From: Miller, Tyson FLNR:EX
Sent: Tuesday, June 14, 2016 2:07 PM
To: Ladd, Jeff R FLNR:EX; Gonzalez, Ana Maria FLNR:EX
Cc: Logue, Carissa FLNR:EX
Subject: 12 km Jones FSR WBC

Hi Jeff/Ana Maria

As you are aware I was out on the Jones Lake FSR today, specifically to review the WBC at approximately 12.0km (lat/long – 49 13 8.1 x 121 36 16.5).

The structure in question is an original 5.6 meter span WBC on single log sills with an additional layer of log stringers laid directly overtop (much like the ones on the Stave FSR). The additional stringers (top layer) were recently added as there is relatively recent logging in the area (and you can see the outside top stringers - balsam stringers with bark still on them). Because of the additional layer of stringers and gravel fill there is quite a vertical curve to both approaches of this structure.

The original 5.6m span WBC is in very poor condition (see pictures) with many of the stringers either completely rotten, or with significant rot. And as you can imagine the top layer of stringers are impossible to fully assess as the they are covered with gravel on the top and restricted from viewing underneath due to the original structure being still in place. In order for me to fully assess the structure I would need to know what the species and diameters of the top stringers are that are buried. Perhaps the road use permit holder has that information? It would be worth contacting them or their professional involved in this to see what information they have on this.

With the outside stringers (top layer) being partially visible, one can assume that all the stringers are roughly that diameter (400mm), and based on that the structure would be able to sustain an L60 (54 tonnes) logging truck – just barely. With saying that I am NOT assigning an L60 load rating to this structure at this point (because it's based on a large assumption - all stringers are 400mm diameter), it's just worth mentioning. And, because this structure is still considered a WBC (by the span definition – even though a calculation of Q can be made and if greater than 6m3/s then would qualify as a structure), there isn't a real requirement for an actual load rating. Again, it would be worth contacting the RUP holder to see what information they have on this.

My recommendation at this point is to contact the RUP holder to see if they have record drawings or any information with regards to what species and diameters were used in the structure and what "load rating" they have assigned to the structure. If they do not have any documentation my recommendation is to restrict the use of this structure to 30 tonnes and plan to replace it with a sufficient structure that meets the requirement of the road/site.

If you have questions please let me know.

Tyson Miller P.Eng, RPF
Roads Engineer
Coast Engineering Group
Mobile: 604-798-7109
Office: 604-702-5735

Jones 12.0km

Jones lake FSR 12.0km

2016 Inspection

Approach from Right Bank when facing downstream

upstream

downstream

Approach from Left Bank when facing downstream

Jones 12.0km

Jones lake FSR 12.0km

2016 Inspection

Upstream Profile

Left Bank Abutment when facing downstream

Right Bank Abutment when facing downstream

stringer 13 conk and rot

Jones 12.0km

Jones lake FSR 12.0km

2016 Inspection

Stringer10 missing wood

Downstream Profile

stringer 7 starting to grow conk

stringer 12 condition