

Document 1: Bank Street Canal Bridge Improvements—Alternate Design

Proposals, June 2020

Transportation Committee, September 2, 2020

Prepared by the Office of Councillor Shawn Menard



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BANK STREET CANAL BRIDGE RE-DESIGN

Proposed Improvements

June 2020

*Prepared by the Office of Councillor Shawn Menard
City of Ottawa*

Overview

With the construction planned for the Bank Street Canal Bridge, our office saw this as an appropriate opportunity to address the longstanding safety issues with the bridge. We approached city staff, asking for recommendations to provide added safety measures for pedestrians and bicyclists.

This was not a simple task. Being both a bus and truck route, any re-design of the bridge must accommodate large, heavy vehicles. The bridge is used as part of the Lansdowne transportation plan, allowing buses to queue for RedBlacks games and other large events. Finally, the bridge's heritage status must be considered.

After months of collaboration with city staff, we can now present a proposed design that would provide significant safety improvements while also respecting the unique context and uses of the bridge.

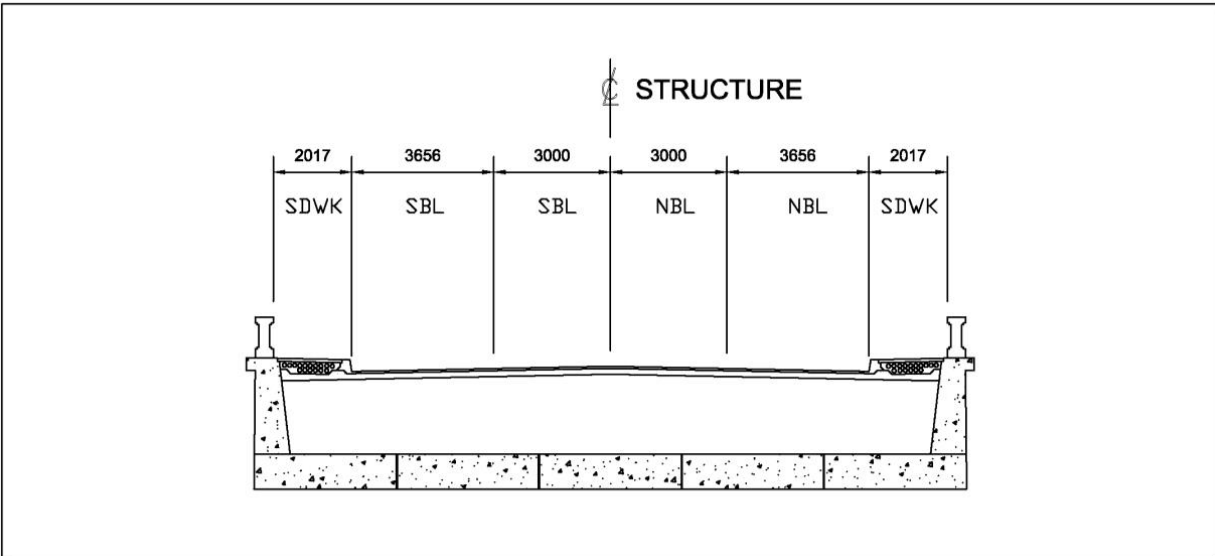
In addition, we are presenting alternative designs that were considered.

Current Design

Current Design

Configuration:

- 1 3.65m NB traffic curb lane (shared by vehicles, buses and bicyclists)
- 1 3.0m NB traffic center lane
- 1 3.65m SB traffic curb lane (shared by vehicles, buses and bicyclists)
- 1 3.0m SB traffic center lane
- 2 2m sidewalks

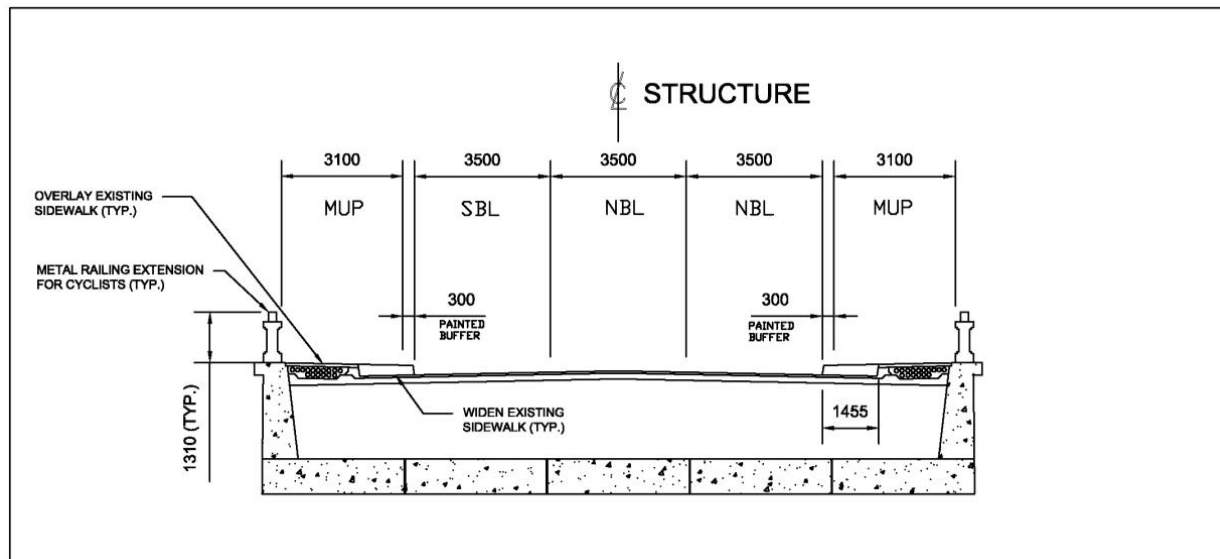


Proposed Design

Proposed Design: 3 Traffic Lanes, 2 MUPs

Configuration:

- 2 3.5m NB traffic lanes
- 1 3.5m SB traffic lane
- 2 3.1m wide MUP's



Our office inquired about the possibility of having a centre lane that changes direction based on rush hour traffic. Unfortunately, the pitch of the bridge blocks sightlines, thus proving too dangerous for an alternating-direction lane.

Advantages

- Provides improved bicycling and pedestrian facilities on both sides of bridge
- Bicyclists are segregated from motor vehicle traffic
- Winter-maintained
- Provides a third motor vehicle lane to be used for bus queuing in accordance with the Lansdowne transportation plan

Disadvantages

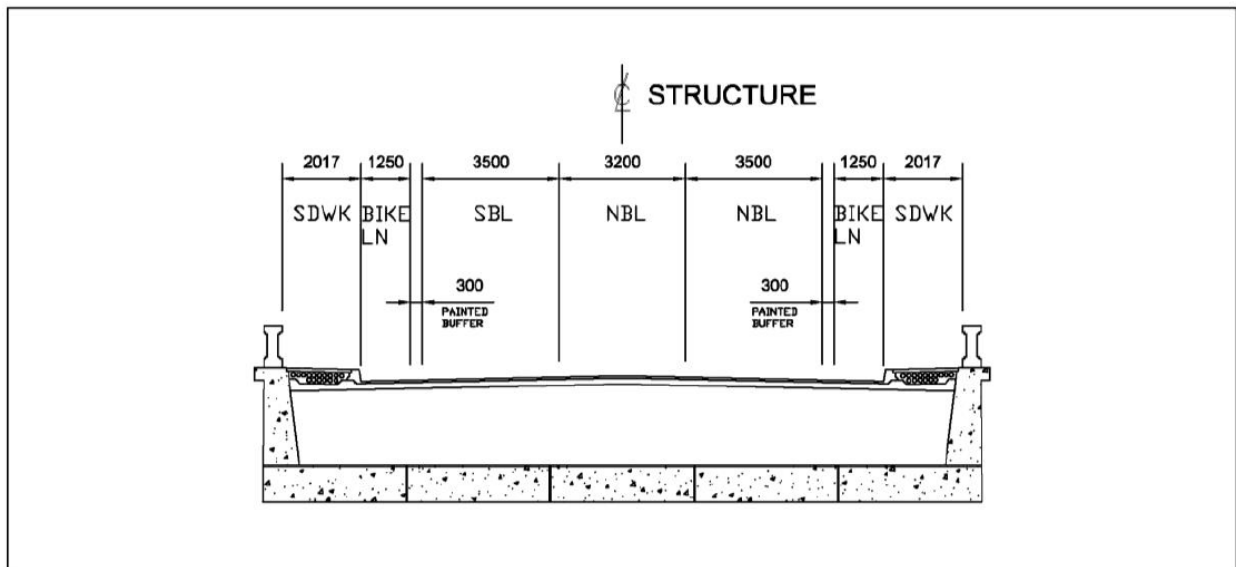
- Does not provide separate facilities for pedestrians and bicyclists

Alternative Designs

Alternate Design #1: 3 Traffic Lanes, 2 Bicycling Lanes (Wider Traffic Lanes)

Configuration

- 1 3.5m NB traffic lane
- 1 3.2m NB traffic lane
- 1 3.5m SB traffic lane
- 2 1.25m bicycling lanes
- 2 2m sidewalks



Advantages

- Separated facilities for all road users
- Provides a third motor vehicle lane to be used for bus queuing in accordance with the Lansdowne transportation plan

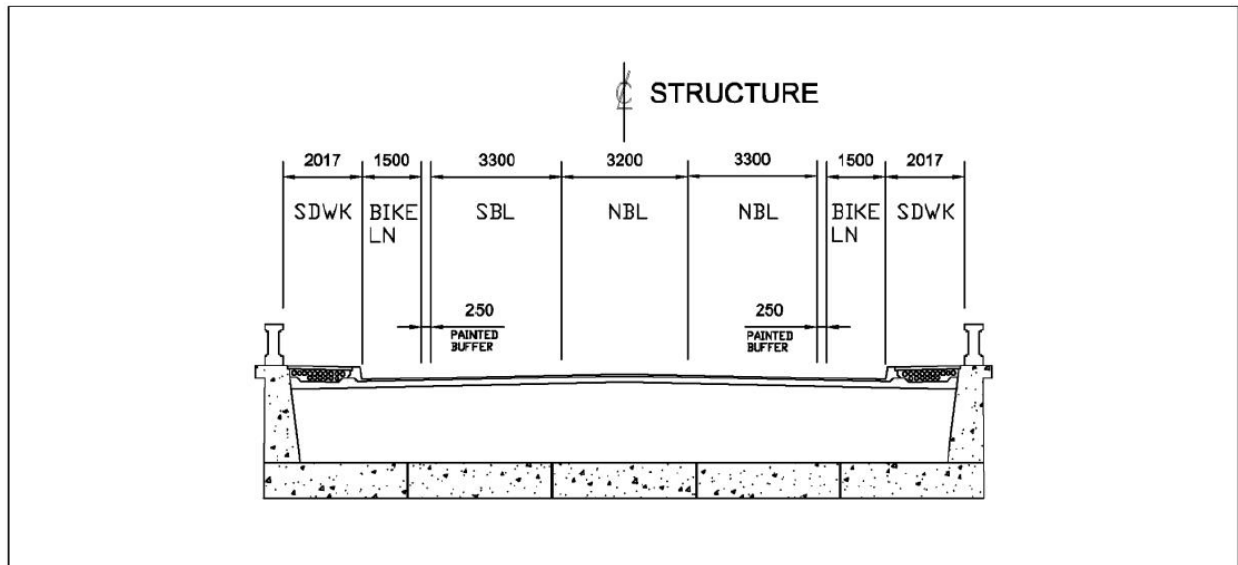
Disadvantages

- Reduced lane widths (3.3m is minimum width for OC Transpo busses)
- No increase in sidewalk widths
- Insufficient bicycle lane widths (minimum 1.8m)
- 0.25m buffer zone is less than standard 0.3m
- Bicycle lanes at street level
- Bicycle lanes not protected
- Bicycle lanes cannot be winter-maintained unless widened

Alternate Design #2: 3 Traffic Lanes, 2 Cycling Lanes (Narrower Traffic Lanes)

Configuration:

- 1 3.3m NB traffic lane
- 1 3.2m NB traffic lane
- 1 3.3m SB traffic lane
- 2 1.5m bicycle lanes
- 2 2m sidewalks



Advantages

- Separate facilities for all road users
- Provides a third motor vehicle lane to be used for bus queuing in accordance with the Lansdowne transportation plan

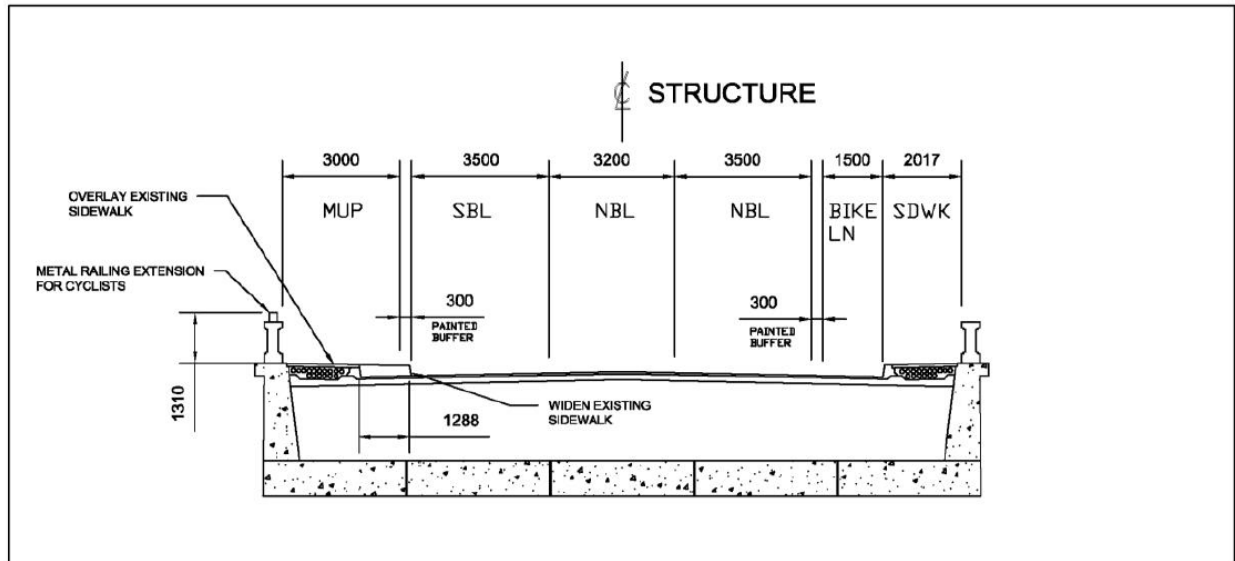
Disadvantages

- Reduced lane widths (3.3m is minimum width for OC Transpo busses)
- No increase in sidewalk widths
- Insufficient bicycle lane widths (minimum 1.8m)
- 0.25m buffer zone is less than standard 0.3m
- Bicycle lanes at street level
- Bicycle lanes not protected
- Bicycle lanes cannot be winter-maintained unless widened

Alternate Design #3: 3 Traffic Lanes, MUP (West) and Bicycle Lane (East)

Configuration:

- 1 3.5m NB traffic lane
- 1 3.2m NB traffic lane
- 1 3.5m SB traffic lane
- 1 3m MUP (west)
- 1 1.5m bicycle lane (east)
- 1 2m sidewalk (east)



Advantages

- Provides cyclist and pedestrian facilities on both sides of bridge (winter excluded)

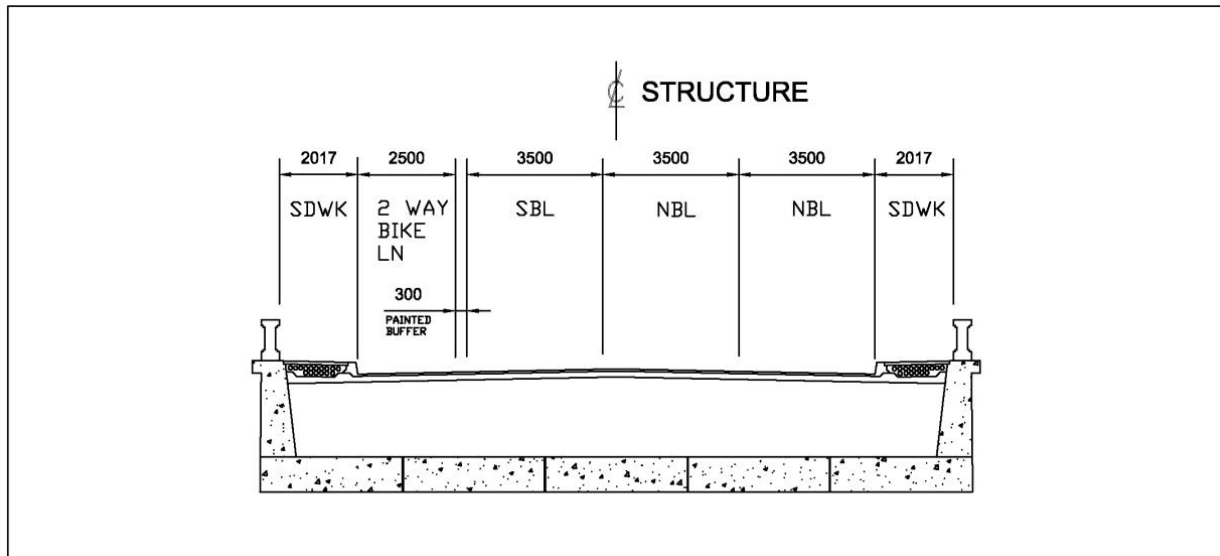
Disadvantages

- Does not provide separated facilities for all road users
- No increase in sidewalk width on east side
- Insufficient bicycle lane width on east side (minimum 1.8m)
- Bicycle lane at street level
- Bicycle lane not protected
- Bicycle lane cannot be winter-maintained unless widened
- Bicycles would travel in both directions on MUP in winter
- No NB connection to MUP for bicyclists

Alternate Design #4: 3 Traffic Lanes, 1 Bi-Directional Bicycle Lane (West)

Configuration:

- 2-3.5m NB traffic lanes
- 1-3.5m SB traffic lane
- 1-2.5m bi-directional bicycle lane (west)
- 2-2m sidewalks



Advantages

- Separated facilities for all road users
- Provides a third motor vehicle lane to be used for bus queuing in accordance with the Lansdowne transportation plan

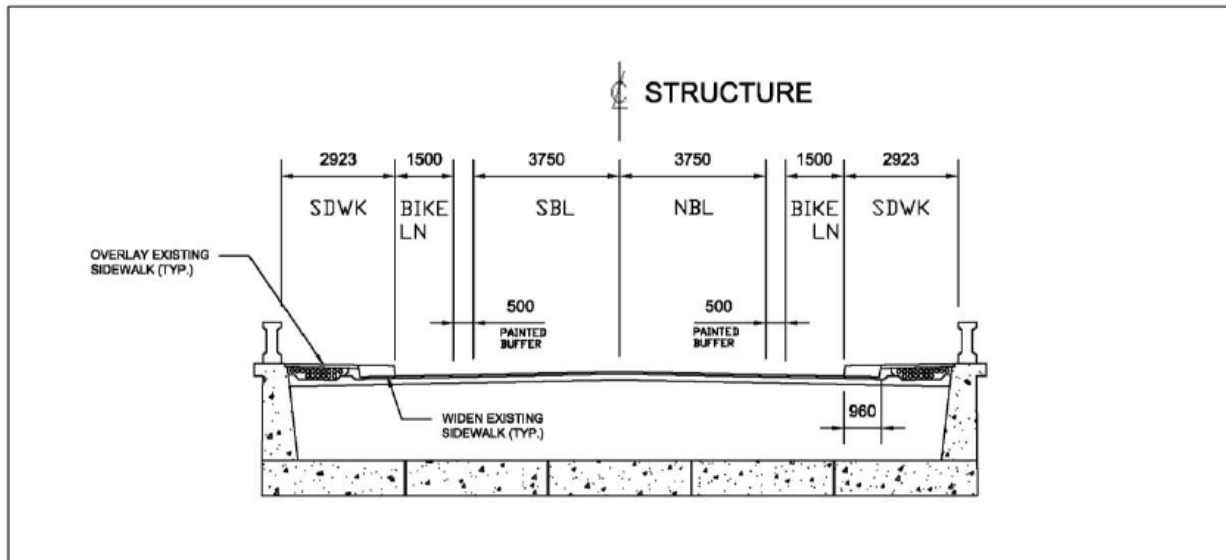
Disadvantages

- 2.5m is too narrow for a bi-directional bicycle lane (3m required with a 0.5m buffer)
- No increase in sidewalk widths
- Cycling lanes on one side of bridge only, resulting in reduced connectivity with surrounding cycling facilities
- No NB connectivity between roadway and bi-directional bicycle lane
- Proposed bicycling facilities are not currently part of the winter cycling network

Alternate Design #5: 2 Traffic Lanes, 2 Cycling Lanes, Widened Sidewalks

Configuration:

- 1 3.75m NB traffic lane
- 1 3.75m SB traffic lane
- 2 1.5m bicycle lanes
- 2 2.9m sidewalks



Advantages

- Separated facilities for all road users
- Wider sidewalks
- 0.5m buffer between bicycle lane and motor vehicle lane

Disadvantages

- Issues with NB traffic turning onto Wilton Cres.
- Insufficient bicycle lane widths (minimum 1.8m)
- Bicycle lanes at street level
- Bicycle lanes not protected
- Bicycle lanes are not currently part of the winter cycling network
- Bicycle lanes cannot be winter-maintained unless widened
- Does not provide a third motor vehicle lane to be used for bus queuing in accordance with the Lansdowne transportation plan