Although we requested a written plan for the work, we were only told verbally that the re-stressing would take place incrementally. Each bar-tendon in member 11 would be stressed in 50K increments each, alternating between bar-tendon A and B, until the full 280K force was applied to each bar-tendon. Given that at this time Alex Molina, our post-tensioning inspector was not on site, and that we had just been informed of the post-tensioning operations taking place immediately after the meeting, we dispatched Carlos Chapman to only observe the re-stressing operations on the canopy and report the activities. Jose Morales went on the bridge deck to observe the behavior of the cracks in Member 11 during the re-stress of the bar-tendons and did not observe any increase in length or size of the cracks in Member 11.

Let me know if you have any additional questions or require further clarification.

Thank you,

Joaquin (Jake) Perez, PE | Principal, Director of Engineering

Bolton Perez & Associates
Consulting Engineers

7205 Corporate Center Drive, Suite 201
Miami, Florida 33126

[redacted]