

November 8, 2023

Christopher G. Alonso, P.E.
Senior Engineer
Public Works Department
P.O. Box 839966
San Antonio, TX 78205

PROJ: Market Street over San Antonio River Bridge Rail Replacement
RE: **Traffic Rail Replacement**

Dear Mr. Alonso,

SEA conducted a Bridge Condition Survey for the referenced project in April of 2021. The structure's current bridge rail is not crash tested and has a large section, approximately 4 foot in length, missing due to a vehicle impact. From a safety standpoint, traffic rail for this site serves to redirect errant vehicle traffic and provide drop off protection for pedestrians crossing the bridge. The bridge rail also protects pedestrians using the San Antonio Riverwalk below.

Results of the Bridge Condition Survey determined that the current bridge rail is not a TxDOT rail, is not crash tested, contains numerous deficiencies including spalled, deteriorating concrete along with the large 4 foot missing section. This missing section evidences the current traffic rail's poor performance under vehicular impact. From a safety standpoint for vehicle and pedestrian users, SEA's recommendation was and continues to be full replacement for the bridge rail at this site. Prior precedent has followed TxDOT and AASHTO LRFD Bridge Design Code for COSA projects. AASHTO LRFD Code requires new rail construction to be a crash tested rail for public bridge structures used by vehicle traffic and pedestrians. The TxDOT C411 Rail detailed in the construction plans prepared for this bridge is a combination pedestrian and vehicular traffic rail. This proposed rail is crash test rated for the speeds typically seen in this area and satisfies all pedestrian height and maximum opening code requirements. C411 is intended to be an aesthetically pleasing traffic rail and is visually similar to the rail being replaced.

Please reply with any questions.

Sincere Regards,

Farren S. Basse, P.E. | Senior Project Manager



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