City of Richmond

Report to Committee

To:	Public Works and Transportation Committee	**Date:**	September 22, 2026
From:	Roeland Zwaag General Manager, Engineering and Public Works	**File:**	10-6500-01/2025-Vol 01
Re:	**Top 20 Collision-Prone Intersections Update 2026**		

Staff Recommendation

That the report titled "Top 20 Collision-Prone Intersections Update 2026", from the General Manager, Engineering and Public Works, dated September 22, 2026, be received for information.

Executive Summary

This report provides an update on the status of improvements to the City's Top 20 Collision-Prone Intersections in response to questions raised at the May 20, 2026, Public Works and Transportation Committee meeting.

Since 2019, intersection safety improvements have been implemented based on results of road safety reviews and warrant studies for new traffic signal installations. Minor improvements to all of the Top 20 Collision-Prone Intersections, major geometric improvements to 10 intersections and installation of new traffic signals at 24 intersections have been completed over the past seven years. Construction at an additional 10 intersections is ongoing or upcoming over the next two years.

Staff Report

Origin

At the May 20, 2026, Public Works and Transportation Committee meeting, The Committee requested an update on the status of the Top 20 Collision-Prone Intersections program and other upcoming intersection improvement projects within the City.

This report provides information on how intersections are selected for safety improvements, provides a status update on Council-approved improvements and an overview of potential future projects.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

> *Community safety and preparedness through effective planning, strategic partnerships and proactive programs.*

Analysis

Origin of Intersection Improvement Projects

Intersections recommended for road safety improvements are identified through a combination of road safety reviews and warrant studies for traffic signal implementation. Intersection improvements are also delivered through development.

2019 Review of Collision-Prone Intersections

In 2019, the City completed a road safety review using collision data from ICBC to identify the Top 20 Collision-Prone Intersections based on:

- The observed collision rate;
- The collision severity index, which is a measure of how severe collisions are and whether they resulted in injuries or fatalities; and
- The number of collisions involving vulnerable road users such as cyclists and pedestrians.

Through this assessment, the Top 20 Collision-Prone Intersections within the City were identified. These intersections are outlined in Attachment 1.

Short-term improvements, such as improved signage, pavement markings and minor traffic signal modifications were implemented at each of the Top 20 Collision-Prone Intersections as part of the 2020 Capital Budget.

Additional assessments were conducted on the Top 20 Collision-Prone Intersections to identify potential causes of chronic collision patterns and determine long-term safety improvements to mitigate collisions. These improvements typically include addition of new turning lanes, traffic signal and timing modifications, removal of channelized right-turn islands, intersection lighting

improvements and pedestrian and cycling safety and accessibility improvements.

Removal of Channelized Right-Turn Islands

Through the additional assessment, channelized right-turn islands were found to be a significant contributor for vehicle collisions and pedestrian conflicts.

A report titled "Removal of channelized right-turn islands to Improve Road Safety" from the Director, Transportation dated September 6, 2022, identified 45 intersections within the City with channelized right-turns. Staff reviewed these intersections based on jurisdictional authority, right-turn vehicle volumes, pedestrian volumes, collision history and intersection geometry. The report recommended the following actions:

- Removal of channelized right-turn islands at 11 intersections (three are part of the City's Top 20 Collision-Prone Intersections); and
- Further assessments to be undertaken at two intersections to review feasibility of removing existing right-turn channels.

These intersections are identified in Attachment 2.

A memorandum titled "Channelized Right Turn Safety – No.4 Road and Alderbridge Way Intersection Safety Improvements" from the Director, Transportation dated May 19, 2026, reviewed historical right turn collisions at the intersection. It found that channelized right-turns resulted in a collision rate 15 times higher than normal right turn movements. 44 per cent of those collisions resulted in injury. A review of average collision rates at eight major intersections in Richmond found that, on average, the collision rate for channelized right-turns was four times higher than normal right turn movements.

Installation of New Traffic Signals

Installation of new traffic signals at intersections is typically driven by growth and are guided by the City's Official Community Plan. Installation of new traffic signals at intersections to improve safety and traffic flow are determined through warrant studies which considers factors such as observed traffic volumes, traffic performance, collision history, pedestrian demands and the specific conditions at the intersections.

Status of Intersection Improvement Projects

Completed Intersection Upgrades

Since 2019, projects have been brought forward for Council's approval as part of annual budget processes. Intersection safety upgrades have also been completed through development of adjacent properties. To date, works that have been completed through a combination of capital construction and development include:

- Short-term upgrades of all of the Top 20 Most Collision-Prone Intersections.
- Long-term upgrades of five of the Top 20 Most Collision-Prone Intersections:
    - No. 5 Road at Cambie Road;
    - No. 4 Road at Cambie Road;

  - No. 5 Road at Westminster Highway;
  - No. 2 Road at Westminster Highway; (final paving and restoration work remaining); and
  - Minoru Boulevard at Granville Avenue.
- Removal of channelized right-turns at five intersections:
  - No. 3 Road at Capstan Way;
  - Westminster Highway at Gilley Road;
  - Garden City Road at Lansdowne Road;
  - Cooney Road at Westminster Highway; and
  - St. Edwards Drive at Cambie Road.
- Installation of new traffic signals at sixteen intersections, as identified in Attachment 3.

The completion of long-term improvements for intersections listed above is too recent to assess safety improvements. To accurately assess changes in collision statistics at improved intersections, 5 full calendar years of data is needed for enough data to be collected for comparison. There is also a one-year delay for ICBC to process and release collision data. Should an intersection experience periods of disruption, such as for development or utility construction, additional data may be required.

Upcoming Intersection Improvements

Improvements to 10 intersections are underway through Capital Plans approved through 2026. Proposed improvements to an additional two intersections are included in the 2027 Capital Plan for Council consideration. The status of these projects are summarized in Table 1.

Table 1: Upcoming Upgrades to Intersections

Intersection	Status and Construction Schedule	Scope of Work
Granville Avenue at Cooney Road	Construction underway, target completion Q4 2026	• Removal of a channelized right-turn island at the northwest corner of the intersection • Conversion of the southbound right turn lane to a shared through and right turn lane
Great Canadian Way at Beckwith Road	Construction underway, target completion Q4 2026	• New traffic signal
Cambie Road at Garden City Road	Construction underway via development	• New southbound right-turn lane • Pedestrian safety and accessibility improvements at the northwest corner of the intersection • Traffic signal improvements
No. 4 Road at Westminster Highway	Construction underway, target completion Q2 2027	• Addition of dual left-turn lanes in the eastbound and westbound directions • Implementation of protected-only left-turns in the eastbound and westbound directions • Alignment adjustment of the northbound and southbound left-turn lanes to create a positive offset to improve visibility • Pedestrian safety and accessibility improvements
Cambie Road at Brown Road	Construction underway, target completion Q4 2026	• New traffic signal • Pedestrian safety and accessibility improvements

Bridgeport Road at Sexsmith Road	Construction underway, target completion Q4 2026	• New pedestrian activated traffic signal crossing Bridgeport Road • Removal of a channelized right-turn island
Coppersmith Place at Steveston Highway	Construction underway, target completion Q3 2027	• Removal of a channelized right-turn island to be completed as part of the Steveston Highway Multi-Use Pathway project
Garden City at Alderbridge Way	Construction scheduled for 2027	• Removal of channelized right-turn islands at the northwest, southwest and southeast corners • Addition of dual left-turn lanes in the eastbound direction • Cycling facility improvements along Garden City Road • Transit improvements including addition of a southbound bus queue jump to improve bus speed and reliability and a new eastbound bus stop on Alderbridge Way
No. 6 Road at Vulcan Way	Construction scheduled for 2027/2028 (subject to CN approval)	• New traffic signal and CN rail signal and gates
No. 4 Road at Alderbridge Way	Construction scheduled for 2028	• Removal of a channelized right-turn island at the southeast and southwest corners of the intersection • Adjust offset of eastbound and westbound left-turn lanes to improve visibility
No.4 Road at Blundell Road	Included in 2027 Capital Plan for Council Consideration	• Minor road widening and pavement marking adjustments to create additional westbound lane
No.3 Road and Granville Ave	Included in 2027 Capital Plan for Council consideration	• Traffic signal improvements • Street lighting improvements • Pedestrian safety and accessibility improvements

Future Upgrades to Top 20 Collision-Prone Intersections

Staff continue to assess potential improvements at intersections that have been identified as part of the Top 20 Collision-Prone Intersection report and the Removal of channelized right-turn islands to Improve Road Safety report. The status of these projects are described in Attachments 1 and 2.

For many of the remaining 15 intersections identified for improvements, these improvements require additional property to accommodate turn lanes, cycling facilities and improved pedestrian infrastructure. Staff recommend that these changes be implemented through future re-development of surrounding properties.

Intersections where there may be an opportunity for medium-term improvements prior to re-development will be reviewed and should any suitable improvements be determined, they will be brought forward for Council's consideration as part of future Capital Plan submissions. Currently there are three intersections under review:

- Shell Road at Alderbridge Way;
- Garden City Road at Sea Island Way; and
- Garden City Road at Granville Avenue.

Budgetary Implications

Future intersection improvements will be presented to Council for consideration as part of the annual budget process.

Conclusion

The City is committed to improving the safety and operational efficiency of our transportation network. Since 2019, major safety and operational improvements have been implemented at 34 intersections, with upgrades to another 10 intersections underway.

Staff continue to review opportunities to implement safety, operational and accessibility improvements throughout the City, which may be secured through re-development of adjacent properties or through future Capital Budgets.

Respectfully submitted,

Lloyd Bie, Director, Transportation

Report Contributors

This report was prepared by Justin Ng, Acting Manager, Transportation Development and Design, and reviewed by Transportation.

Endorsed by Serena Lusk, CAO

Att. 1: Status and Scope of Top 20 Collision-Prone Intersections
2: Status of Channelized Right-Turn Island Removal Projects
3: Intersections with New Traffic Signals Installed (2019 – 2026)

Status and Scope of Top 20 Collision-Prone Intersections

Top 20 Ranking	North-South Road	East-West Road	Project Status	Completed Works or Potential Works
1	Shell Road	Alderbridge Way	Under Review	**Potential Works** • channelized right-turn improvement or removal • Traffic signal adjustments • Pedestrian/Cycling infrastructure improvement **Future Works** • Additional southbound and eastbound right turn lanes **Note**: Requires coordination with Ministry of Transportation and Transit and CN Rail
2	Garden City Road	Sea Island Way	Under Review	**Potential Works** • channelized right-turn improvement or removal • Traffic signal adjustments • Modifications to laning and merge conditions • Pedestrian/Cycling infrastructure improvement **Note**: Requires coordination with Ministry of Transportation and Transit
3	No. 2 Road	Westminster Highway	Complete (2026)	**Completed Works** • Removal of channelized right-turn • Additional eastbound left-turn lane • Traffic signal adjustments • Pedestrian safety and accessibility improvements • Pedestrian/Cycling infrastructure improvement • Final paving and restoration work remaining
4	No. 4 Road	Alderbridge Way	Approved for Construction (scheduled for 2028)	**Construction Works** • Removal of two channelized right-turn • Median modifications on Alderbridge Way to create positive offset left-turn lane to improve visibility • Pedestrian/Cycling infrastructure improvement
5	No. 5 Road	Westminster Highway	Complete (2025)	**Completed Works** • Removal of one channelized right-turn • Pedestrian/Cycling infrastructure improvement • Review of signal timing adjustments to balance safety and traffic flow are ongoing
6	No. 5 Road	Cambie Road	Complete (2024)	**Completed Works** • Addition of left-turn lanes in all 4 directions • Pedestrian safety and accessibility

				improvements
7	No. 4 Road	Westminster Highway	Under Construction	**Construction Works** • Implementation of dual eastbound and westbound left-turn lanes • Pedestrian and cyclist safety and accessibility improvements • Addition of dual left-turn lanes in east and westbound directions • North-south lane alignment adjustments to create positive offset left turn lanes to improve visibility
8	Garden City Road	Cambie Road	Under Construction	**Construction Works** • New southbound right-turn lane • Pedestrian safety and accessibility improvements at the northwest corner of the intersection • Traffic signal improvements **Future Works (with Development)** • Driveway consolidation • Pedestrian/Cycling infrastructure improvement
9	Garden City Road	Granville Avenue	Under Review	**Potential Works** • Intersection reconfiguration • Signal timing modification • Pedestrian/Cycling infrastructure improvement
10	No. 2 Road	Blundell Road	Future Review	**Future Works (with Development)** • Driveway consolidation or elimination • Pedestrian/Cycling infrastructure improvement
11	No. 3 Road	Granville Avenue	Interim Improvements In 2027 Capital Plan	**Works Identified in 2027 Capital Plan** • Traffic signal improvements • Street lighting improvements • Pedestrian safety and accessibility improvements
12	No. 4 Road	Blundell Road	Interim Improvements In 2027 Capital Plan	**Works Identified in 2027 Capital Plan** • Minor road widening and pavement marking adjustments to create additional westbound lane **Future Works (with Development)** • Traffic signal improvements • Street lighting improvements • Addition of north-south left-turn lanes along No. 4 Road • Pedestrian/Cycling infrastructure improvement • Traffic signal improvements

13	No. 4 Road	Cambie Road	Complete (2026)	**Completed Works** • Addition of left-turn lanes in all directions • Pedestrian/Cycling infrastructure improvement • Traffic signal improvements
14	Shell Road	Bridgeport Road	Future Review	**Future Works (with Development)** • Addition of left-turn lanes in all directions • Pedestrian/Cycling infrastructure improvement • Traffic signal improvements
15	Minoru Boulevard	Granville Avenue	Complete (2025)	**Completed Works** • Street lighting improvements • Pedestrian accessibility improvements
16	Garden City Road	Blundell Road	Under Review	**Potential Works** • Streetlighting improvements **Future Works (with Development)** • Addition of left-turn lanes in all 4 directions • Pedestrian safety and accessibility improvements • Traffic signal improvements
17	No.1 Road	Francis Road	Future Review	**Future Works (with Development)** • Addition of left-turn lanes in all directions • Traffic signal improvements
18	No.1 Road	Steveston Highway	Future Review	**Future Works (with Development)** • Addition of north-south left-turn lanes on No.1 Road • Aligning east-west left-turn lanes • Traffic signal improvements
19	Gilbert Road	Blundell Road	Future Review	**Future Works (with Development)** • Addition of east-west left-turn lanes on Blundell Road • Traffic signal improvements
20	No. 5 Road	Blundell Road	Future Review	**Future Works (with Development)** • Traffic signal improvements

Status of Channelized Right-Turn Island Removal Projects

Intersection		Channelized Right-Turn Island Removal Recommended in 2022	Status / Recommendation
North-South Road	**East-West Road**		
Garden City Road	Lansdowne Road	Yes	Completed
No. 3 Road	Capstan Way	Yes	Completed
Westminster Highway	Gilley Road	Yes	Completed
Cooney Road	Westminster Highway	Yes	Completed
Cooney Road	Granville Avenue	Yes	**Construction In Progress 2026**
Railway Avenue	Granville Avenue	Yes	Under Review
St. Edwards Drive	Cambie Road	Yes	Completed
Garden City Road	Alderbridge Way	Yes	**Construction 2027** *Removal of the southbound, westbound, and northbound right-turn movements*
No.6 Road	Vulcan Way	No	**Construction 2027/2028** **(Subject to CN Approval)**
Shell Road	Cambie Road	No	N/A
Shell Road	Westminster Highway	No	N/A
Boundary Road	Westminster Highway	No	N/A
Coppersmith Place	Steveston Highway	Further review required	**Construction 2026-2027** *Removal of the eastbound right-turn movements as part of Phase 4 of the Steveston Highway Multi-Use Pathway Project*
No. 5 Road	Steveston Highway	Further review required	Future review

Intersections with New Traffic Signals Installed (2019 – 2026)

	North-South Road	East-West Road
1	Minoru Gate	Granville Avenue
2	Kwantlen Street	Lansdowne Road
3	Railway Avenue	Garry Street
4	No. 2 Road	Moncton Street
5	No. 5 Road	Vulcan Way
6	Old Westminster Highway	Westminster Highway
7	No. 5 Road	King Road
8	Moffatt Road	Blundell Road
9	Nelson Road	Blundell Road
10	River Parkway	Cambie Road
11	River Parkway	Leslie Road
12	Shell Road	Williams Road
13	St. Albans Road	Bennett Road
14	Cooney Road	Park Road
15	No. 5 Road	Granville Avenue
16	Lynas Lane	Granville Avenue
17	No. 4 Road	Edgington Avenue
18	Pearson Way	River Road
19	No. 3 Road	McMyn Way
20	Bridgeport Road	McLennan Avenue
21	Hazelbridge Way	Capstan Way
22	Minoru Boulevard	Mah Bing Road
23	Buswell Street	Park Road