COUNCIL REPORT

18 STREET OVER HORSEHILLS CREEK BRIDGE REPLACEMENT

Environmental Impact Assessment

Recommendation

That Urban Planning Committee recommend to City Council:

> That the Environmental Impact Assessment for the 18 Street over Horsehills Creek Bridge (B081) Replacement Project, as outlined in Attachment 1 of the February 11, 2025, Integrated Infrastructure Services report IIS02605, be approved.

Requested Action	Council decision required		
ConnectEdmonton's Guiding Principle		**ConnectEdmonton Strategic Goals**	
CONNECTED This unifies our work to achieve our strategic goals.		**Regional Prosperity**	
City Plan Values	ACCESS		
City Plan Big City Move(s)	A rebuildable city	**Relationship to Council's Strategic Priorities**	Mobility Network
Corporate Business Plan	Serving Edmontonians		
Council Policy, Program or Project Relationships	• Bridge Renewal Program • Bylaw 7188 - North Saskatchewan River Valley Area Redevelopment Plan (NSRV ARP)		
Related Council Discussions	• N/A		

Executive Summary

- This report requests City Council's approval of the Environmental Impact Assessment (EIA) included in Attachment 1 for the planned 18 Street over Horsehills Creek Bridge (bridge

number B081) replacement (the Project) within the North Saskatchewan River Valley. Construction of the new replacement bridge is anticipated to begin in 2025, funded as part of the City's Bridges & Auxiliary Structures - Renewal Program (CM-24-0000).

- The EIA describes the Project's potential environmental impacts on surrounding wetland areas, the Horsehills Creek watercourse beneath the bridge, vegetation, fish and wildlife habitats. It concludes that any possible adverse effects related to the construction of the replacement bridge can be tempered by applying appropriate mitigation measures during construction.
- Approval of this report demonstrates the City's commitment to environmental reviews, environmental permitting, and environmentally robust design, as well as its commitment to ensuring the City's environmental stewardship objectives are met during the construction of this Project.

REPORT

The 18 Street over Horsehills Creek bridge was originally built in 1961. The bridge is approaching the end of its service life, as evidenced by the tilting of the abutments, extensive rotting and cracking of the timber foundation, and concrete deterioration.

At the bridge location, 18 Street is a low volume, rural gravel road carrying two-way traffic in a north-south direction. Horsehills Creek is a small meandering creek that flows south parallel to 18 Street before being joined by another stream and bending sharply east at the crossing location.

Horsehills Creek is part of the North Saskatchewan River Valley and is within the North Saskatchewan River Valley Area Redevelopment Plan (ARP), Bylaw 7188, thereby triggering the need for an environmental review under Bylaw 7188.

While it will be built slightly wider to meet current City design standards, the replacement bridge will occupy a similar footprint as the existing bridge. The new bridge and widened approach roads will generally fit within the existing road right-of-way. A small area of land will need to be acquired from a private landowner to accommodate a portion of the new structure, along with a permanent easement to accommodate the side slopes. To facilitate construction access, additional space will be required during construction, extending beyond the right-of-way width. Land negotiations are currently underway.

The Environmental Impact Assessment (EIA) included in Attachment 1 outlines the current conditions in the project area, evaluates potential risks, and identifies adverse impacts. It further focuses on construction activities that must be eliminated, minimized or mitigated through design and construction measures.

Potential environmental impacts are anticipated to be localized within the project area. The project is anticipated to result in minimal cumulative impacts that can be mitigated by applying mitigation measures provided in the EIA.

Some of the potential impacts and mitigations identified in the EIA include:

- Geotechnical and soil contaminants:

    - Impacts include alteration of banks as a result of earthworks during construction and potentially finding contaminated soils during construction.
    - Mitigations include limiting the project's footprint and protecting the banks from erosion or damage. Further mitigation includes removing potentially contaminated soils from the project area.
- Hydrology and Surface Drainage:
    - Impacts include alteration of Horsehills Creek drainage patterns and erosion in the creek during construction.
    - Mitigations include implementing a site-specific Erosion and Sediment Control (ESC) plan to prevent erosion and revegetating side slopes to deter sedimentation from entering the creek. The proposed bridge and approach roads will drain away from the creek, towards well-vegetated areas to allow sediment to settle out before entering the water.
- Fish and fish habitat disturbance:
    - Impacts include fish mortality, alteration of in-stream fish and riparian habitats and sedimentation of the watercourse during construction.
    - Mitigation measures include measures to deter fish from entering the work area, conducting fish rescue (if required) and/or blocking fish from entering the in-water work areas. Further mitigation includes reducing vegetation removal and minimizing in-water work requirements, as well as implementing erosion control to prevent the release of suspended sediment.
- Wildlife and wildlife habitat disturbance:
    - Impacts include disturbance to breeding or overwintering species during the general nesting period and to nesting or denning wildlife.
    - Mitigation measures include reviewing the timing of vegetation clearing and tree removal to minimize disruption to wildlife, including scheduling demolition and vegetation clearing to occur outside the nesting period.
- Vegetation loss, tree damage and invasive species:
    - Impacts include vegetation loss resulting from construction activities and the potential introduction of weeds and invasive species. Notably, no rare plants or provincial environmentally significant areas were observed within the project area.
    - Mitigations include minimizing native plant removal and implementing a plan for revegetation with native species similar to existing conditions.
    - Further mitigations include fencing to avoid disturbing any natural habitat beyond the project workspace, weed control prior to, during, and following construction, and equipment cleaning and soil handling procedures.
- Wetlands:
    - Wetlands west and east of the bridge replacement area will be impacted by the proposed construction work.
    - Wetland compensation fees were paid, and approval under the Alberta *Water Act* was required. Approval was issued in November 2024 with the condition that a Siltation and

Erosion Control Plan be prepared prior to carrying out project activities. Per regulatory requirements, a certificate of completion will be prepared at the end of the project.
    - Further mitigations include protecting wetland areas outside the construction area.
    - Further mitigation measures include implementing an Environmental Construction Operation (ECO) Plan, and Spill Response Plan and Erosion and Sediment Control (ECS) Plan to limit the potential for off-site siltation of nearby waterbodies.
- Ecological connectivity/wildlife movement:
    - The replacement bridge will improve conditions for wildlife passage compared to existing conditions by providing a more open environment for small and medium species.
    - Wildlife passage will be maintained during construction. Construction activities will be limited during the day, lighting will be confined within the construction area, and any temporarily disturbed areas within Horsehills Creek will be revegetated.
- Historical Resources:
    - The project received *Historical Resources Act* approval from Alberta Culture, Multiculturalism and Status of Women (ACMSW) on April 2, 2024. There were no requirements for archaeological, palaeontological, and Indigenous traditional use sites and provincially designated historic resources.
    - If historical or archaeological resources are discovered during construction, all work will be immediately suspended, and ACMSW will be contacted.

Budget/Financial Implications

The replacement of the 18 Street over Horsehills Creek Bridge is funded through the City's Transportation: Bridges & Auxiliary Structures - Renewal Program (CM-24-0000) as part of the 2023-2026 Capital Budget.

Legal Implications

Section 3.4.3 of the North Saskatchewan River Valley Area Redevelopment Plan requires City Council to approve the attached EIA (Attachment 1) for the planned construction of the 18 Street over Horsehills Creek Bridge replacement before the proposed development can proceed to construction.

Community Insight

18 Street provides convenient access to Manning Drive and is most commonly used by local residents for access and for moving farming equipment. The engagement approach was focused on targeted stakeholder engagement during the preliminary and detailed design phases of the project. Based on a review of the project, a Duty to Consult was not required.

Introductory project letters were sent to local residents and external stakeholders, including the Nanaksar Gurdwara Gursikh Temple and Edmonton River Valley Conservation Coalition (ERVCC). Over the duration of the design process, local residents shared email feedback, and meetings (a combination of virtual and in-person) were held with the Nanaksar Gurdwara Gursikh Temple and ERVCC. This input was then considered part of the design process.

Project information will continue to be shared with area residents, stakeholders and the general public. The project webpage will be updated with the most up-to-date information. Pre-construction communication will be provided to local residents to outline construction impacts and detours in advance of the construction start date.

GBA+

During the bridge replacement design process, the project team connected with local residents who expressed interest in the project construction timelines and detour routes when access across the 18 Street bridge would be disrupted. The residents requested early communication about construction impacts and detour routes to provide them with lead time to make alternate arrangements during the harvesting season. The project team committed to providing early communication to the residents and informing them about construction timelines and detour routes when the information becomes available.

To mitigate or remove barriers to inclusion, the following was implemented:

- Accessibility / Safety:
  - The new bridge structure will be wider (6.4m to 9.0m) to meet current City design standards. The widening of the bridge (wider shoulders and driving surface) will provide safer access.
- Safety Equity Measures:
  - As part of the detailed design, the Project team created a detour plan for traffic to ensure safe operation during bridge construction;
  - Special consideration was given during the detour route selection and timely communication with the local farmers to ensure they could prepare all necessary arrangements for the upcoming harvesting season;
  - Detour signage will be visible with font size adjusted to driver speed to ensure it is clear for the users.

Environment and Climate Review

The EIA report (Attachment 1) for the 18 Street over Horsehills Creek Bridge replacement project describes the pre-construction environmental conditions for the valued ecosystem components and outlines mitigation measures for environmentally sensitive areas. The mitigation measures will be implemented during the project. The following is of note:

- Soil testing conducted for the limited phase II Environmental Site Assessment (ESA) found soil contaminated with hydrocarbons, metals and elevated salinity within the project area. Excavated soils contaminated with hydrocarbons and metals would require disposal at a landfill, and soils that are only impacted by salinity may be used within the project area under environmental regulations. The EIA report identifies that a procedure will be developed for managing contaminated soils for this project.
- A list of all regulatory approvals and notifications submitted for the project is provided in the EIA report. While these approvals and notifications are necessary, the project must also comply with applicable environmental statutes, regulations, policies and

standards. Key environmentally sensitive areas of interest that require specific regulatory protection are wetlands, fish and fish habitat:

- Due to the potential impact on Horsehills Creek, the Department of Fisheries and Ocean (DFO) had to review the project. A letter of advice from DFO was issued in October 2024 to proceed with the project, noting that the planned mitigation measures to protect fish and fish habitat were appropriate.
- Because wetland alteration is expected, and the road widening may potentially disrupt Horsehills Creek, submission of wetland compensation fees and approval to widen the road was required under the *Water Act,* RSA 2000, c W-3. The mitigation measures and compensation needs were already identified as part of this EIA report. Alberta Environment and Protected Areas issued approval to proceed with the project, stating that a Siltation and Erosion Control Plan should be prepared prior to carrying out project activities. A certificate of completion will be prepared at the end of the project per regulatory requirements.
- Adherence to the EIA's mitigation measures will support the City in meeting compliance requirements.

Attachment

1. Environmental Impact Assessment - 18 Street over Horsehills Creek Bridge Replacement