



BRIEFING NOTE FOR INFORMATION

DATE: December 11, 2020

PREPARED FOR: Honourable Minister Rob Fleming

ISSUE: Highway 1 Widening to the Fraser Valley

SUMMARY:

- **Highway 1 widening to the Fraser Valley (Abbotsford) addresses mobility and reliability challenges for moving people and goods.**
- **The segment between 216th and 264th Street was announced in 2019 and is currently in design with construction expected to get underway in late 2021.**
- **The Fraser Valley Integrated Transportation and Development Strategy (ITDS) is in progress. It will look at traffic congestion and travel demand as well as examine and evaluate options for new transit and transportation initiatives in the Fraser Valley.**
- **High-level planning is underway for widening between 264th Street to Whatcom Road.**

BACKGROUND:

Highway 1 is a critical transportation link for the movement of goods and people. Traffic continues to increase on an annual basis, growing 11% over the last 5 years between 264th and Whatcom Road. Traffic volumes generally increase from east to west across the Highway 1 corridor between the Whatcom and the 264th Interchanges, with volumes greater than 80,000 vehicles per day between 264th Street in Langley to McCallum Road in Abbotsford, and then reducing to approximately 50,000 vehicles per day at Whatcom Road.

Within the subject area of Highway 1 (264th to Whatcom), collision frequencies and severity are more than 10% higher than provincial averages across several sections and in both directions. Both the high collision rates and severities further contribute toward poor mobility and reliability of the Highway 1 corridor during weekdays and weekends. Highway 1 can also experience varied levels of mobility and reliability during weekday and weekend periods. In fact, peak vehicles speeds can be well below posted speeds (particularly in the eastbound directions) ranging anywhere from 20 to 60km/hr through much of Abbotsford. The variability of speeds in turn contribute toward higher collision rates and severities.

Highway 1 widening is designed to ease congestion for growing areas of the Lower Mainland and reduce the frequency and severity of crashes along this provincially important corridor. The recently completed 4 km widening project for High Occupancy Vehicle (HOV) lanes between 202nd and 216th Street as well as the completion of the new 216th Street Interchange have helped relieve congestion and improve operations. Design is underway for the continuation of 10 km of HOV lanes from 216th Street to 264th Street, a project that was announced in April 2019. Construction is expected to get underway in late 2021.

PAST INTERACTIONS:

None.

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Figure 1 - Overview Map of Highway 1 Widening to Fraser Valley

(264th to Whatcom Interchanges)

Project Improvement Highlights

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APPROVED HOV Lane Widening (216th to 264th)

Features: Highway 1 (232nd to 264th)

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ONGOING:^{s.13}

(264th to Mt Lehman)

PROJECT STATUS:

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Problem Definition:

- q Existing Conditions
- q Future Base Conditions
- q Key Issues & Challenges

Options Identification & Screening

§ Shortlist Options Development & Evaluation

§ Implementation Priorities (March 2021 Completion)

ONGOING:^{s.13}

(264th to Mt Lehman)

Preliminary Features: 232nd to 264th Interchange

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ONGOING:^{s.13}

I (264th to Mt Lehman)

Preliminary Features: 264th Interchange &^{s.13; s.16}

s.13; s.16

ONGOING:^{s.13}

(264th to Mt Lehman)

Preliminary Features: 264th to Mt Lehman

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: Mt Lehman to Clearbrook

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: Clearbrook to McCallum

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: McCallum to Highway 11

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: Highway 11 Interchange

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: Highway 11 to Whatcom

s.13; s.16

ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Preliminary Features: Whatcom Interchange

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ANNOUNCED: Highway 1 Widening (264th to Whatcom)

Potential Project Segments

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Technical Planning, Design & Delivery Stages (DBB or DB)

1. Project Planning & Concept Development <ul style="list-style-type: none"> a. Data Collection b. Problem Definition (existing & future base) c. Improvement Concept Options Identification d. Concept Development & Evaluation e. Issues & Risk Identification f. Reporting g. Stakeholder Engagement (i.e. agencies, Indigenous communities, etc.) h. Approvals to Proceed 	2. Preliminary Design (10%) <ul style="list-style-type: none"> a. Design Criteria b. Lidar Mapping c. Preliminary Technical Investigations (i.e. geotechnical, environmental, archaeological, property, etc.) d. Concept Planning Refinements e. Concept Value Analysis f. Preliminary Design Drawings (Options) g. Cost Estimates (30 to 50% including construction contingencies) and Risk Registry h. Stakeholder Engagement i. Procurement Screen & Review j. Technical Reporting k. Stage 1 Business Case & Partnerships l. Approvals to Proceed
3. Functional Design (30%) <ul style="list-style-type: none"> a. Detailed Field Survey b. Detailed Investigations, Impacts & Mitigation strategies & timeframes (i.e. geotechnical, environmental, archaeological, etc.) c. Property Acquisition & Appraisals d. First Nations Consultation & Accommodations e. Functional Design Preparation (preferred option) f. Cost Estimates (25 to 40% including construction contingencies) & Risk Register g. Procurement method decision h. Technical Reporting i. Stage 2 Business Case & Partnerships Confirmed j. Approvals to Proceed 	4. DBB Detailed Design (100%) <ul style="list-style-type: none"> a. Value Engineering b. Detailed Design Drawings c. Cost Estimates & Risk Register d. Property Acquisition e. Tender Document <p>OR</p> 4. DB Design & Reference Documentation <ul style="list-style-type: none"> a. Value Engineering b. Property Acquisition c. Cost Estimates & Risk Register d. DB Reference Documentation e. DB RFQ
5. Tender or DB RFP	6. Construction

2020-12-14

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Highway 1^{s.13}

Example DBB Integrated Project Delivery Schedule

- Combined integrated corridor improvement plan (expand 264th to Mt Lehman).
- Coordinated Preliminary & Functional Designs with Business Case Development & Approvals.
- Advance Detailed Design, Tender & Construction incrementally from west to east.

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Highway 1^{s.13}

Example DB Advance Segment 1 & Combine 2-4 Delivery Schedule

- Advance planning, design, business case, approvals and delivery (DB) for Segment 1.
- Advance planning, design and approvals for Segments 2-4 and combine delivery (DB).

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Summary of Cost Estimates

Highway 1 HOV/EV Lanes (264th Interchange to Whatcom Interchange) - Cost Estimate Summary								04-Dec-2020 Version 2.0
Improvement	Construction Value (\$2020)			Cost Adjustments (\$2020)				GRAND TOTAL
	Baseline Cost	Contingency	Subtotal	Indirect Costs	Total Excl. Esc.	Escalation	Interest During Construction	
264th Street Interchange Improvement	s.13; s.17							
264th Street Park-and-Pool Lot								
Eastbound Truck Climbing Lane 232nd to 264th								
Bradner Overpass Structure Replacements								
Eastbound HOV / EV Lane 264th to Mt. Lehman								
Westbound HOV / EV Lane Mt. Lehman to 264th								
Westbound Climbing Lane Extension 2 km west of Mt. Lehman to 264th								
SUBTOTAL - SEGMENT 1								
Pearsonville Overpass Replacement & Reconfiguration								
Eastbound HOV / EV Lane Mt. Lehman to McCallum								
Westbound HOV / EV Lane McCallum to Mt. Lehman								
Westbound Truck Climbing Lane McCallum to Clearbrook								
SUBTOTAL - SEGMENT 2								
Highway 11 Interchange Replacement & Eastbound + Westbound HOV / EV Lanes								
SUBTOTAL - SEGMENT 3								
Whatcom Interchange - Stage 1 - Split Diamond								
Whatcom Interchange - Stage 2 - Full Buildout								
Eastbound HOV / EV Lane Highway 11 to Whatcom								
Westbound HOV / EV Lane Whatcom to Highway 11								
SUBTOTAL - SEGMENT 4								
GRAND TOTAL (\$M)								

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Highway 1^{s.13} (264th to Whatcom Interchanges)

Project Improvement Highlights

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CORPORATE ISSUE/OPPORTUNITY NOTE

PLATFORM COMMITMENT

Issue:

- Widen the Fraser Highway to ease congestion.
- Continued Expansion of the Highway 1 corridor from 264th Street to Whatcom Interchange

Background:

- The Highway 1 corridor continues to experience significant congestion impacting regional and inter-regional movements between Metro Vancouver and the Fraser Valley.
- The Highway 1 corridor from 264th Street (Langley) to Whatcom Interchange (Abbotsford) is 25km of 4-lane divided arterial highway and the major east-west connector for the Lower Mainland.
- The Highway 1 corridor has an average annual daily volume of 91K vehicle trips. The corridor through this section divides the municipalities of Township of Langley and the City of Abbotsford.
- The Highway 1 corridor through this section has the following major interchanges:
 - Township of Langley
 - Hwy 264th Street
 - City of Abbotsford
 - Mt. Lehman Road
 - Clearbrook Road
 - Peardonville Road
 - McCallum Road
 - Highway 11/1 Interchange
 - Whatcom Road
- Major development has already occurred near the corridor through the City of Abbotsford placing pressure on the existing interchanges.
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Issue/Opportunity:

- TransLink/BC Transit are looking to expand transit services between the Fraser Valley and Metro Vancouver. The Highway 1 corridor forms a primary connector for major transit nodes such as employment, education, and shopping.
- Five of the seven interchanges on the Highway 1 corridor from 264th to Whatcom Road would need be significantly reconfigured to accommodate future growth along the corridor. Improvements would need to consider transit services (stops, park & rides) as part of any design; and future economic development and growth adjacent to the corridor.
- Infrastructure projects on Highway 1 have been cost-shared between the Federal Government and the Local Municipalities. The ministry will need to seek funding partnerships from the Township of Langley and the City of Abbotsford to support this infrastructure.
- The Ministry of Municipal Affairs and Housing has stated that local Development Cost Charges (DCC) cannot be used by municipalities to fund non-municipal infrastructure. The Township of Langley and the City of Abbotsford have already raised this as a concern at UBCM and stated restricting the use of DCC's will significantly decrease the opportunity for local municipalities to participate even though developments would benefit directly from an increased highway expansion.

- Future expansion of Highway 1 would need to be phased to prevent mobility issues in the Lower Mainland. The only alternative route to Highway 1 is Highway 7 which represents a significant detour for regional and inter-regional traffic.
- The Ministry is completing a planning study to identify phasing options, issue identification, and planning level project estimates. This work will be completed by the end of November 2020.
- The Ministry would need to engage with 12 First Nations bands on future planning for this Highway 1 corridor. There has no engagement to date.