

PROJECT MEMO

To: Justin Lucas, AICP
From: Heidi Carter, P.E.
Date: July 19, 2019
Subject: 518020.00 Linder Road Concept Study Pedestrian Pathway Width

This memo provides the rationale, as well as an alternatives discussion, for the shared pathway width on the proposed conceptual bridge cross section as provided in Figure 13 of the Linder Road Concept Report. Below is a summary of the design guidance published by AASHTO that allows for a 10 foot wide pedestrian/bicycle facility along constrained and environmentally sensitive facilities such as bridge structures over river channels.

The *AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities* states the following:

- *In areas where high pedestrian volumes are expected, it may be appropriate to provide sidewalk widths of 10 to 15 feet or more to accommodate pedestrian flows. (Section 3.2.3 Sidewalk Widths)*
- *Where practical sidewalk widths across bridges and through underpasses should be the same as or wider than the clear width of the existing connection sidewalks. The minimum clear width for curb attached sidewalk on a bridge is 4' with a width of 8' desirable. (Section 3.2.9 Sidewalks for Highway Bridges, Underpasses and Tunnels)*
- *AASHTO's Guide for the Development of Bicycle Facilities provides design guidelines that should be consulted in the design of shared use paths and should include a recommended paved width of 10 feet with 12 feet recommend in areas with higher user volumes. (Section 3.2.14 Off-Road and Shared-Use Paths)*

The *AASHTO Guide for the Development of Bicycle Facilities* states the following:

- *The appropriate paved width for a shared use path is dependent on the context, volume, and mix of users. (Section 5.2.1 Width and Clearance)*
- *The minimum paved width for a two-directional shared use path is 10'. Typically, widths range from 10 to 14 feet, with the wider values applicable to areas with high use and/or a wider variety of user groups. (Section 5.2.1 Width and Clearance)*
- *A path width of 8 feet may be used for a short distance due to a physical constraint such as an environmental feature, bridge abutment, utility structure, fence and such. (Section 5.2.1 Width and Clearance)*

- *The MUTCD requires a minimum 2 ft clearance to post-mounted signs or other traffic control devices. Where “smooth” features such as bicycle railings or fences are introduced with appropriate flaring end treatments, a lesser clearance of 1 ft is acceptable. (Section 5.2.1 Width and Clearance)*
- *The “receiving” clear width on the end of a bridge (from inside of rail or barrier to inside of opposite rail or barrier) should allow 2 feet of clearance on each side of the pathway, as recommended in Section 5.2.1, but under constrained conditions may taper to the pathway width.*

Below are some potential revisions to the conceptual bridge cross section in order to provide additional width across the bridge structures to provide low speed pedestrians and bicyclists shy distance to the vertical barrier without increasing the overall bridge width as defined in the Figure 13 – Conceptual Bridge Cross Section of the Linder Road Concept Report:

- Reduce the shoulder width between the travel lane and the bridge parapet from 6 feet to 4 feet,
- Decrease the turn lane width across the bridge to the extent possible at each individual bridge crossing which would likely provide 1 or 2 additional feet in most cases,
- Decrease the pathway width on one side of the bridge to provide shy distance for the pathway on only one side of the bridge structure, and/or
- Modify bridge parapet (1'-5") to pedestrian combination rail (9").

As the *AASHTO Guide for the Development of Bicycle Facilities* states the width of a shared use path is dependent on the context as defined by the specific project area. The shared use path along the roadway segments of Linder Road provide for a 2 foot shoulder in addition to the paved 10 foot pathway in order to provide a recoverable area prior to any potential grade breaks along the pathway as well as to allow width for the installation of signing and/or railing as necessary. The shared use path along the bridge structures allow for the 10 foot pathway to be continued across these structures to maintain the continuity of the pathway width as well as minimize the impacts to the environmentally sensitive river channels and floodways as well as control the cost of these large structures. Engineering judgement and budgetary constraints both become factors in the design process as long as safety is not compromised. Based on the guidance noted above the 10 foot pathways would meet the guidance as noted for a constrained and environmentally sensitive facility such as these river and irrigation crossings.