

## **Supplemental Technical Information Required for Water Crossings (linear/bridge/culverts)**

1. Waterbody name (English and Inuktitut) and location (Lat & Long)

Intermittent road-side drainage features associated with the Duval River.  
Location LAT 66° 8'55.33"N LONG 65°42'3.92"W.

2. Site photo, site map or air photo detailing location

See attached Google Earth picture and Photo 1

3. Other Agencies contacted to date

a) Nunavut Impact Review Board – decision attached dated July 24 2009  
b) Department of Fisheries & Oceans Canada – Fish Habitat Management - Fisheries Act section 35(2) authorization pending  
c) Transport Canada – Marine – Navigable Waters Protection Program – permit pending  
d) Nunavut Planning Commission – see attached response dated Sept 3 2009, from NPC stating that the two existing land use plans do not apply to the area surrounding Pangnirtung

4. Need for the project and alternatives considered

During the construction of a small craft harbour facility at the Hamlet of Pangnirtung, the dredging of the basin is located at the outlet of this drainage feature. The flows associated with this drainage feature will be re-routed to an existing culvert drainage feature located behind the Hamlet offices.

5. General condition of the site (s)

- i. Slope of banks  
Relatively flat featureless road side drainage feature
- ii. Description of substrate  
2-4 inch gravel, coarse substrates typical of roadway runoff
- iii. Vegetation (on banks, in-stream, to be removed)  
Little or no vegetation, roadside drainage
- iv. Expected flow rates during time of construction  
Intermittent watercourse – works to be done in the dry
- v. Channel meander pattern  
Straight roadside drainage feature

6. Existing Habitat

Impacts to fish habitat are not anticipated. The drainage feature outlets through existing perched culverts. The Duval River does not support migratory fish species such as arctic charr. Due to the intermittent nature of this drainage feature it does not support direct fish habitat.

## 7. Construction Details

Due to the intermittent nature of this drainage feature it does not support direct fish habitat. The works to re-direct the drainage feature will be undertaken in the dry.

Contingency plans will be in place to implement mitigation measures related to silt/sediment control in the event flows occur during the replacement of the existing culvert. These will be field-fitted to meet the specific conditions that may occur.

The new drainage feature will be lined with 2-4 inch gravel material.

Once the marshalling area construction is complete, the original flow will be redirected through an open channel overland through the marshalling area to the north east of the existing breakwater.

## 8. Bridge

Not applicable

## 9. Culvert Installation

Once the marshalling area construction is complete, the original flow will be redirected through a new culvert (Approximately 30 m of 900mm diameter CSP culvert) under the gravel road to the existing breakwater into an open channel overland through the marshalling area to the north east of the existing breakwater.

The redirected and final location of the drainage feature will follow the existing roadside drainage corridor (see attached drawing).

Due to the intermittent nature of this drainage feature it does not support direct fish habitat and