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Background

- WSP was hired to complete an intersection review of Gunningsville Boulevard with Coverdale Road/Hillsborough Road intersection.
- North approach of the intersection (Gunningsville Bridge) serves as one of two links across the Petitcodiac River to Moncton and Dieppe.
- The intersection experiences long delays and queues that approach or exceed capacity.
- The Town is planning modifications to the intersection to improve the operations and accommodate future growth in the network.



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Study Objectives

- ✓ Reviewed existing traffic conditions at the intersection and identified major operational issues.
- ✓ Projected design hourly traffic volumes based on anticipated growth in the area and identified major operational issues.
- ✓ Identified intersection modification options to improve the intersection.
- ✓ Developed conceptual design drawings and high-level cost estimates for each option.
- ✓ Predicted changes to traffic patterns that will occur with the planned construction of Bridgedale Boulevard



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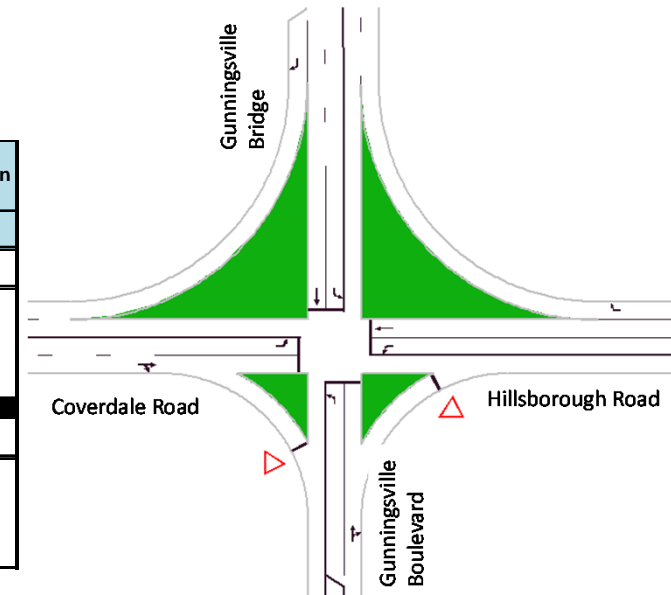
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Existing Operations

LOS Criteria	Control Delay (sec/veh), v/c Ratio, and 95 th %ile Queue (m) by Intersection Movement										Overall Intersection	
	EB-L	EB-TR	WB-L	WB-T	WB-R	NB-L	NB-TR	SB-L	SB-T	SB-R	Delay	LOS
AM Peak Hour (Page C-1)												
Delay	81.7	17.2	47.3	77.3	1.5	40.6	87.6	71.3	29.5	0.2	45.4	D
LOS	F	B	D	E	A	D	F	E	C	A		
v/c	1.03	0.21	0.22	0.89	0.57	0.02	0.97	0.89	0.12	0.15		
Queue	234.6	44.7	24.8	147.4	0.0	4.7	191.3	88.5	28.0	0.0		
PM Peak Hour (Page C-2)												
Delay	84.2	47.6	32.0	72.5	0.3	22.6	62.9	70.2	21.7	0.9	42.7	D
LOS	F	D	C	E	A	C	E	E	C	A		
v/c	1.01	0.7	0.27	0.82	0.18	0.02	0.74	1.02	0.38	0.43		
Queue	146.3	149.1	20.1	121.9	0.0	2.7	74.5	252.9	88.9	0.0		



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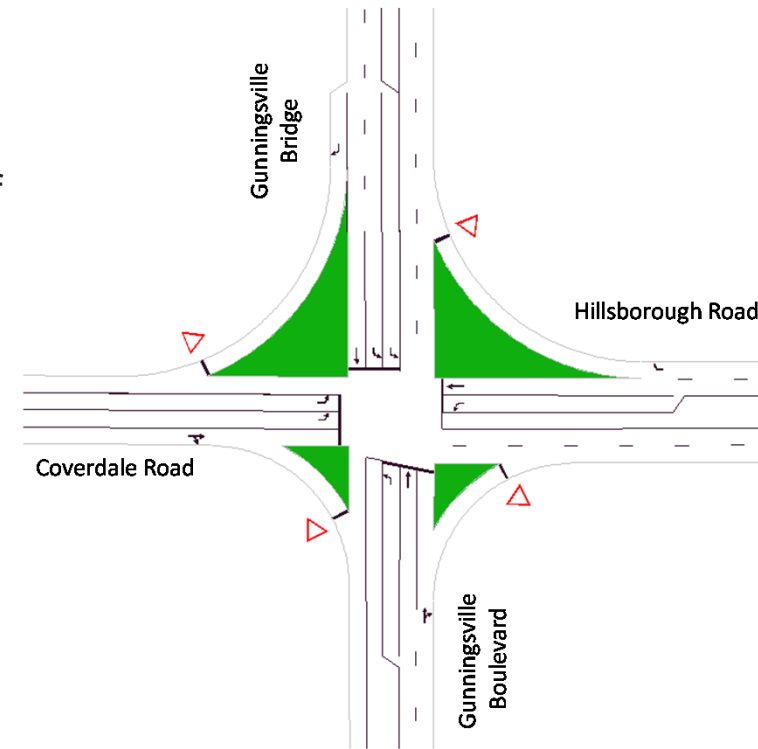
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Improvements to Signalized Intersection

- Improvements required:
 - Install a second left turn lane for the EB (Coverdale Road) approach;
 - Install a second receiving lane north of the intersection (to the bridge);
 - Remove right-turn receiving lane west of the intersection and convert right turn movements from the bridge to Coverdale Road to yield control;
 - Install a second NB through lane and convert the right turn movement from Hillsborough Road to the bridge to yield control;
 - Install a second left turn lane for the SB approach;
 - Install a second receiving lane east of the intersection (Hillsborough Road); and,
 - Modify the signal timings to accommodate the new configuration.



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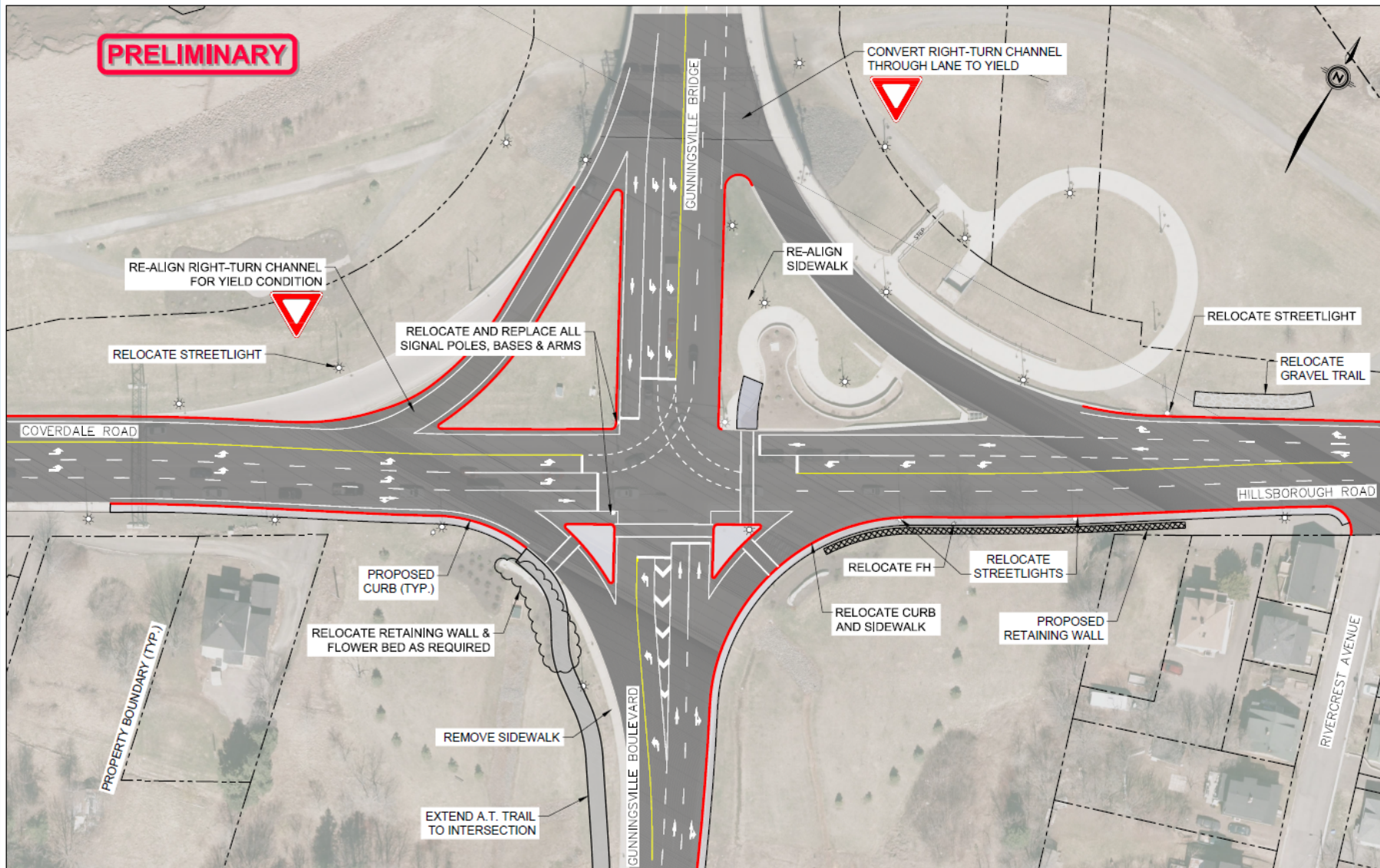
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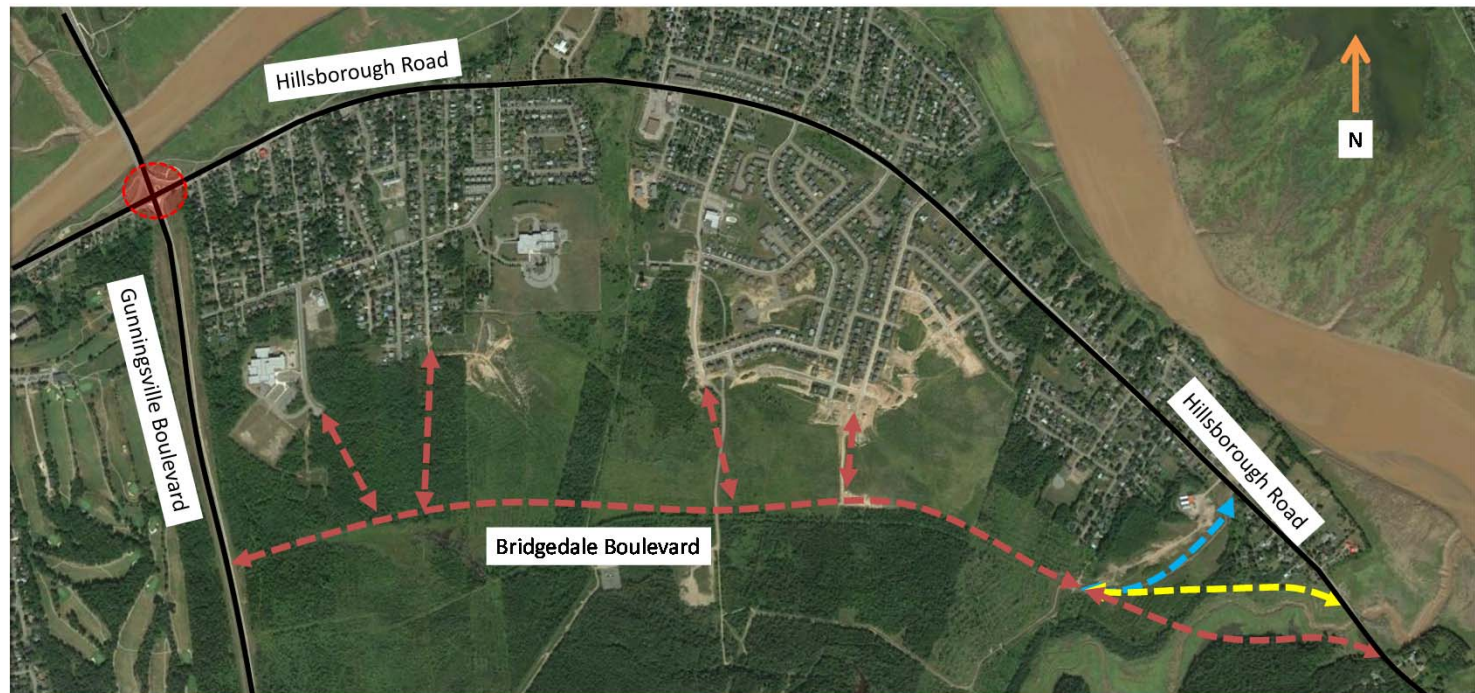
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Consideration of Future Bridgedale Boulevard

- A new east-west roadway to alleviate the traffic on Hillsborough Road.
- Traffic will be redistributed and access the bridge via Bridgedale Boulevard.
- Potential alignments and connections are shown in red.
- Potential connections to Hillsborough are shown in yellow and blue.



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- The existing intersection experiences large delays and long queues.
- Two options were considered:
 - *Option 1: Improvements to Signalized Intersection*
 - *Option 2: Multi-lane Roundabout*
- Projected design volumes used in the Level of Service analysis shows operational improvements at the intersection.
- The addition of the Bridgedale Boulevard connection will improve the operations at the intersection, due to the traffic pattern changes to currently lower volume movements.
- Design currently underway with planned construction in 2018.



Thank you!

