



## PARAGRAPH 35(2)(b) *FISHERIES ACT* AUTHORIZATION

**Authorization issued to**  
Alberta Transportation (*hereafter referred to as the "Proponent"*)

Attention to: Rizwan Hussain  
Main Floor Willowglen Business Park  
803 Manning Road NE  
Calgary, Alberta  
T2E 7M8

### Location of Proposed Project

Nearest community: Calgary  
Province: Alberta  
Name of watercourse: Bow River  
Longitude and latitude: Longitude: -114.009975, Latitude: 50.894225

### Description of Proposed Project

The proposed project of which the work, undertaking or activity authorized is a part involves:

Replacement of two existing bridges with two wider three-span bridges across the Bow River to accommodate future traffic on the South Calgary Ring Road. Bridge replacement will require the installation of two temporary instream berms to install the new piers and will additionally function as a working platform. The works will be constructed in three stages as follows:

- Installation of a 3,042 m<sup>2</sup> berm on the east bank with a 1,467 m<sup>2</sup> central berm extending towards the central pier in the existing eastbound bridge in July 2019 to facilitate removal of two piers (36 m<sup>2</sup>), extension of another pier (19 m<sup>2</sup>), and installation of a new pier (60 m<sup>2</sup>). Removal of the central berm will occur in October 2019 and with the remainder of the east berm being removed in April 2021.
- Installation of a 6,312 m<sup>2</sup> berm on the west bank in October 2019 to facilitate removal of one pier (18 m<sup>2</sup>), extension of another pier (19 m<sup>2</sup>), and installation of a new pier (60 m<sup>2</sup>). Removal of the west berm will occur in April 2021.

A new pedestrian bridge will be constructed over the Bow River approximately 230 m downstream of the bridge replacement, which will require the installation of two temporary instream berms to install the piers and function as a working platform. The works will be constructed in 1 stage as follows:

- Installation of a 563 m<sup>2</sup> berm on the east bank in April 2019 to facilitate the installation of a new pier (4 m<sup>2</sup>), with removal between July and September in 2020.
- Installation of a 1,073 m<sup>2</sup> berm on the west bank in April 2019 to facilitate the installation of a new pier (4 m<sup>2</sup>), with removal between July and September in 2020.

### Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in serious harm to fish

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in serious harm to fish, are:

- Installation and maintenance of two instream berms for the Stoney Trail Bridges covering up to 10,821 m<sup>2</sup> for three years.

- Installation /extension of four instream piers for the Stoney Trail Bridges covering 158 m<sup>2</sup>.
- Installation and maintenance of two instream berms for the pedestrian bridge covering 1,636 m<sup>2</sup> for 14 months.
- Installation of two instream piers for the pedestrian bridge covering 8 m<sup>2</sup>.

**The serious harm to fish likely to result from the proposed work(s), undertaking(s), or activity(ies), and covered by this authorization includes**

- Permanent alteration of up to 12,457 m<sup>2</sup> for a time period that spans the normal life history processes for resident fish species.
- Permanent alteration of up to 7,262 m<sup>2</sup> of habitat due to hydraulic impacts in the channel adjacent to and between the berms that will result in reduced functionality for the carrying on of normal life history processes for resident fish species.

### **Conditions of Authorization**

The above described work, undertaking or activity that is likely to result in serious harm to fish must be carried on in accordance with the following conditions.

1. **Conditions that relate to the period during which the work, undertaking or activity that will result in serious harm to fish can be carried on**

The work, undertaking or activity that results in serious harm to fish is authorized to be carried on during the following period:

From Date of Issuance to April 30<sup>th</sup>, 2021.

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) must be notified in advance of the expiration of the above time period. DFO may, where appropriate, provide written notice that the period to carry on the work, undertaking or activity has been extended.

The periods during which other conditions of this authorization must be complied with are provided in their respective sections below. DFO may, where appropriate, provide written notice that these periods have been extended, in order to correspond to the extension of the period to carry on a work, undertaking, or activity.

2. **Conditions that relate to measures and standards to avoid and mitigate serious harm to fish**

- 2.1 Sediment and erosion control:

2.1.1 On-shore erosion and sediment control measures must be in place and shall be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity.

2.1.2 Effective on-shore erosion and sediment control measures shall be in place prior to, during, and after construction and until revegetation or other mitigation measures are sufficient to control erosion.

2.1.3 Total suspended sediment and turbidity monitoring shall adhere to the plan outlined in Application for Authorization supporting documentation titled "Stony Trail Bridge Widening and Replacement over Bow River for *Fisheries Act* Authorization" dated March 2018 by Amec Foster Wheeler.

- 2.1.4 All riprap shall:

2.1.4.1 Be clean and free of fine materials and debris prior to placement and of sufficient size to resist displacement during design flood events; and,

- 2.1.4.2 Not be obtained from areas below the high water mark of any fish-frequented waters.
- 2.1.5 Should the need for dewatering arise, water shall be released into a well-vegetated area or settling basin and not directly into fish-frequented waters.
- 2.1.6 All spoil materials and debris shall be disposed of above the high water mark (HWM) such that it does not enter the watercourse. Any materials stored above the HWM shall be stabilized and properly disposed of.
- 2.1.7 Work that could result in sedimentation shall stop during heavy or persistent rainfall.
- 2.2 List of measures and standards to avoid and mitigate serious harm to fish:
  - 2.2.1 Berm size, location, and timing of construction and removal shall adhere to plans outlined in the Application for Authorization and supporting documents. Any updates to these plans shall be reviewed and approved by DFO.
  - 2.2.2 In-water activity shall be timed to respect the restricted timing windows of May 1<sup>st</sup> to July 15<sup>th</sup> and September 16<sup>th</sup> to April 5<sup>th</sup> of any year to protect spawning fish, their incubating eggs, and the larval stages of fish.
    - 2.2.2.1 In year one of construction works (2019), in-water activity shall extend into the fall restricted activity period by one month, with the construction of the in-stream berms for the Stoney Trail bridges to be completed by October 15<sup>th</sup>, 2019. Should further extension into the fall restricted activity be required, the Proponent shall consult and get written approval from Alberta Environment and Parks and DFO.
  - 2.2.3 Any natural structure that contributes to fish habitat before construction, including but not limited to: woody debris, root wads, and large boulders, shall be stockpiled and replaced as close to their original positions as possible after construction.
  - 2.2.4 For each phase of the berms, the footprint of the berm shall not exceed an area greater than 5% of the design area without prior notification to and approval by DFO.
  - 2.2.5 Stockpiles of berm material shall be placed on a clean surface, free of soils and debris to avoid contaminating clean material. Berm material shall be washed onsite if necessary to ensure that it is free of fine material before placement instream.
  - 2.2.6 Each time berm material placement or removal occurs, the activity shall begin slowly in a manner that maximizes the ability of fish to leave the area.
  - 2.2.7 Placement and removal of each berm shall not exceed a week in-water work period without prior notification to and approval by DFO.
  - 2.2.8 Pre-construction water depths within the berm footprint will be restored after the berm is removed.
- 2.3 Disturbed areas associated with the construction site shall be revegetated as soon as possible with native vegetation. Any areas to be protected shall be clearly delineated to prevent accidental encroachment.
- 2.4 Equipment shall arrive on site in a clean condition and be maintained free of fluid leaks, invasive species and noxious weeds. Alberta Environment and Park's Interim Guidelines for the Disinfection of Fisheries Equipment to Reduce the Spread of Whirling Disease in Southern Alberta shall be followed.
- 2.5 Equipment in or near fish-frequented waters shall be operated, refuelled, and serviced in a manner that prevents spills, leaks or wash water from entering fish-frequented waters.
- 2.6 A response plan shall be in place in the event of a sediment release or spill of a deleterious substance. A spill kit and spill contaminant provisions shall be kept on site at all times. Appropriate personnel at the worksite shall be familiar with the location and use of the spill kit and spill response plan.
- 2.7 Areas used for stockpiling construction materials or other equipment storage shall be above the average annual high water level and, if possible, in areas which have already been disturbed or are devoid of vegetation.
- 2.8 The following contingency measures shall be put in place if monitoring required in condition below indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful:

- 2.8.1 On-shore erosion and sediment control measures shall be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity.
- 2.8.2 Placement of additional armouring material shall occur if it is deemed that berm material cannot withstand river flow velocities.
- 2.8.3 The berm shall be increased in height if it is predicted that water or ice may overtop the berm.
- 2.8.4 Work shall be stopped if total suspended solid and turbidity thresholds identified in 2.1.3 are reached.
- 2.9 Dates by which these measures and standards shall be implemented: Measures and standards to avoid and mitigate serious harm to fish shall be implemented before, during, and following in-water work.
- 3. **Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate serious harm to fish**
  - 3.1 Monitoring of avoidance and mitigation measures: The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO one month following in-water installation and removal works associated with the berms, and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization. This shall be done, by:
    - 3.1.1 Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the serious harm to fish to what is covered by this authorization.
    - 3.1.2 Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.
- 4. **Conditions that relate to the offsetting of the serious harm to fish likely to result from the authorized work, undertaking or activity**
  - 4.1 Scale and description of offsetting measures: 3,462 m<sup>2</sup> of fish habitat restoration works shall be undertaken upstream and downstream of the bridge location on the west bank. The proposed offsetting measures shall be carried out in accordance with the measures set out in the Proponent's offsetting plan dated December 17<sup>th</sup>, 2018 in the document titled "Fisheries Act Authorization – Application Addendum #1" approved by DFO, hereafter referred to as the offsetting plan.
  - 4.2 Offsetting criteria to assess the implementation and effectiveness of the offsetting measures: All fish habitat offsetting measures shall be completed and functioning according to the criteria below:
    - 4.2.1 Offsetting measures shall be completed by October 15<sup>th</sup>, 2022. Effectiveness of the offsetting measures shall be assessed according to the measures detailed in the approved offsetting plan.
  - 4.3 Contingency measures: If the results of monitoring as required in condition 5 indicate that the offsetting measures are not completed by the date specified and/or are not functioning according to the above criteria in 4.2, the Proponent shall give written notice to DFO and shall implement the contingency measures and associated monitoring measures.
    - 4.3.1 In the event that contingency measures are required and an adaptive management approach is adopted, details shall be reviewed and approved in writing by DFO prior to implementation.
  - 4.4 The Proponent shall not carry on any work, undertaking or activity that will adversely disturb or impact the offsetting measures.
  - 4.5 Other conditions related to offsetting: Any alterations to the plans identified in 4.1 shall be reviewed and approved in writing by DFO prior to implementation.

**5. Conditions that relate to monitoring and reporting of implementation of offsetting measures (described above in section 4):**

5.1 Schedule(s) and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the approved timeline and criteria in the offsetting plan:

5.1.1 The Proponent shall report to DFO on whether the offsetting measures were conducted according to the conditions of this authorization by providing a report to be submitted no later than January 15<sup>th</sup>, 2023 .

5.2 The Proponent shall engage in post-construction monitoring of the offset works for a period of three years following the completion of offsetting works with reports submitted to DFO by December 31<sup>st</sup>, 2023, December 31<sup>st</sup>, 2024, and December 31<sup>st</sup>, 2025.

**Authorization Limitations and Application Conditions**

The Proponent is solely responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraph 35(2)(b) of the *Fisheries Act*, R.S.C., 1985, c.F. 14 to carry on the work(s), undertaking(s) and/or activity(ies) that are likely to result in serious harm to fish as described herein. This authorization does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

This authorization does not permit the deposit of a deleterious substance in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

This authorization does not permit the killing, harming, harassment, capture or taking of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 32 of the SARA), or the damage or destruction of residence of individuals of such species (s. 33 of the SARA) or the destruction of the critical habitat of any such species (s. 58 of the SARA).]

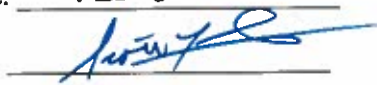
At the date of issuance of this authorization, no individuals of aquatic species listed under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act* and may result in charges being laid under the *Fisheries Act*.

This authorization must be held on site and work crews must be made familiar with the conditions attached.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred, or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization shall advise DFO in advance.

Date of Issuance: **FEB 04 2018**

Approved by:   
 Scott Gilbert  
 A/Regional Director General  
 Central and Arctic  
 Fisheries and Oceans Canada

