



CITY OF TRAIL MEMORANDUM

DATE: December 15, 2010
TO: MAYOR AND COUNCIL
FROM: DAVID PEREHUDOFF, CHIEF ADMINISTRATIVE OFFICER
SUBJECT: BRIDGE REPLACEMENT

FILE NO. 5400-02



1.0 ISSUE

- 1.1 The purpose of this report is to provide additional commentary and suggested direction in support of the Engineering Technician's report dated December 9, 2010 which is attached as it pertains to the replacement of the Old Trail Bridge.
- 1.2 The purpose is to advise Council of the costs to replace the Old Trail Bridge and to set direction moving forward.

2.0 BACKGROUND

- 2.1 The information is advanced following the receipt of an engineering report recommending that the Old Trail Bridge be closed. The Bridge, which is now approaching 100 years old, has deteriorated to a point where it is no longer safe for vehicular traffic.
- 2.2 Staff is still trying to determine if the bridge could be reopened to pedestrian traffic as an interim measure. Discussions are proceeding in this regard and it is hoped that a report will be advanced to Council on this matter within the next month.

3.0 ANALYSIS

- 3.1 As indicated in the attached memorandum, three options are presented as far as replacement goes with a cost range from \$20 million for full replacement to \$6.5 million for a pedestrian and utility crossing.
 - 3.1.1 The third option is for a one lane bridge for emergency traffic only. Given the differential cost between the construction of a fully functional bridge and this option at \$15 million this would not be viewed as a prudent way to proceed. If the decision is made to proceed the bridge will hopefully be in service for in excess of 75 years and therefore it would not make sense from a cost avoidance and incremental annual depreciated cost perspective to consider this option.
- 3.2 The question associated with "need" is something that should be considered in order to determine whether or not the replacement should be further explored. Several comments are raised in this regard:



- 3.2.1 The Victoria Street crossing is the primary crossing and should it ever be closed for any length of time the alternative to get from West Trail to East Trail would be through Castlegar, over a mountain pass and down through Beaver Valley. Alternately there is access back through the US but a person would have to have a passport on their person in order to choose this route. Either option would be approximately a one hour diversion.
- 3.2.1.1 The City requested traffic counts from the Ministry of Transportation for the Victoria Street Bridge and the last count in August 2009 (attached), prior to the closure of the Old Bridge, indicated that 18,000 vehicles used the bridge in one day. If extrapolated, this equates to annual traffic movement over the bridge of 6.57 million vehicles.
- 3.2.1.2 The Old Bridge was experiencing 3,000 vehicles per day or 1.09 million uses per year.
- 3.2.1.3 Ministry of Transportation will provide current counts shortly to monitor the impact that the Old Trail Bridge closure is having on traffic volumes on Victoria Street.
- 3.2.2 As indicated above there is significant traffic volume as referenced above, which includes many heavy trucks that service the smelter. It is suggested that there may be an elevated risk that could give rise to a closure based on the traffic volume and heavy use. Since the Old Bridge was closed several months ago there have been some four incidences which have given rise to major traffic issues coming across the bridge, which could be alleviated if there was a second crossing in place.
- 3.2.3 The Kootenay Boundary Regional Hospital is located in East Trail and in order to ensure uninterrupted service, providing two river crossings may be an important consideration.
- 3.2.4 Given that this would effectively be a local project, Council will want to ascertain feedback from the public in terms of the perceived need and if there is support to pay for the significant capital cost as well as the ongoing maintenance cost of a new structure.
- 3.3 Another factor to consider, which is somewhat of a subjective question; is the project "affordable"? Given the significance of the project and the cost, the public's input is critically important. Over and above the costs to proceed with the construction there will be ongoing maintenance costs as well as the ongoing costs of continuing to run the municipality and other projects that may come forward that will also impact property tax rates.
- 3.3.1 One significant concern in this regard is the potential for future capping of major industrial and/or business taxes. The financing and property tax



distribution model used for this project takes a very conservative approach which should not be impacted should any future capping be implemented.

4.0 FINANCIAL CONSIDERATIONS

- 4.1 As detailed in the Engineering Technician's report, three options and associated costs have been provided.
- 4.2 From a financing perspective, it is assumed that if the City did proceed moneys would be borrowed over 30 years. This approach effectively matches the cost with the use on an annual basis.
- 4.3 Several scenarios are presented on the attached table that details the financial impacts associated with borrowing the moneys required under the two different options discussed above. Further, both options factor in a \$2.5 million reduction based on potential anticipated cost sharing from the other parties using the bridge for the utility lines. The following additional comments are noted:
 - 4.3.1 The property tax distribution model assumes that Major Industry will pay 50% of this cost. This is based on Teck's previously stated "preferred" distribution and reflects Council's longer term goal with respect to the overall distribution of the municipal budget.
 - 4.3.2 The split between residential and business is based on maintaining a one to one ratio. In other words, the property impact on \$100,000 would be exactly the same whether the property is assessed as commercial or residential. Therefore the project will not place an "unreasonable" burden on businesses in the City.
 - 4.3.3 The \$2.5 million could be viewed as an order of magnitude reduction only. It is suggested that the City would most likely be looking for closer to \$6 million from the utility companies based on the cost to relocate lines in the absence of providing a crossing over the river.
- 4.4 The impact analysis uses 2010 assessments. The average residential assessment in 2010 was \$185,000 and if \$20 million was borrowed this would equate to \$179 per year in additional property taxes.

5.0 OTHER CONSIDERATIONS

- 5.1 It is important that the public be given an opportunity to provide input into the proposals so Council can determine the level of support that exists for any of the options. In this regard it is suggested that consideration be given to the following:
 - 5.1.1 Information provided on the City's website and establishment of an email address bridge@trail.ca so people can provide ongoing feedback and suggestions.



- 5.1.2 Information provided through direct mailing to all properties in the City.
 - 5.1.3 Information provided and feedback obtained through several open houses.
 - 5.1.4 Direct meetings with key stakeholders such as Teck and also discussions with the Downtown Opportunities and Action Committee.
 - 5.1.5 Presentations to local service groups such as the Rotary Club.
 - 5.1.6 Establishment of a display in the Shopping Mall and other public locations such as the Trail Library.
- 5.2 Borrowing the moneys required will either require a referendum or could be achieved through counter-petition where the City advertises its intention to proceed and if a petition with ten percent or more of the registered electors is presented then it would require Council to proceed to referendum or abandon the project.
- 5.3 It is suggested that providing the public with project detail and receiving feedback is a critical component before determining the preferred approach. Given the significant financial impact the project will have on Teck who would pay 50% of the cost under the proposed model, it is also suggested that the City consult directly with major industry and receive feedback as noted above. As referenced above one of the key considerations with respect to the need to replace the bridge is the heavy truck traffic generated by this operation as well as the potential risk that this operation brings to the community which should be considered as far as the need for a second crossing is concerned.
- 5.4 The City should also pursue any and all potential funding opportunities and should contact the MLA, MP to determine if they may be able to provide any assistance in securing senior level government funding in recognition of the significance of the project. If nothing else, the Province should be responsible for decommissioning costs of the existing bridge, which are not factored into the budgets provided.
- 5.5 The City should also engage the RDKB and Fortis as it pertains to the relocation of utility lines and their willingness to provide funding in support of the project. It is noted that in the absence of a crossing being provided these utilities may be forced to look at crossings under the river. Directional drilling comes with significant risk and could cost upward of \$6 million to complete.
- 5.5.1 With respect to the RDKB, the City of Trail would be a party to this cost through the Regional Sewer Function. In the absence of a new cost sharing formula, the City would pay 70% of the regional contribution towards a new crossing.
- 5.6 Once the public consultation period is completed, Council may also want to undertake a statistically valid public opinion survey to determine the level of



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support for any of the options before moving forward. Given the significance of the capital expense this might be a consideration rather than going through the expense of a referendum to see it fail by a significant margin. Ipsos Reid was contacted and a statistically valid survey of 300 residents would cost approximately \$12,500.

5.7 If the project did proceed, it would take approximately 18 months to complete from engineering design to construction. One major consideration would be the steel fabrication and delivery that could take some four months to complete.

6.0 RECOMMENDATION

6.1 THAT staff be directed to develop a public consultation process in accordance with paragraph 5.1 above to provide the public information and receive input with respect to the replacement of the Old Trail Bridge with a target date for completing the public consultation process by May 31st, 2011.

6.2 THAT the City's Member of Parliament and Member of the Legislative Assembly be contacted and asked for assistance with respect to requesting funding assistance from senior levels of government.

6.3 THAT Fortis and the RDKB be contacted and be requested to respond in the context of providing funding support for a new river crossing, which could come in the form of a lump sum payment or annual rental to secure lines to the new structure.

6.4 THAT Council support the establishment of a \$35,000 Budget, to be included as part of the 2011 Capital Budget in support of completing all necessary preliminary work and public consultation required prior to Council making a decision on whether or not to proceed to referendum.

6.5 THAT the construction cost of the Bridge be reflected in the City's 2011 Capital Budget and Five Year Financial Plan for the purpose of establishing authority and intent should the decision be made to proceed with a Loan Authorization Bylaw to fund the project in 2011.

Respectfully submitted,

David Perehudoff, CGA
Chief Administrative Officer

attach.

CITY OF TRAIL
FINANCING COST / PROPERTY TAX IMPLICATIONS
Old Trail Bridge Replacement



| Property Class | Debt Financing** | | | | | | | |
|--------------------------|--------------------------|------------------|---------------------------|------------------|-----------------------------------|------------------|------------------------|------------------|
| | 20 million - Full Bridge | | 17.5 million - Cost share | | 6.5 million - Pedestrian/ utility | | 4 million - Cost Share | |
| | Payment | Cost / \$100,000 | Payment | Cost / \$100,000 | Payment | Cost / \$100,000 | Payment | Cost / \$100,000 |
| Class 1 - Residential | \$600,100 | \$97.00 | \$509,485 | \$82.00 | \$188,300 | \$31.00 | \$115,150 | \$19.00 |
| Class 4 - Major Industry | \$700,000 | | \$595,000 | | \$220,500 | | \$135,750 | |
| Class 6 - Business | \$95,900 | \$97.00 | \$81,515 | \$82.00 | \$30,200 | \$31.00 | \$18,600 | \$19.00 |
| Others | \$4,000 | | \$4,000 | | \$2,000 | | \$2,000 | |
| | \$1,400,000 | | \$1,190,000 | | \$441,000 | | \$271,500 | |

** Assuming borrowing over thirty years at current market rate of 4.81%

BC Ministry of Transportation and Infrastructure

Daily Volume from 08/11/2009 through 08/14/2009

Site Names: 32-012EW
 County: Posted Speed = 60 kph
 Funct.
 Location: Route 3B At The East End Of Victoria Street (Columbia River) Bridge In Trail

Seasonal Factor Type: Consistent
 Daily Factor Type: Consistent
 Axle Factor Type:
 Growth Factor Type: Consistent

| | 08/09/2009 | | | 08/10/2009 | | | 08/11/2009 | | | 08/12/2009 | | | 08/13/2009 | | | 08/14/2009 | | | 08/15/2009 | | | |
|---------------------|------------|-----|-----|------------|-----|-----|------------|-------|-------|------------|-------|-------|------------|-------|-------|------------|-------|-------|------------|-----|-----|--|
| | Road | Neg | Pos | Road | Neg | Pos | Road | Neg | Pos | Road | Neg | Pos | Road | Neg | Pos | Road | Neg | Pos | Road | Neg | Pos | |
| 00:00 | | | | | | | | | | 79 | 33 | 46 | 71 | 34 | 37 | 0 | 0 | 0 | | | | |
| 01:00 | | | | | | | | | | 18 | 10 | 8 | 37 | 18 | 19 | | | | | | | |
| 02:00 | | | | | | | | | | 23 | 10 | 13 | 42 | 18 | 24 | | | | | | | |
| 03:00 | | | | | | | | | | 9 | 4 | 5 | 23 | 11 | 12 | | | | | | | |
| 04:00 | | | | | | | | | | 58 | 39 | 19 | 61 | 42 | 19 | | | | | | | |
| 05:00 | | | | | | | | | | 282 | 175 | 107 | 249 | 148 | 101 | | | | | | | |
| 06:00 | | | | | | | | | | 713 | 425 | 288 | 669 | 414 | 255 | | | | | | | |
| 07:00 | | | | | | | | | | 801 | 405 | 396 | 804 | 396 | 408 | | | | | | | |
| 08:00 | | | | | | | | | | 959 | 459 | 500 | 915 | 452 | 463 | | | | | | | |
| 09:00 | | | | | | | | | | 1,005 | 482 | 523 | 1,042 | 521 | 521 | | | | | | | |
| 10:00 | | | | | | | | | | 1,266 | 592 | 674 | 1,219 | 582 | 637 | | | | | | | |
| 11:00 | | | | | | | | | | 1,403 | 711 | 692 | 1,380 | 696 | 684 | | | | | | | |
| 12:00 | | | | | | | | | | 1,388 | 683 | 705 | 1,440 | 685 | 755 | | | | | | | |
| 13:00 | | | | | | | | | | 1,377 | 676 | 701 | 1,391 | 691 | 700 | | | | | | | |
| 14:00 | | | | | | | | | | 1,443 | 740 | 703 | 1,424 | 711 | 713 | | | | | | | |
| 15:00 | | | | | | | | | | 1,762 | 795 | 967 | 1,562 | 749 | 813 | | | | | | | |
| 16:00 | | | | | | | | | | 1,556 | 809 | 747 | 1,534 | 767 | 767 | | | | | | | |
| 17:00 | | | | | | | | | | 1,221 | 614 | 607 | 1,284 | 630 | 654 | | | | | | | |
| 18:00 | | | | | | | | | | 892 | 429 | 463 | 886 | 425 | 461 | | | | | | | |
| 19:00 | | | | | | | | | | 672 | 328 | 344 | 726 | 365 | 361 | | | | | | | |
| 20:00 | | | | | | | | | | 591 | 262 | 329 | 624 | 283 | 341 | | | | | | | |
| 21:00 | | | | | | | | | | 436 | 220 | 216 | 447 | 226 | 221 | | | | | | | |
| 22:00 | | | | | | | | | | 234 | 101 | 133 | 236 | 121 | 115 | | | | | | | |
| 23:00 | | | | | | | 94 | 40 | 54 | 137 | 66 | 71 | 138 | 57 | 81 | | | | | | | |
| Volume | | | | | | | 94 | 40 | 54 | 18,325 | 9,068 | 9,257 | 18,204 | 9,042 | 9,162 | | | | | | | |
| AM Peak Vol | | | | | | | | | | 1,403 | 711 | 715 | 1,380 | 696 | 692 | | | | | | | |
| AM Peak Fct | | | | | | | | | | 0.98 | 0.96 | 0.91 | 0.93 | 0.93 | 0.95 | | | | | | | |
| AM Peak Hr | | | | | | | | | | 11:00 | 11:00 | 10:45 | 11:00 | 11:00 | 10:45 | | | | | | | |
| PM Peak Vol | | | | | | | | | | 1,793 | 853 | 967 | 1,612 | 781 | 831 | | | | | | | |
| PM Peak Fct | | | | | | | | | | 0.99 | 0.87 | 0.96 | 0.94 | 0.91 | 0.92 | | | | | | | |
| PM Peak Hr | | | | | | | | | | 15:15 | 15:45 | 15:00 | 15:15 | 15:15 | 15:15 | | | | | | | |
| Seasonal Fct | | | | | | | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | 0.941 | | | | |
| Daily Fct | | | | | | | 0.969 | 0.969 | 0.969 | 0.955 | 0.955 | 0.955 | 0.936 | 0.936 | 0.936 | 0.901 | 0.901 | 0.901 | | | | |
| Axle Fct | | | | | | | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | 0.500 | | | | |
| Pulse Fct | | | | | | | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | 2.000 | | | | |