Summary of Project
Proposed Char River Crossing Replacement Structure at the Hamlet of Rankin Inlet

In June 2002, Dillon Consulting Limited (Dillon) was retained by the Department of Community Government and Transportation (CG & T), Government of Nunavut, to design a new crossing structure for the Char River at Rankin Inlet. Background information was provided to Dillon with respect to the existing crossings history of yearly washouts and the corresponding fish habitat damage downstream. Further, Dillon was informed that the Department of Fisheries and Oceans (DFO) had demanded a permanent solution to this problem.

Dillon assessed several crossing structure alternatives against all the requirements listed in sections Understanding of the Project and Fish Habitat. After discussions with the Department of Community Government and Transportation, Dillon has determined that a bridge with a clear span of 12.6 m is the appropriate structure to replace the existing 1.2 m diameter culvert.

The bridge is supported on steel cribs (bin walls) that are filled with granular material for stability. The bin walls are recessed 1.0 m below stream bed on firm foundation soils. To prevent scour around and between the bin walls, riprap underlain by geotextile is proposed. The geotextile is used to prevent the leaching of fine streambed materials through the riprap, thus maintaining its integrity.

The road on either side of the bridge has been raised to accommodate the higher structure. Roadside ditches with interceptor arms have been designed to prevent any downslope erosion from occurring in the vicinity of the crossing.

The riprap placed around the bin walls and on the channel bottom, will prevent erosion and maintain the integrity of the crossing.

The roadway ditches and interceptor arms will collect runoff in the vicinity of the roadway and convey it to the river in a controlled and non-erosive manner. This is designed to preserve the integrity of both the crossing and the aquatic habitat within the Char River.

The proposed bridge crossing project of the Char River at Rankin Inlet will have a positive influence on the aquatic habitat. The history of road washouts and the subsequent deposition of material on the downstream channel will be resolved.

The following are the benefits of this project:

- A stable, non-erodible river crossing.
- Erosion protection for the road embankments and channel.
- A 144 m^2 net gain in fish habitat area.
- A crossing that will allow for unrestricted fish passage.

End of Section

030129CHA Proj Sum-ILAM

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ᑯᑦ ᐃᑲᕐᑎᖓᓂᖅ ᐊᓯᔾᔨᕋᐅᓂᖓᓄᓪ ᐱᒋᐊᖏᑕᐅᔪᒪᔪᖅ
ᐄᐊᓖᑦᓂᓗᑦ ᑲᖏᖏᓕᓂᕆᒥ

ᔪᓐ 2002 ᖃᐅᑎᓪᓗᒍ, ᖃᐅᔨᒪᓪᓕᑕᐅᔪᑦ ᐅᑯᐊ Dillion Consulting Limited (Dillon) ᑎᓕᓐ ᖃᐅᔨᒪᓪᓕᑕᐅᔪᑦ ᓄᓇᓕᖅᓂ ᒪᓕᒪᓕᓚᓴᓕᑦ ᐊᒪᒪᓪ ᐊᐅᓕᑦᑎᖏᓕᓚᓴᓄᓕᑦ ᑎᐃᔨᒥᐊᖏᑕᐅᑐᐃᓇᓕᐅᖏᓐᓂᑦ, ᓄᓇᕗᑦ ᒪᓕᒪᓱᑯᖓᓂᓄᑦ, ᑯᓱᑯᑦ ᐃᑲᖏᑕᐅᓂᐊᖏᓐᖓᖅ ᖃᓄᖅ ᓴᓇᔨᒪᓂᐊᖏᒪᖓᓕᒃᑎᑦ ᖃᐅᔨᒥᐊᖏᑦᑯᐅᔨᐅᑐᐃᑎᖅ. ᑭᖓᔪᓂᑎᓐᓂ ᑐᓴᒪᓱᐅᔪᑦ ᒡᓕᑯᓄᖓᓪ ᑎᓐᓂᑯᓐᓄᑦ (Dillon) ᐊᑐᐃᓐᓇᐅᑎᑕᐅᓕᐅᖏᓪᓕᔪᑦ ᒡᒃᓇ ᐃᑲᖏᐃ ᑯᓱᑯᑦ ᓯᓚ ᐃᓕᓴᕐᔪᒡᒃᑦ ᐊᖏᖏᓖᒃᑐᒡᒃᑦ ᐊᒪᒪᓪ ᐃᓕᓴᐃᑦ ᓇᔪᖓᑕᖏᖓ ᐊᑯᐊᑦ ᖃᓄᖅᑕᓯᓚ ᖃᐅᔨᓴᖓᑕᐅᖏᓪᓕᖓᓕᒫᑦ. ᑭᓪᓕ, ᖃᐅᑯᐊ ᑎᓂᑯᑦ ᑐᓴᒪᑎᑕᐅᑕᓕᐅᖏᓕᑦ ᑕᓕᐅᖏᑕᐅᑕᓚᓴᑯᓂᑦ (DFO) ᓴᖏᐅᖓᑕᖓᖏᑎᑐᒃ ᐃᑲᖏᓴᓕᐅᔨᑕᐅᑯᓯᑦᓗᒍ, ᐊᑲᐅᖓᖏᓕᑐᐅᑕᐅᔪᖅ ᐋᖅᑭᑕᐅᔪᓐᓇᔨᓂᐊᖏᓪᓕᑦ.

ᑎᓕᓐ (Dillon) ᐃᑲᖏᑕᐅᓇᐅᔨᑐᓂᒃ ᐊᑕᐅᓯᐅᖓᖓᑦᑐᒥᒃ (ᐊᒥᓱᓪᓗᑎᒃ) ᖃᐅᔨᒋᐊᖃᑕᖏᓪᓕᔪᑦ ᐊᑐᖏᑕᐅᔪᓐᓇᔨᓂᒃ ᐃᑲᖏᑎᑦ ᓱᖃᑦ ᓴᖏᐅᖃᑕᖏᓐᖓᑦ ᐊᒪᒪᓪ ᐃᖃᓗᑕᑦ ᓇᔪᖃᑕᖏᓐᓄᒃ ᖃᐅᔨᓇᓱᖃᑕᖏᓪᓕᖓᓕᒫᑦ. ᐅᖃᖃᑎᖓᔪᐅᓇᐅᔨᑎᓪᓗᓂᑦ ᓄᓇᓕᖅᓂ ᒪᓕᒪᓕᓚᓴᓕᑦ ᐊᒪᒪᓪ ᐊᐅᓕᑦᑎᖏᓕᓚᓴᓄᓕᑦ, ᑎᓂᑯᑦ (Dillon) ᐃᓱᒪᓕᐅᓕᓕᐅᔨᑐᓂ ᐃᑲᖏᓱᐅᑕᐅᔨᖃᑦᓗᒍ ᐃᒪᓐᓇ ᑕᑭᑎᑎᓗᒍ 12.6 ᑎᑐᑦ, ᑕᐃᓐᓇ ᓱᑦᓗ 1.2 ᑎᑐᑦ ᓱᓕᑎᑎᓂᖅ ᐊᓱᔨᖏᑕᐅᔨᖃᑦᓗᒍ.

ᐃᑲᖏᑦ ᑐᓕᒫᓕᖏᑕᐅᓱᒪᓂᐊᖏᑐᖅ ᓴᐃᖅᓂᒃ ᑐᖅᓚᐃᖅᑎᑦᓗᒍ, ᓱᐅᖅᖏᑐᖏᑕᐅᓱᒪᓂᐊᖏᑦᓗᓂ ᐊᐅᓕᓕᔨᕆᖃᓕᒫᒍ. ᓇᓗᓂᑦ ᓴᖏᐅᓴᓕᐅᖏᓪᓕᖓᓕᒫᑦ ᐊᐅᓕᑦᑎᖏᓕᓚᓴᓄᓕᑦ 1 ᑎᑐᑦ ᓗᐊᒥᒃ ᓄᓇᒫᑦ ᐊᐅᓕᔨᔪᓐᓇᖅᑐᑦᑐᖅ ᒪᓂᖏᖅ ᑎᑭᓪᓗᒍ. ᓇᐸᓂᑦ ᑐᖅᓚᐃᑎᔨᐅᓂᑦ ᐊᐅᓕᓕᔨᒃᑕᐅᖃᓕᑦ ᐊᒃᓐᓂᖅᑐᑎᒍᑦ ᐊᑕᑎᖅᑐᑎᒍᓪᓗᓗᒍ, ᓱᐅᑦᖏᑦ ᑐᐊᐸᑦᓗᓐᓂᑦ ᓴᖏᑕᐅᑎᑕᐅᑦᓂᓕᑦ, ᐅᔨᖏᓴᐸᐊᓂᒃ ᒪᑐᑎᑕᐅᑎᒃᓴᓂᓗᓐᓂᑦ ᐃᓕᓴᐅᖃᐃ%ᓇᐅᓂᐊᖏᓪᓕᖓᓄᑦ ᓇᓚᐸᑦ ᑐᐃᖓᓕᓇᑦ ᐊᑕᑎᖅᑐᑦ. ᑕᓐᓇ ᓄᓇᒫᑦ ᐊᐅᓕᓕᔨᒃᑕᐃᓕᑕᐅᔪᖅ ᓱᐅᑦᖏᑦ, ᒪᑦᖏᑦ ᐅ%ᓴᓗᓐᓂᑦ ᑐᐊᐸᒃ ᓴᓴᖅᑭᑐᓂᖅᓂᓴᐅᓂᐊᖏᓪᓕᒫᑦ, ᑕᐃᒪᓕᐃᑕᑦᑐᒥᒃ ᐃᓕᓴᐅᖃᐃ%ᓇᐅᑐᒍᓂ.

ᐊᐸᖏᑦ ᖃᐅᓕᑎᑎᑕᐅᓱᒪᔪᖅ ᐃᑲᖏᑦ ᖃᐅᓕᓱᓂᓴᐅᓂᐊᖏᓪᓕᒫᑦ. ᐊᒥᑎᐅᐸᑦ ᓴᓂᑦᖏᓂ ᓄᓇᒫᑦ, ᐊᐅᓕᓕᔨᒃᑕᐅᖃᐅᔨᒍ, ᑕᓕᐅᔨᔪᑎᑐᒃ ᐃᓕᓴᐅᖃᐃ%ᓇᐅᓂᐊᖏᓪᓕᖓᓄᑦ ᑎᑎᑦᐅᔨᑕᐅᓂᖓᓐᓄ ᐋᖅᑭᑕᐅᓱᒪᔪᖅ, ᓱᐅᑦᖏᑦ, ᑐᐊᐸᒃ ᓴᖏᐅᑕᐃᓕᓚᓴᓄᓕᑦ ᐊᒪᒪᓪ ᐃᑲᖏᓪᓗᑦ ᐊᐅᓕᓕᔨᒃᑕᐃᓕᑕᐅᑕᓕᐅᖏᓪᓕᒫᓗᒍ.

ᐅᔨᑦᓴᐊᑦ ᒪᑦᑎᑕᐅᓱᓕᔪᐃᓕᓚᓴᓄᓕᑦ ᐃᑲᖏᑎᐅᐸᑦ ᓴᓂᑦᖏᓂ ᐃᓕᓴᐅᖃᑕᐃᓱᒪᓂᐊᖏᓪᓕᖓᓕᑦ, ᓄᓇᒥᒃ ᓴᓴᖅᑭᑐᓂᖅᓂᓴᐅᓂᐊᖏᓪᓕᒫᓗᒍ ᐊᒪᒪᓪ ᐃᑲᖏᓪᓗᑦ ᐊᐅᓕᓕᔨᒃᑕᐃᓕᑕᐅᑕᓕᐅᖏᓪᓕᒫᓗᒍ.

ᓄᓇᕗᑦ ᐊᖏᑎᐅᐸᑦ ᓴᓂᐊᖃᓕᖓᓐᓄ ᐊᒪᒪᓪ ᑕᐃᑦᑯᐊ ᑕᓕᓐᓂᔪᐊᖏᔪᖅᑕᖓᓕᑦ ᐃᑲᖏᑎᐅᐸᑦ ᓴᓂᐊᖃᓂ ᐃᓕᓴᐅᖏᓪᓕᖓᓕᑦ ᐃᓕᑦᑐᑦ ᑭᖓᔪᓂᑦᑎᓂᓴᐅᓂᐊᖏᓪᓕᖓᓕᑦ ᑯᓱ ᓴᖏᐅᓗᐊᓂᑯᑦ ᐊᒪᒪᓪ ᑭᓇᑐᐃᓐᓇᖅᑐᓂᒃ ᐊᒪᒪᓪ ᐃᖃᓗᓐᓂᑦ ᐃᓕᓴᐅᓂᓗ ᐊᒪᒪᓪ ᐃᓕᓴᐃᑦᓂᓕᑦ ᐃᑲᕐᓂᖅᑐᑦᓂᓕᑦ ᐃᓕᓴᐅᖃᐃᓇᓕᐅᖏᓪᓕᒫᓗᒍ.

ᑯᓱᑯᑦ ᐃᑲᖏᑕᐅᓂᐊᖏᓪᓕᖓᓄᑦ ᑲᖏᖏᓕᓚᓴᓄᓕᑦ ᐃᓕᒥᐅᑕᐅᑕᓕᐅᔪᓐᓇᖅᑐᑦ ᖃᓄᐃᓕᐅᔪᓐᓇᖅᑐᑦᓂᓕᑦ ᐃᑲᖏᑦ ᓴᖏᐅᑕᐅᑎᓪᓗᒍ ᐊᒪᒪᓪ ᓴᖏᐅᑕᐅᓂᐊᖏᓪᓕᖓᓕᑦ ᑕᐃᓕᐅᖃᐃᓇᓕᐅᖏᓪᓕᒫᓗᒍ.

ᐅᑯᐊ ᑕᒪᒃ ᐱᓕᕆᓕᖅᑕᐅᓕᒪᓚᐃᓂᐊᖏᓪᓕᖓᓕᑦ

- ᐃᑲᖏᓴᐸᐊᐅᓕᔨᒃᑕᐃᓕᑦᑐᑐᓂᓪ, ᐊᒪᒪᓪ ᐃᑲᖏᑦ ᓱᖅᑕᓕᐃᓕᑦᑐᑐᓂᓪ
- ᐃᑲᖏᖅ ᐊᖏᑎᒫᑦ ᑯᓱ ᓴᓂᐊᖃᓂ ᓱᖏᑕᐃᓕᓕᑕᐅᑕᓕᐅᖏᓪᓕᖓᓄᓪ.
- ᐃᓚᓐᓂᓕᑦ ᓇᔪᑕᐅᓕᓴᖓᓐᓄ ᐊᖏᓂᖏᓪᓕᖓᐅᓕᖏᓪᓕᖓᓄᓪ ᐃᓕᒫᓕᐅ ᑐᑦ 144 ᑎᑐᑦ ᖁᑦᑕᓚᓴᑎᑎᔨᒃ
- ᐃᓚᓐᓂᓕᑦ ᐊᑐᖏᑕᐅᔪᓕᓱᒥᐊᖏᓕᑦ ᐃᓚᓐᓇᐃᑦ ᕿᓘᓴᐃᖏᑕᐅᖓᓂᖏᓐᓂᓴᓕᐅᓚᓴᑎᑎᒃ.

ᐃᓱᓐᓂ