
To:	Geraldo Araujo, M.Sc., P.Eng. Manager, Projects –Bulk Material Handling FWS Group of Companies	From:	Felipe Rodriguez, P.Eng., PTOE Transportation Planning/Traffic Engineer Lead, BC Stantec Consulting Ltd., Burnaby
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Reference: Fraser Grain Terminal VFPA Review - Updated Rail Crossings Impacts

1. Background

Stantec has recently conducted a traffic impact study for the new Fraser Grain Terminal (FGT). The purpose of the study was to highlight, from a multi-modal perspective, how the new FGT operations will affect the transportation network on the Fraser Surrey Port Lands (FSPL). Rail and Truck traffic trip generation estimates to/from the FGT facility were extracted from the information provided by CMC Engineering & Management Ltd. Stantec undertook several sets of macroscopic analysis using Synchro 9.0 software and used Vissim software to microsimulate scenarios where Synchro's macroscopic analysis was not detailed enough to provide an accurate depiction of anticipated traffic operation, especially the rail blockages.

The purpose of this memo is to assess the impacts of recent proposed changes to the rail car configurations after a FWS design change.

2. VFPA Review - Rail Crossings

As part of the FGT project redesign done by FWS, changes are proposed to the configuration of the rail car strings being unloaded at the grain export facility. The original traffic study was based on the assumption that six (6) strings of 19 cars were being unloaded at FGT. The current design proposes to use Eight (8) strings of 14 cars, resulting in a smaller indexer at the train unloading station. This will also decrease the duration of Robson Road blockages but increase the number of blockages.

The original study suggested that the FGT Access intersection at Robson Road is expected to operate at LOS C/A in the peak hours under typical conditions. The eastbound through movement is expected to experience LOS F in the AM peak with a typical three-minute train blockage but the queue remains quite manageable (120 m). With the reduced blockage duration under the proposed rail configuration the expected queue will decrease, however, the frequency of queueing may increase depending on the time of day of these blockages. These blockages are expected to have minimal impacts on the road traffic if these additional rail blockages occur during the off-peak times of the day, i.e., out of the shift change hours.

3. Conclusion

Keeping in view the shorter rail blockages and low traffic level during the off-peak hours, it is expected that the revised rail configuration will have no significant impacts on the traffic network at Robson Road and Stantec's original conclusions still hold.

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CLOSURE

We thank you for the opportunity. Please do not hesitate to contact the undersigned should you have any questions.

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