



Wellington Road 109 Bridges

From Highway 6 to Sideroad 7
Township of North Wellington

Replacement Design Summary

January 14, 2025

Project Limits



MCEA Study Completion

- ▶ In 2020, a Schedule C Municipal Class Environmental Assessment (EA) Study was initiated to identify and evaluate solutions. The study considered construction staging and traffic delays when improvements are happening; potential impacts on local residences and business activity; and protection of cultural heritage, Indigenous values, and the natural environment.
- ▶ In April of 2024, the County posted the Schedule C, Municipal Class Environmental Assessment for the 4 Structures east of Hwy 6 on Wellington Road 109.
 - ▶ <https://www.wellington.ca/programmes-services/roads-construction/environmental-assessments/wellington-road-109-bridges>



Existing Bridges



- ▶ The four WR109 structures are in **poor condition with major elements in an advanced state of deterioration.**

Proposed Improvements

Structure Number	Structure Type (Ex.)	Location	Existing Clear Span (m)	Proposed Clear Span (m)	Existing Width (m)	Proposed Width (m)
B109132	Rigid Frame	0.2 km east of Highway 6	17.1	21.5 (↑26%)	11.6	16.95 (↑46%)
C109123	Concrete Barrel Arch	0.7 km east of Highway 6	13.7	25.5 (↑86%)	11.5	16.95 (↑47%)
B109133	Rigid Frame	1.7 km east of Highway 6	13.7	17.5 (↑28%)	11.5	13.6 (↑18%)
B109134	Rigid Frame	1 km east of Wellington Road 45	12.2	17.5 (↑43%)	11.5	13.6 (↑18%)

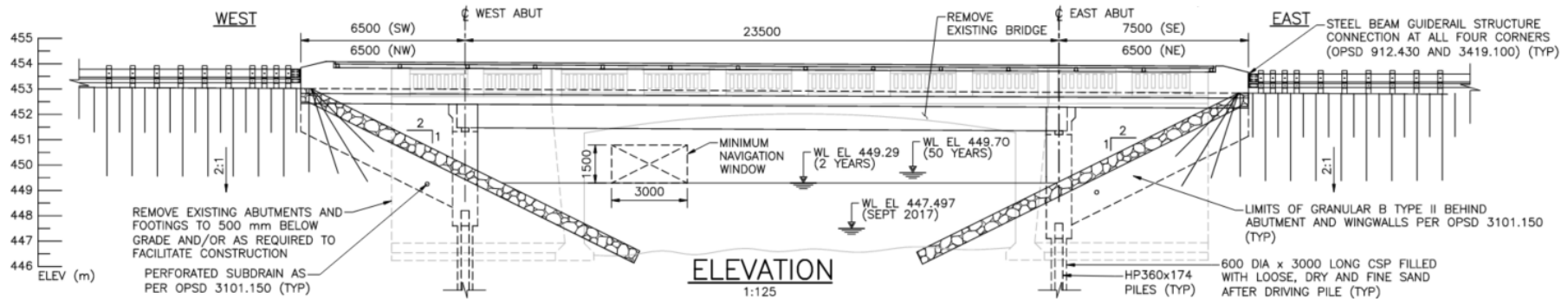
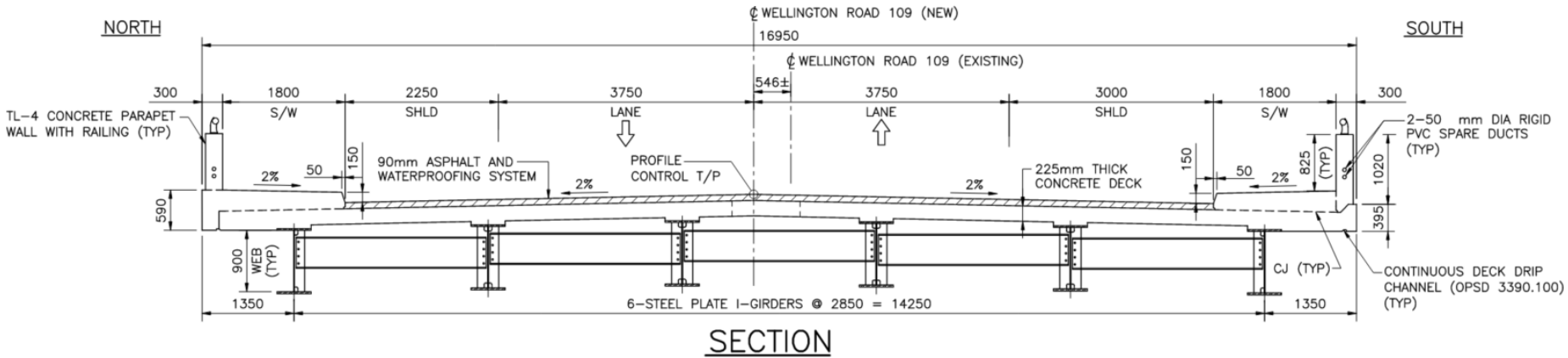
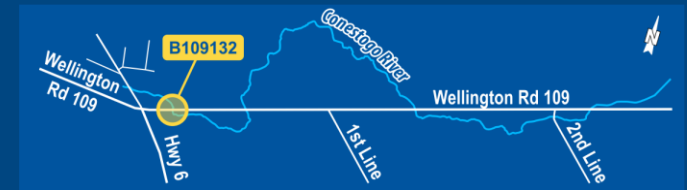


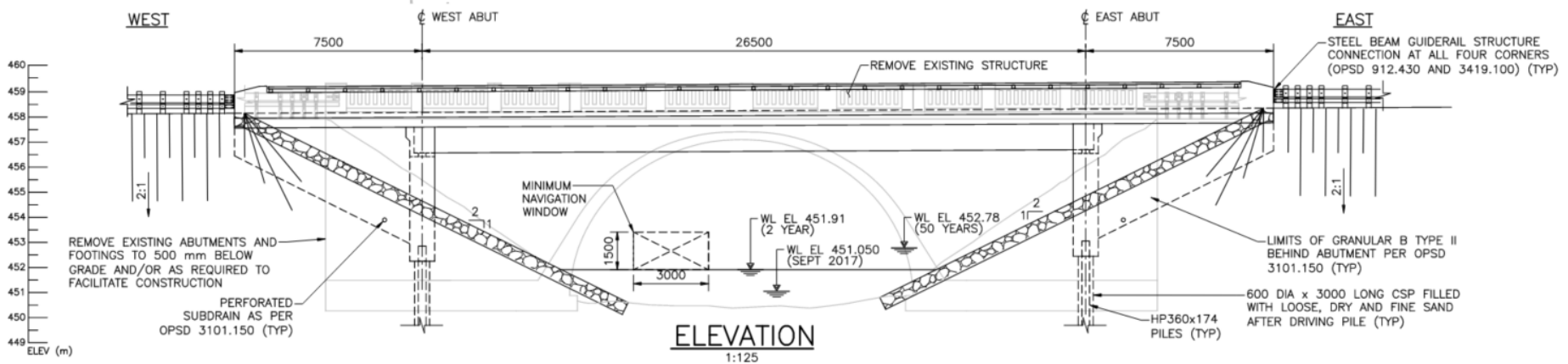
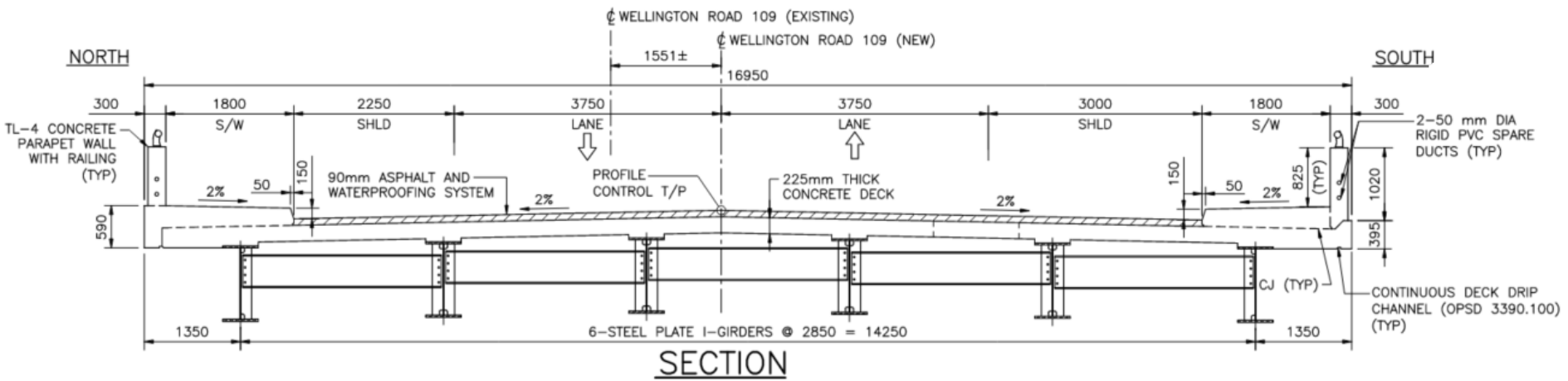
Looking west over C109123

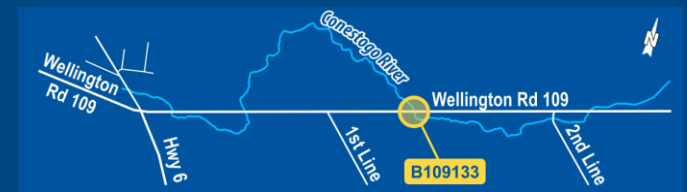


Looking east over B109134





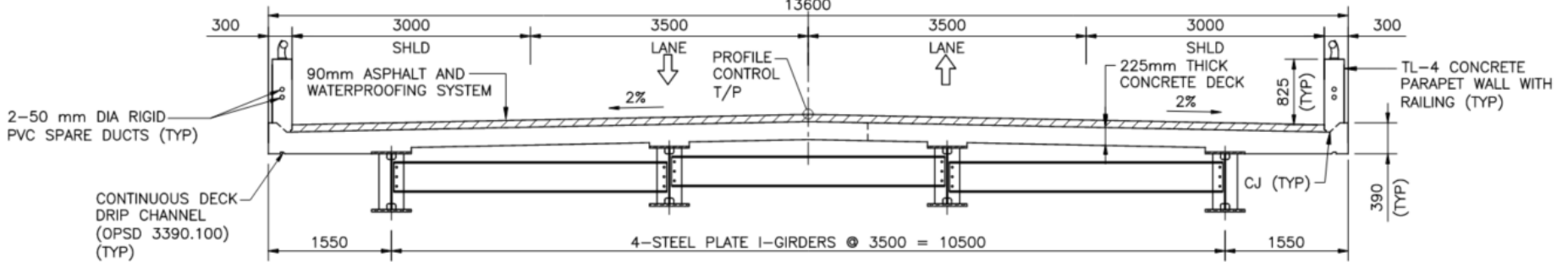




NORTH

SOUTH

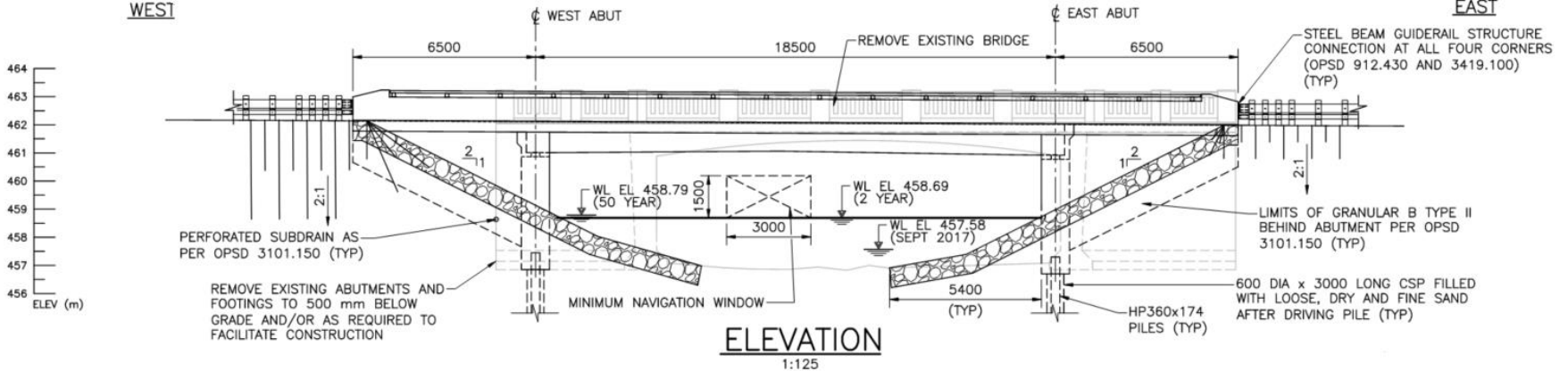
WELLINGTON ROAD 109



SECTION

WEST

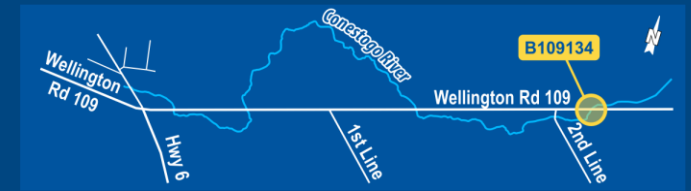
EAST



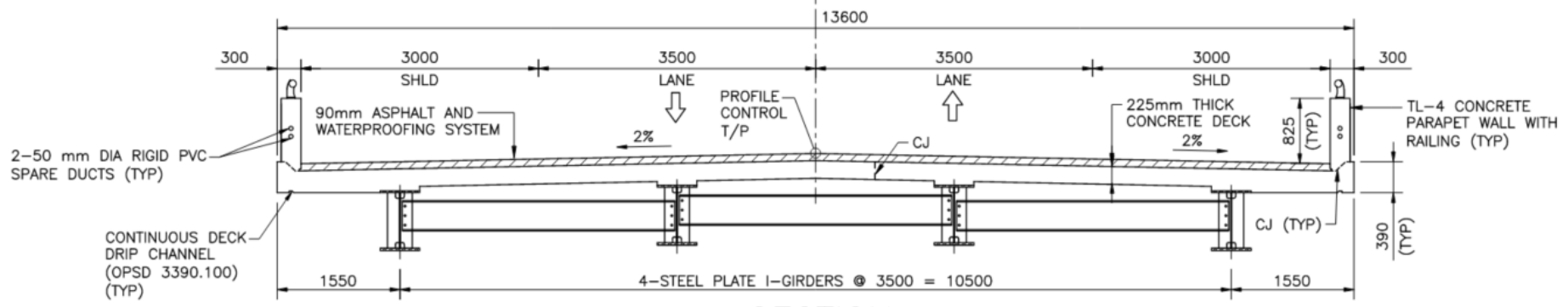
ELEVATION

1:125

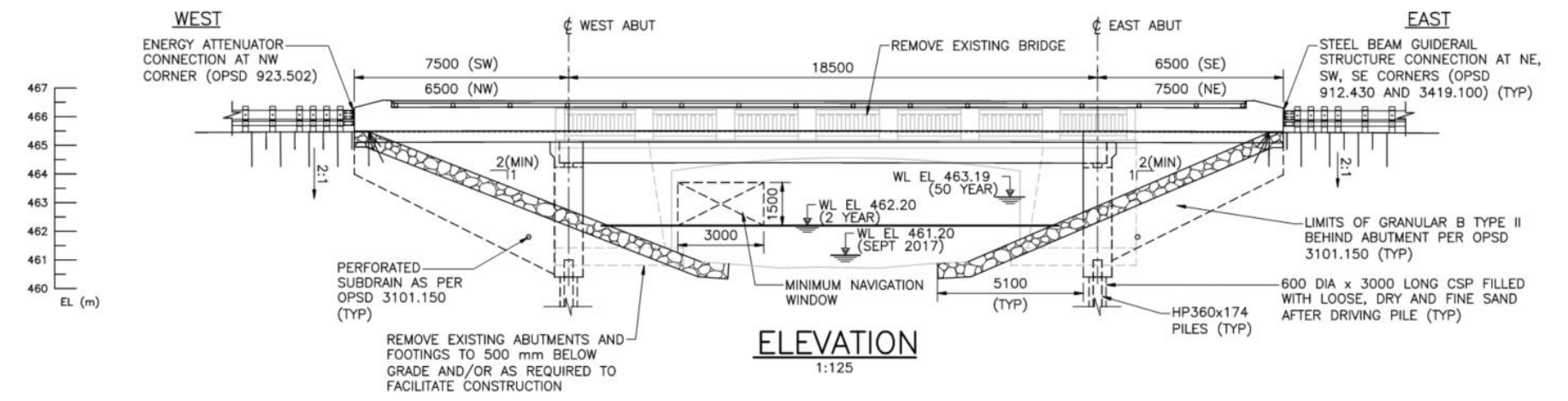




NORTH WELLINGTON ROAD 109 SOUTH



SECTION



ELEVATION
1:125



Construction Methods

Traditional Staging



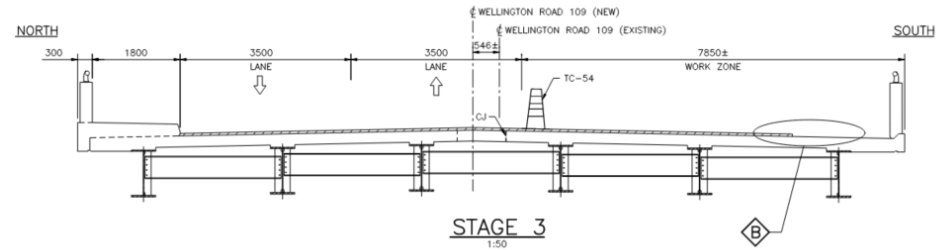
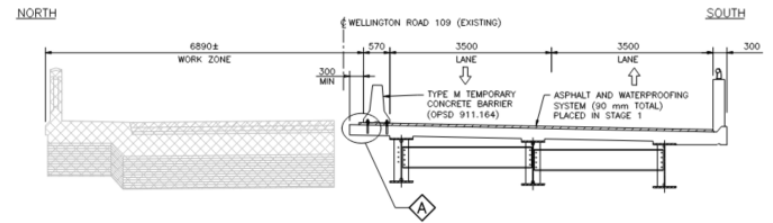
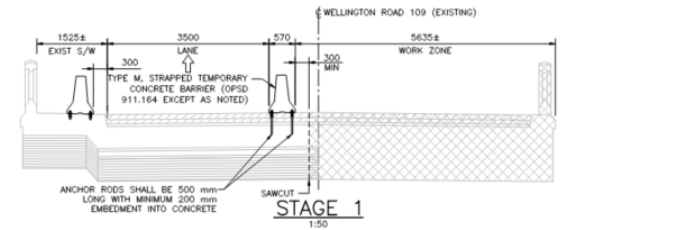
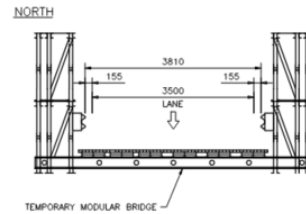
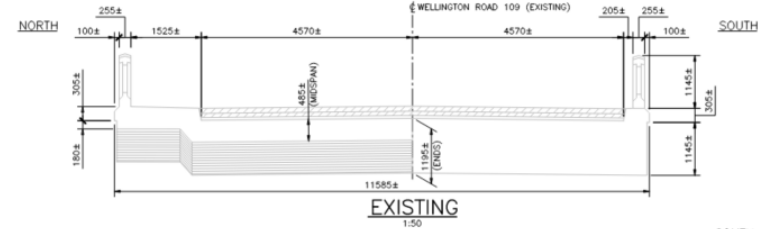
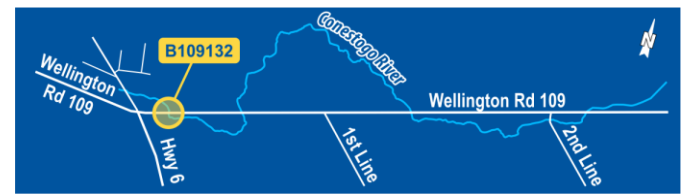
Traffic is maintained adjacent to work zone, and then gets flipped to complete the other half.

Temporary Bridge

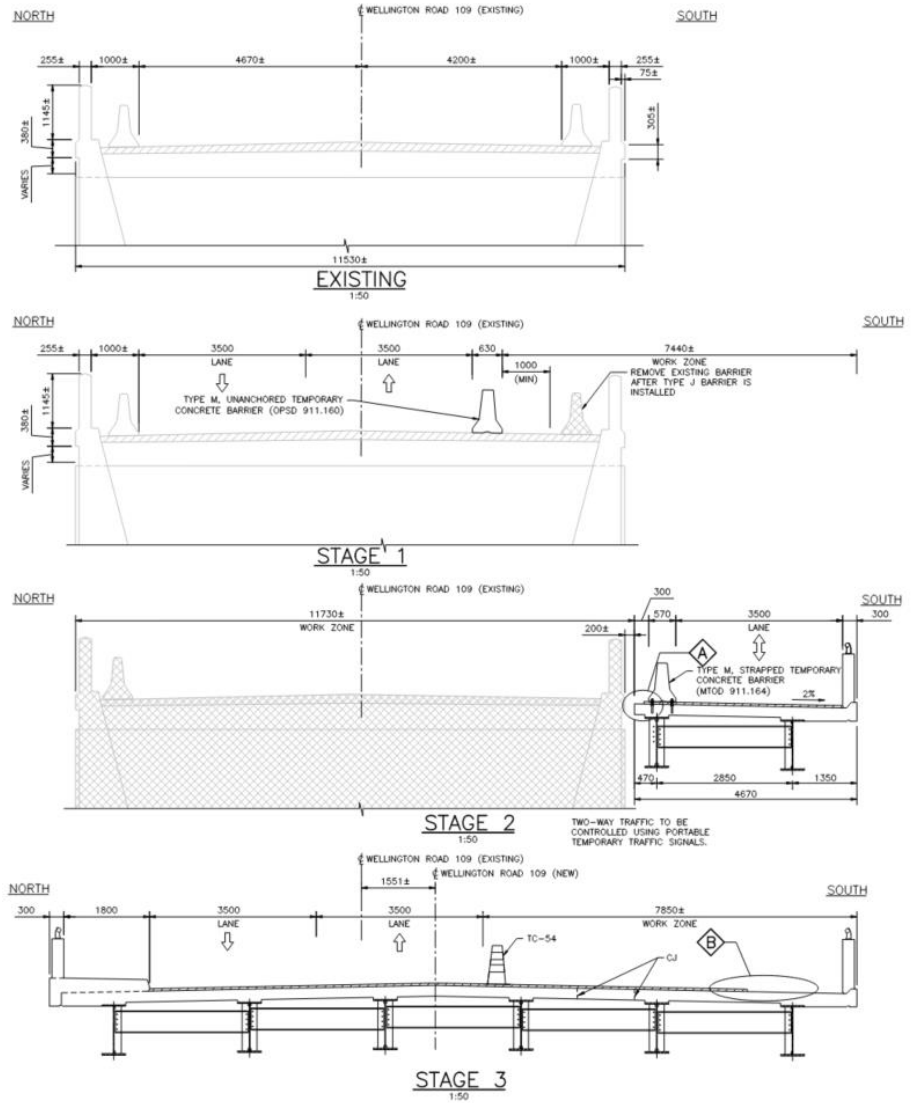
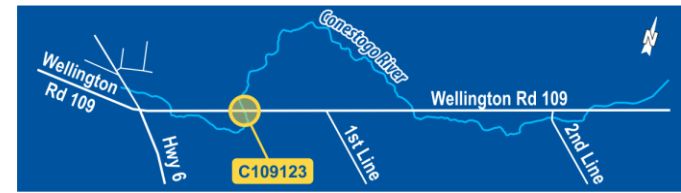


A temporary structure installed adjacent to the existing structure site to carry traffic during in-place replacement of the structure.

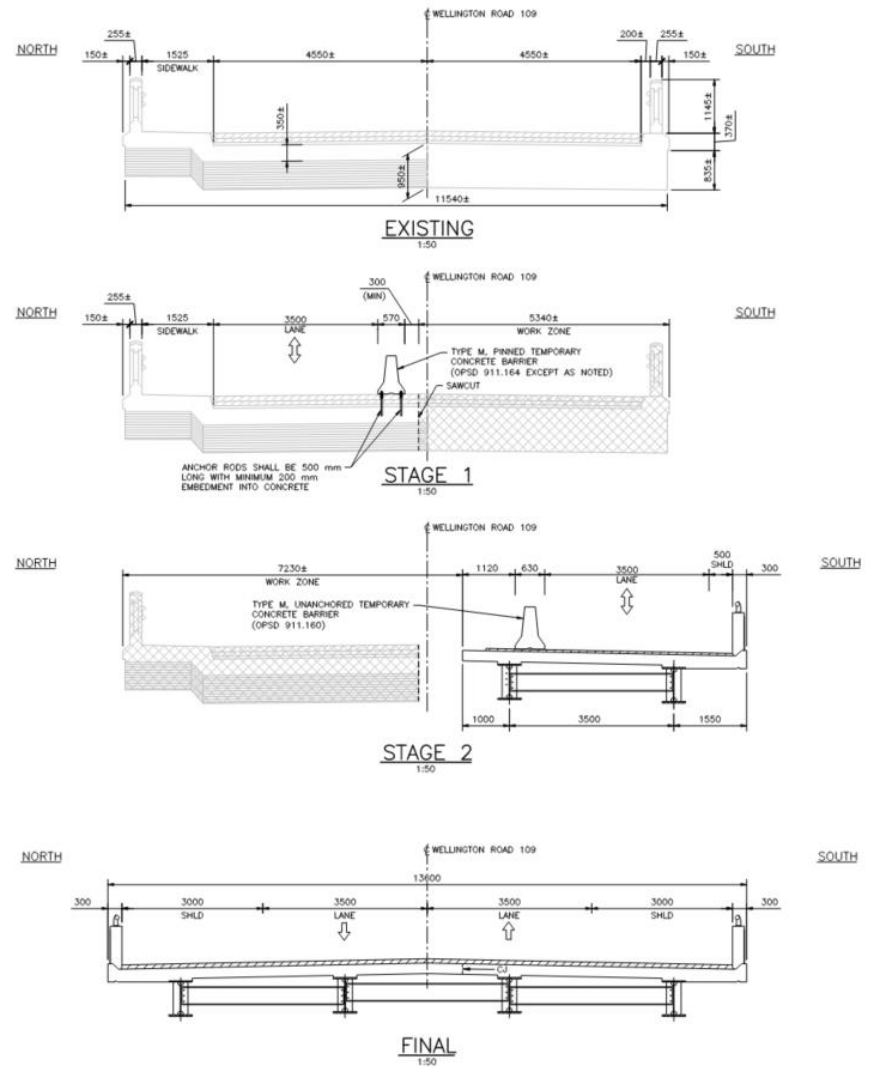
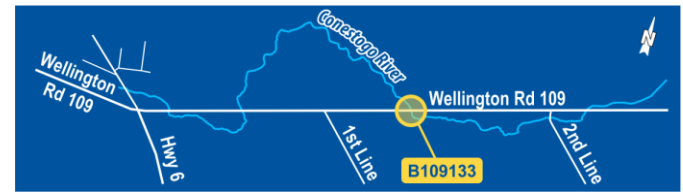
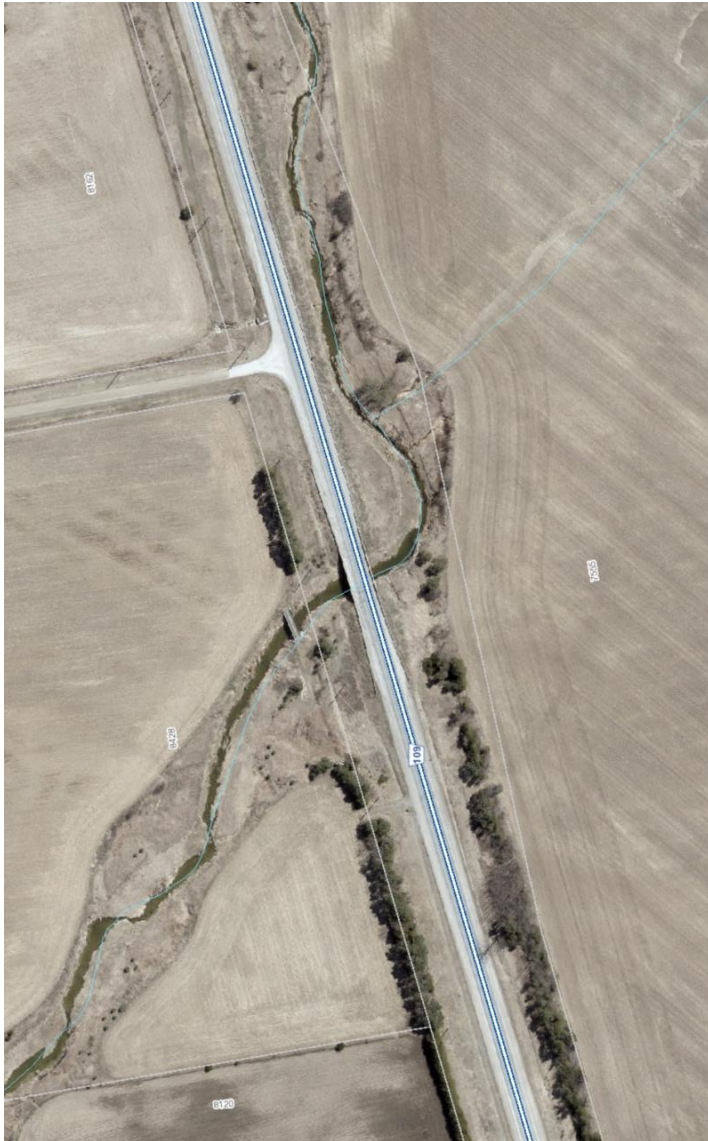
B109132 – Temporary Bridge



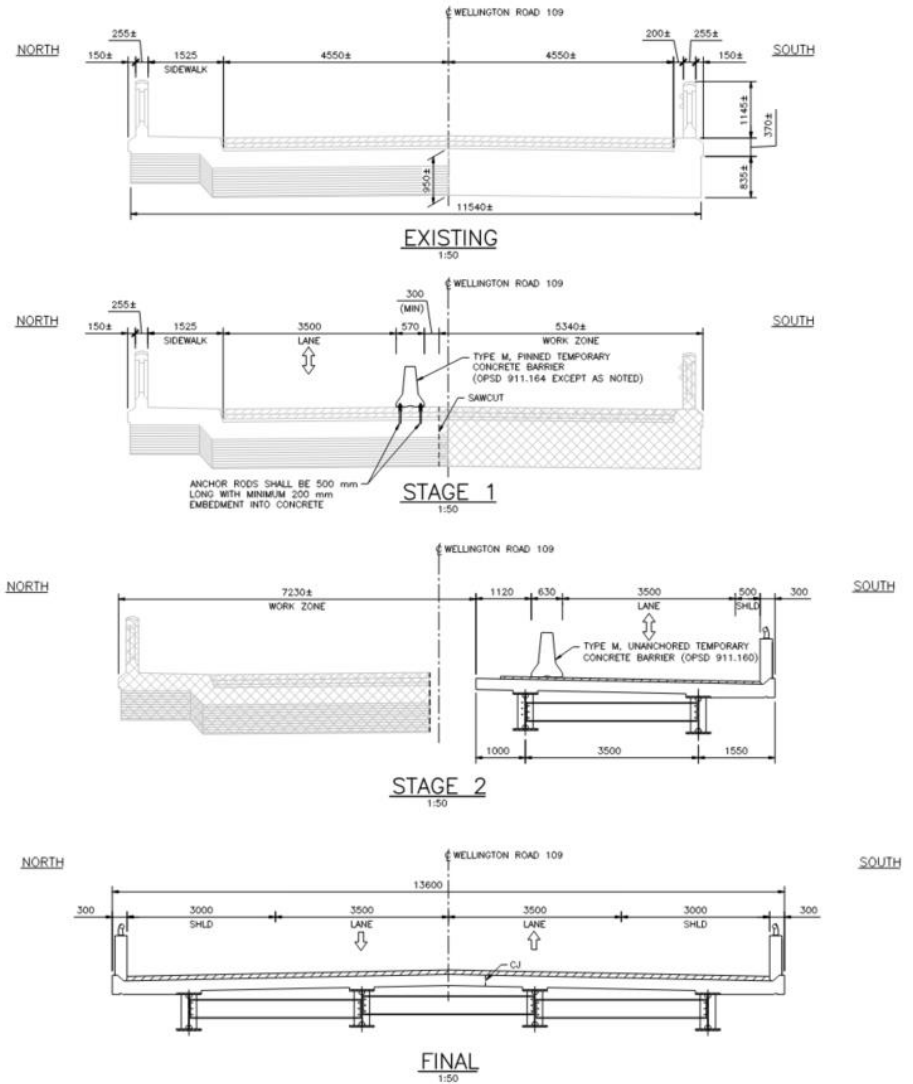
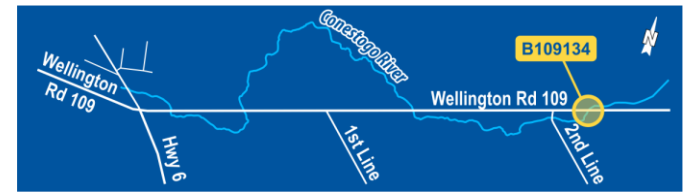
C109123 – Hybrid



B109133 – Traditional Staging

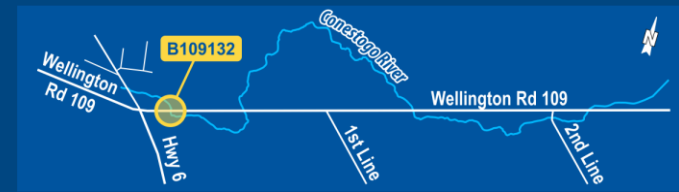


B109134 – Traditional Staging



Traffic Management

B109132



Structure B109132

- ▶ B109132 is located in close proximity to the Highway 6 intersection therefore, two-way traffic must be maintained for the duration of the work to ensure potential impacts to intersection operations are minimized.
- ▶ A temporary modular bridge will be used to facilitate this work.

Posted speed limits will be reduced through and adjacent to construction zones.

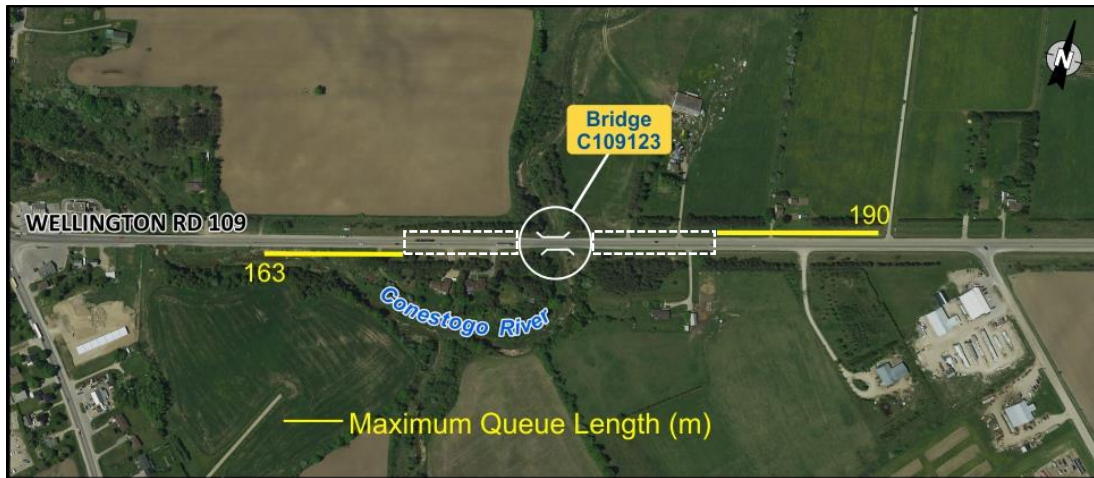


Traffic Management

C109123



- ▶ **1st stage:** the traffic will be maintained on the existing bridge while a portion of the new bridge is constructed adjacent. **2nd stage:** two-way traffic will be staged on a single lane and controlled by temporary traffic signals.
- ▶ This illustration depicts the maximum traffic lengths that could be expected during construction.



- ▶ The eastbound and westbound maximum queues are not expected to extend to the upstream roadways but may impact a farm entrance and several driveways.

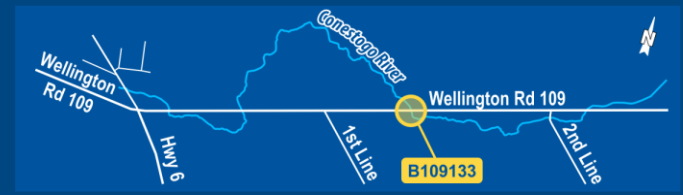
Access to properties will be maintained throughout construction.

Direction	Peak Hour Volumes (4:45 to 5:45 pm)	Truck Percentages	
		Medium	Heavy
Eastbound	316 vehicles	5%	9%
Westbound	355 vehicles	9%	7%

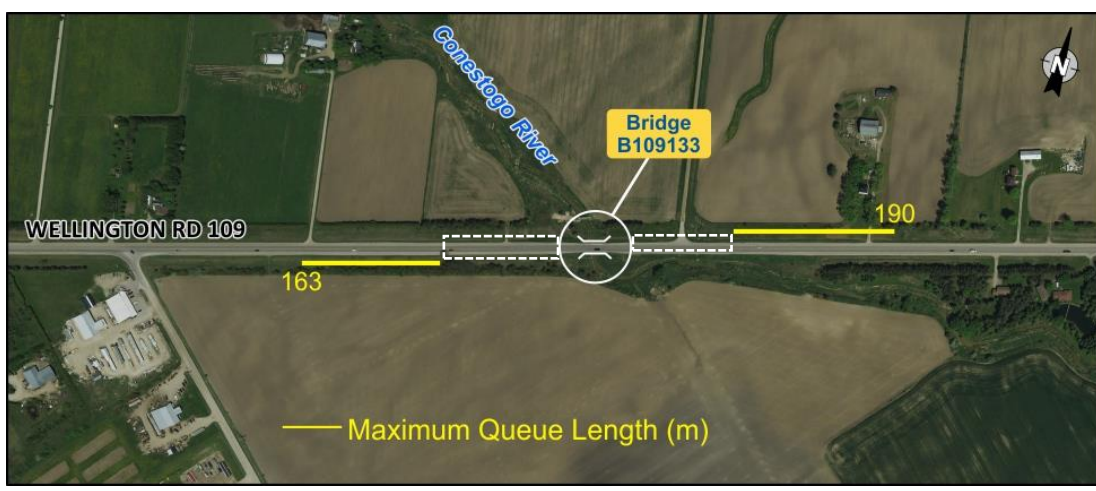


Traffic Management

B109133



- ▶ Two-way traffic will be staged on a single lane and controlled by temporary traffic signals.
- ▶ This illustration depicts the maximum traffic lengths that could be expected during construction.



- ▶ Based on the analysis, it is expected that eastbound and westbound traffic will operate with an average delay of approximately one minute.

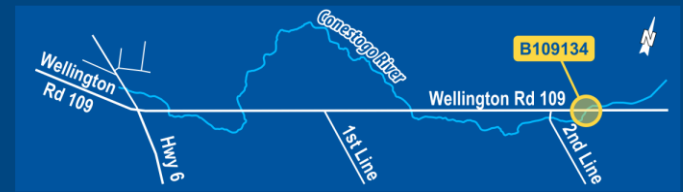
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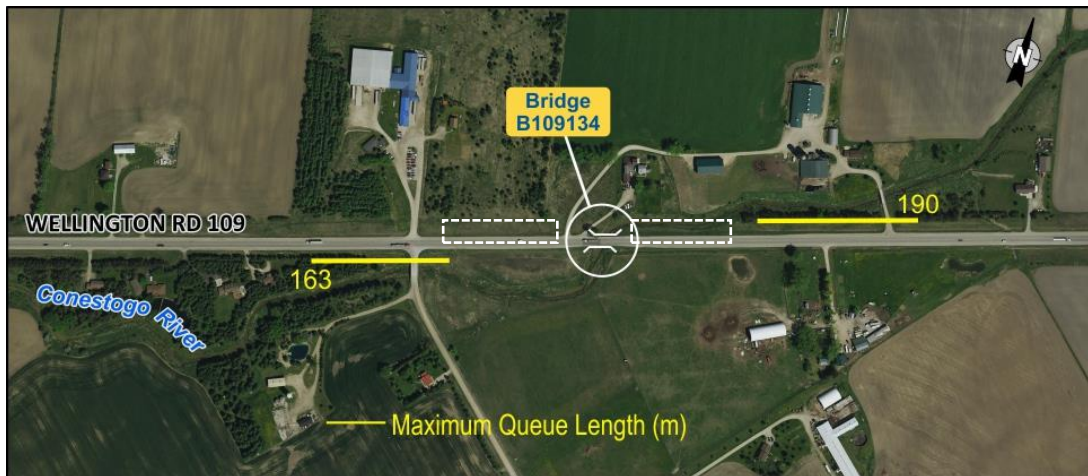


Traffic Management

B109134



- ▶ Two-way traffic will be staged on a single lane and controlled by temporary traffic signals.
- ▶ This illustration depicts the maximum traffic lengths that could be expected during construction.



- ▶ Based on the analysis, it is expected that eastbound and westbound traffic will operate with an average delay of approximately one minute.

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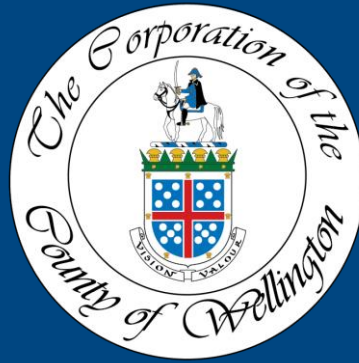


Structure Cost Estimates



The current cost estimates:

Structure Number	Capital Cost	Construction Management /Contingency	Subtotal
B109132	\$5.5 Million	\$0.6 Million	\$6.1 Million
C109123	\$5.5 Million	\$0.6 Million	\$6.1 Million
B109133	\$4.5 Million	\$0.5 Million	\$5.0 Million
B109134	\$4.5 Million	\$0.5 Million	\$5.0 Million



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Alternate formats available upon request