

**Lewvan Drive Interchange Project - Implementing Federal  
Environmental Assessment Practices**

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**Paper prepared for presentation at the Environmental Session  
of the Transportation Association of Canada  
2010 Annual Conference and Exhibition,  
Halifax Nova Scotia**

## **Abstract**

The government of Canada has implemented new measures and undertaken targeted adjustments to the federal environmental assessment process for projects funded under specific federal funding programs. This initiative, specifically schedule 4 of the *Exclusion List Regulations 2007*, is consistent with efforts to focus federal environmental assessments and allow proponents to accelerate projects.

Transport Canada Surface Infrastructure Programs, responsible for managing a number of federal funding programs for highways, borders, railways, transit and federal bridges has been tasked, along with other federal departments to team up with Provinces and private sector proponents in implementing Canada's new regulatory tools.

The Lewvan Drive Interchange project underway in Regina, Saskatchewan is a project that highlights how Canada's new regulatory tools have been put into practice and achieved successful results. Saskatchewan Ministry of Highways and Infrastructure (MHI), the proponent, applied for funding under the Building Canada Fund of the federal governments Building Canada Plan for this project.

This project was excluded from a screening level environmental assessment under schedule 4 of the *Exclusion List Regulations 2007* on July 16, 2009. Despite no screening level assessment under *Canadian Environmental Assessment Act (CEAA)* for the project, wetland loss was identified during the exclusion process as a potential concern. Saskatchewan MHI carried this issue forward beyond the exclusion decision where it eventually resulted in a wetland compensation plan being agreed to and implemented by Ducks Unlimited Canada on December 2, 2009. The Lewvan Drive Interchange project highlights how a collaborative effort between federal and provincial governments and an non-government organization resulted in successful management of environmental responsibilities for a project.

## **Disclaimer**

This paper represents the views/opinions of the authors and does not necessarily reflect the views/opinions of the agency.

## **Introduction**

### *Project Details*

The Lewvan Drive Interchange Project (Project) involves the construction of a modified directional interchange at the intersection of Highway No. 1 and Lewvan Drive in the southwest boundaries of Regina, Saskatchewan as shown in Figure 1. The project area lies within an area that has been previously disturbed through cultivation, road construction, utility construction and land development.

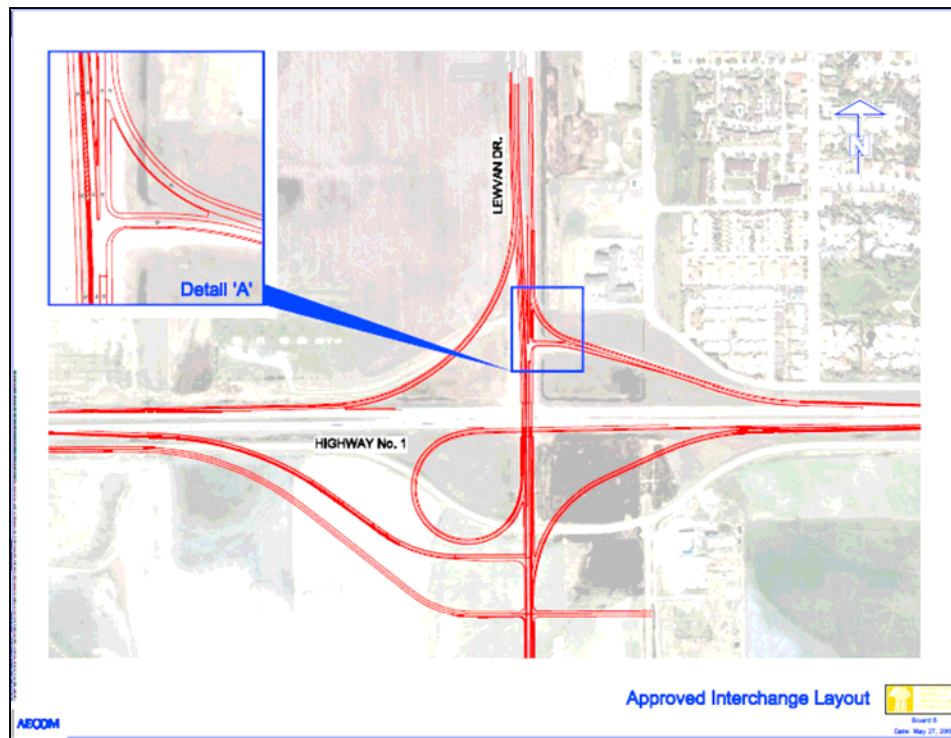


Figure 1: Interchange Layout

Currently there are safety concerns at the intersection of Highway No. 1 and Lewvan Drive due to the high volume of traffic on both roadways. Further growth in traffic at the intersection is expected with the City of Regina's southwest sector development.

The interchange is required to accommodate current and future traffic levels and movements on both Highway No. 1 and Lewvan Drive, provide free-flow conditions on both roadways and significantly increase the safety of this intersection by reducing overall collision rates by approximately 53%. There are also other benefits to this Project as it will improve mobility and connectivity to provincial, national and international transportation systems and markets, attract development to the southwest sector of

Regina, reduce travel time delay, increase fuel consumption savings, and directly support access to and from the Regina Airport.

MHI commissioned AECOM to undertake the functional and detailed design for the interchange, which included obtaining environmental approvals for the Project. Construction commenced in 2009 and it is anticipated the interchange will open to traffic in October 2011. Work undertaken in 2009 included utility relocations, construction of the exit ramp in the NW quadrant and detour road to accommodate traffic during construction, and loading of the overpass embankments. Work in 2010 will include completion of the ramp and roadway in the NE quadrant, grading of the ramps in the SE and SW quadrants, upgrading of the south service road and commencement of bridge construction. Work in 2011 will include completion of all surfacing works and bridge construction.

The Lewvan Drive Interchange Project is a partnership project between the Government of Canada and the Province of Saskatchewan. The project was approved for shared funding with federal contributions to be provided under the Building Canada Fund. The Project is estimated to be \$34 million of which up to \$16 million of eligible costs will be contributed by the federal government.

#### *Overview of the Federal EA process*

All Federally funded projects are subject to the requirements of the *Canadian Environmental Assessment Act* (CEAA) (the Act) as financial assistance is one of four 'triggers' for the Act. As such an environmental assessment must be undertaken for projects that trigger the Act. For federal departments, if the Act is triggered under a departmental responsibility then that department becomes identified as a responsible authority under CEAA.

Under CEAA, projects can be assessed in three different streams:

- A screening level assessment;
- A comprehensive study; or
- A panel/mediation review.

Projects that trigger the Act can also be excluded from one of these assessment types under the *Exclusion List Regulations, 2007* provided that specific project criteria is met which would ensure with a great deal of certainty that no significant environmental effects would result from the project or undertaking.

The Lewvan Drive Interchange Project was excluded under schedule 4 of the exclusion list regulations. The Project met all the criteria under section 9 of schedule 4 for the proposed construction, installation, operation, expansion, or modification of an overpass, a grade separation, a road intersection or a highway interchange.

### *Exclusion Review and Analysis*

As noted above, the Project was excluded under schedule 4 of the Exclusion List Regulations. Schedule 4 of the Exclusion List Regulations is a specific schedule (1 of 4 schedules) aimed at projects and classes of projects funded under certain infrastructure programs and carried out in places other than national parks, park reserves, national historic sites or historic canals.

The specific exclusion criteria with which the Project was excluded under is the following:

*9. The proposed construction, installation, operation, expansion or modification of an overpass, a grade separation, a road intersection or a highway interchange,*

*(a) if the project is to be carried out within 300 m of a transportation or utility right-of-way or on land zoned for transportation or industrial use; and*

*(b) if the project*

*(i) is not to be carried out within 250 m of an environmentally sensitive area, or*

*(ii) is to be carried out within 250 m of an environmentally sensitive area and*

*(A) complies with any law and any management plan, in relation to the environmentally sensitive area, and*

*(B) in the case of an environmentally sensitive area protected by a federal government body, measures are in place to protect the area and the project has a total cost, other than the cost of land, below \$10 million.*

These criteria are used to assess the merits of projects in its applicability for exclusion. The Lewvan Drive Interchange Project met each of these points as was evident in the exclusion form completed by the MHI and submitted to Transport Canada in May of 2009 (See appendix 1 for a copy of the exclusion form).

As a responsible federal authority under the Act, Transport Canada ensures that all projects for which funding is provided have no significant environmental effects resulting from all phases of a proposed project. The exclusion form is the tool with which TC requests from proponents the information required to determine if a potential significant effect could arise. Submitting a complete exclusion form in a timely manner as MHI did in the case of this Project is the most crucial piece of information and the starting point for Transport Canada and responsible authorities to review a potentially excludable project. The exclusion form identifies areas of federal interest and leads responsible authorities to any potential environmental concerns that a project may have.

For the Lewvan Drive Interchange Project the exclusion form identified that this Project would likely involve in-water works. With MHI identifying in-water works early on in the review process, Transport Canada was afforded the time to properly evaluate any potential impacts. Despite a project being in line with all the exclusion criteria above, responsible authorities have duties under other pieces of federal policy and legislation. For Transport Canada Surface Infrastructure Programs projects, the *Federal Policy on Wetland Conservation*, the *Fisheries Act*, and the *Species at Risk Act* are three major pieces of policy and legislation that are common with infrastructure projects.

The exclusion form identified to Transport Canada that MHI needed further evaluation of the in-water works to identify if there would be a potential environmental impact from the Project. Early in the review process it was clear that this would be the only potential environmental concern for the Project, which was enabled by the exclusion form that focuses Federal reviews to the potential issues.

### *Wetland Evaluation and Mitigation*

MHI, through its consultant AECOM, undertook a field analysis in June 2009 to better understand the potential impacts of the Project on the project area. AECOM completed a wetland classification, terrestrial inventory and wildlife ground survey of the project area. Based on the survey, three separate wetlands of interest were noted in the project area: a semi-permanent wetland (Wetland #1), a permanent wetland (Wetland #2) and a temporary wetland (Wetland #3) as shown in Figure 2.

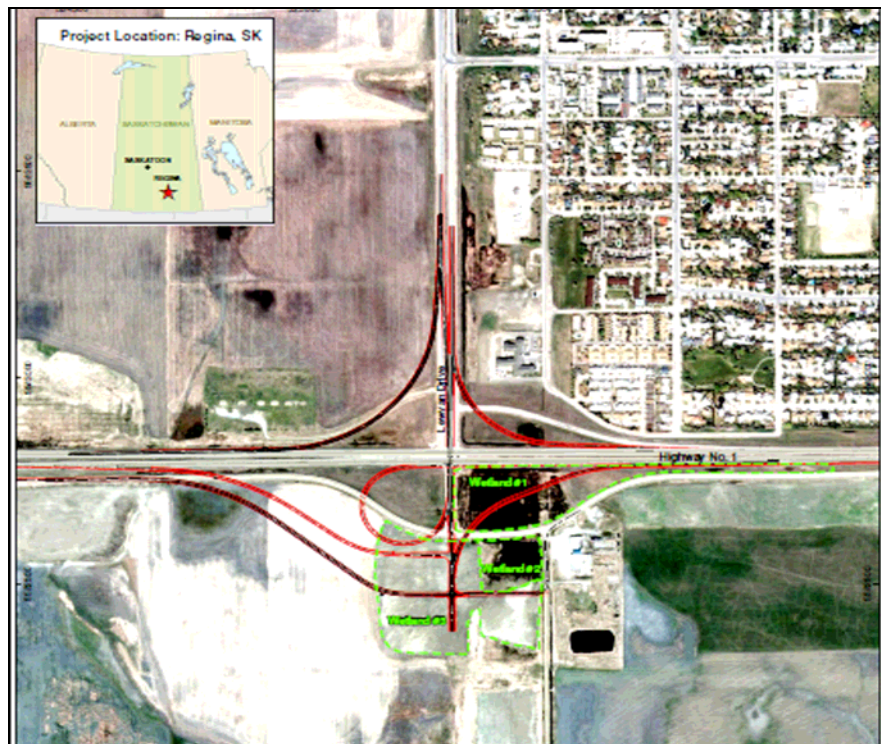


Figure 2: Existing Wetlands

The three wetlands would be impacted by the construction of the interchange resulting in a total loss of 10.3 ha of non-functioning or supporting wetland area. The wetlands ranged from Class II to Class V based on the Stewart and Kantrud (1971) classification system. As the Project was impacting wetland function, the *Federal Policy on Wetland Conservation* could be applied to the Project. Based on standard practice under this policy and the class of wetland loss, wetland compensation at a ratio of 3:1 was provided, resulting in a restoration of 30.9 ha of wetland area.

The Ministry looked to compensate for the lost wetlands and invited Ducks Unlimited Canada (DUC) to act as the approved wetland compensation agency for the Project. DUC accepted the invitation and provided a proposal to undertake the necessary restoration work at a cost of \$77,250 which included land procurement, legal fees, engineering design, construction, long term monitoring and administration. MHI entered into an agreement with DUC in December 2009 to complete the restoration of the wetlands.

As the lost wetlands are located within the Assiniboine River Major Basis, DUC recommended restoring the 30.9 ha of wetlands within the same basin area. DUC will be making the necessary arrangements within a suitable area for the restoration under the agreement MHI has with them.

#### *Approval of Exclusion*

Once the in-water works were identified, Transport Canada relied on the expertise of Environment Canada for advice and guidance on this Project as the in-water works were to take place within a number of permanent and seasonal wetlands in the Regina area as detailed above. Environment Canada advised that the Project should be undertaken in line with the *Federal Policy on Wetland Conservation* and the principal of 'no net loss' of wetland function. Any loss of wetland function that resulted from the Project was to be balanced by the creation or rehabilitation of wetlands that provide similar function within the region.

This recommendation from Environment Canada allowed Transport Canada to request from MHI that compensation for the loss of the outlying wetlands in the project area be properly addressed and as described in the above section, MHI was well underway in developing an approach to mitigate any lost wetlands from the Project. With the mitigation approach of the only identified environmental concern well underway and with the project meeting all exclusion criteria, Transport Canada as the only responsible federal authority for the Project was satisfied that the Project should be approved for exclusion.

Transport Canada issued a letter to MHI on July 16<sup>th</sup>, 2009 with the signed Exclusion form, thereby providing Transport Canada's approval that the Project did not require an environmental assessment and the Project could proceed with construction provided all other approvals are complete.

## **Conclusions**

### *Benefits to Transport Canada and MHI*

Transport Canada and MHI experienced a number of benefits as a result of the process that was undertaken during the Lewvan Drive Interchange Project. This process led to a focused review, provided substantial timesaving's to both organizations and ensured that the necessary mitigation measures would be achieved.

The exclusion process enabled a focused review of the potential environmental issues from the Project. Early in the review process, the exclusion form completed by MHI allowed Transport Canada to focus attention to areas of the project that could require project specific mitigation, beyond that of highway best management practices. This led to significant timesavings as Transport Canada, with advice from Environment Canada, could advance the project through the exclusion process and MHI could begin construction in a timely manner.

Once approved, the timesavings from not undertaking a full environmental assessment allowed Transport Canada staff to focus on other requirements for this and other projects that the Surface Infrastructure Group provide funding towards. The Lewvan Drive Project is a noteworthy example of how the exclusion process can accelerate federal review while ensuring that environmental issues receive the attention and due diligence they deserve.

## **Acknowledgements**

The authors would like to acknowledge AECOM for the photos of the wetland and project area.



**Appendix 1**

**Exclusion Form and Package for the Lewvan Drive Project**



## BUILDING CANADA PLAN: IDENTIFICATION OF FEDERAL EA REQUIREMENTS

### SECTION 1: Project Information

Project name: Highway No. 1 and Lewvan Drive Interchange  
 Construction start: Summer/Fall 2009  
 Construction end: Summer 2010 to Fall 2011  
 Funding program: Building Canada Fund

### Project Class:

- |   |   |
|---|---|
| <input type="checkbox"/> Intelligent transportation systems (s.3)       | <input type="checkbox"/> Overpass or grade separation (s.9)                   |
| <input type="checkbox"/> Buildings (s.5)                                | <input checked="" type="checkbox"/> Intersection or highway interchange (s.9) |
| <input type="checkbox"/> Transit facilities (s.6)                       | <input type="checkbox"/> Road or highway widening (s.10)                      |
| <input type="checkbox"/> Transit/rapid bus transit/rail systems (s.7-8) | <input type="checkbox"/> Bridge widening (s.11)                               |

### SECTION 2: Identification of Federal EA Requirements:

	Yes	No
1. Does the project involve works or activities that are to be carried out near, on, under, over, through or across a water body such as a wetland, stream, river or lake? If yes, <ul style="list-style-type: none"> <li>Is the project likely to occur within 30 m of that water body?</li> <li>Is the project likely to involve in-water works?</li> <li>Is the project likely to require the loss of any wetland function?</li> </ul>	X X X <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> X
2. Is the project to be carried out within 250 metres of a federally designated environmentally sensitive area? If yes: <ul style="list-style-type: none"> <li>Is the total project cost, not including land, less than \$10 million and are measures in place to protect the federally designated area? If yes, please complete Section 3 of this form.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>	X <input type="checkbox"/>
3. Is the project to be carried out within 250 metres of a provincially designated environmentally sensitive area? If yes: <ul style="list-style-type: none"> <li>Does the project comply with any provisions of, or made under, provincial laws and any management plan for that area?</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>	X <input type="checkbox"/>
4. If the project involves modification or widening of an existing road or public highway, or the modification or widening of a bridge (including the approaches) will the project involve the addition of more than two lanes?	<input type="checkbox"/>	<input type="checkbox"/>
5. If the project involves a public transit facility/bus rapid transit system; the modification or expansion of a public transit or railway system; an overpass, grade separation, road intersection or highway interchange; or, modification or widening of a road or public highway, will the project be carried out entirely within 300 metres of an existing transportation or utility right-of-way or on land zoned for transportation or industrial use?	X	<input type="checkbox"/>
6. Is the project subject to the requirements of provincial EA legislation?	<input type="checkbox"/>	X
7. Are there Aboriginal groups or communities in the project area <sup>ii</sup> ? If yes: <ul style="list-style-type: none"> <li>Could the project have adverse effects on those Aboriginal groups?</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>	X <input type="checkbox"/>



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**SECTION 3: Federally-designated Environmentally Sensitive Areas<sup>ii</sup>**

Please identify what measures will be put in place to protect the environmentally sensitive area (e.g. noise walls, wildlife corridors, wildlife connectivity and habitat plans, wetland compensation plans, sediment and erosion control measures, and construction best management practices). If no measures are expected to be required, please explain:

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**SECTION 4: Proponent Information**

Proponent: Saskatchewan Ministry of Highways and Infrastructure  
 Contact: Raeleen Walbaum, P.Eng.  
 Signature: *Raeleen Walbaum*  
*The Proponent has provided accurate project information and is committed to implementing the measures identified in Section 3 (if applicable).*

**SECTION 5: Transport Canada Decision**

	Yes	No	
Does the project meet exclusion criteria? <i>Please identify appropriate exclusion:</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the project eligible for a substituted EA process?	<input type="checkbox"/>	<input type="checkbox"/>	N/A

Departmental official: MANON BARIL

Date: JULY 16/09

<sup>i</sup> "environmentally sensitive area" means an area protected for environmental reasons in regional or local land use plans, or by a local, regional, provincial or federal government body.

<sup>ii</sup> Please indicate whether there are Aboriginal communities located in or near the project area, and/or if there are potential or established rights that might be adversely affected in the project area.



Place de Ville  
Ottawa  
K1A 0N5

Your file Votre référence

Our file Notre référence  
RDIMS no 5047279

Raeleen Walbaum  
Project Manager  
HISRRC - Regional Construction  
Ministry of Highways and Infrastructure  
1630 Park Street  
Regina SK S4N 2G1

Dear Raeleen,

Transport Canada has reviewed *the Identification of Federal Environmental Assessment Requirements Form* completed by Saskatchewan Ministry of Highways and Infrastructure on July 8, 2009 for the Highway 1: Lewvan Drive Interchange Project and has determined that the project meets the exclusion criteria outlined in the *Exclusion List Regulations, 2007* for Section 9. Therefore, the proposed project does not require an environmental assessment under the *Canadian Environmental Assessment Act*.

It is important to note that the determination is only applicable to the project scope as submitted for review. In addition, should the scope of the project change or vary after the *Identification of Federal Environmental Assessment Requirements Form* was submitted, the Proponent is responsible for notifying Transport Canada of these changes as they may impact the determination of exclusion.

Please be advised that while the project is exempted from federal environmental assessment requirements, the project is still subject to any other federal, provincial and municipal authorizations that are required. For the project to proceed authorizations must be obtained in a timely manner and the work must be carried out in accordance with the terms and conditions of these approvals.

The Federal Wetland Policy is applicable to this project as there is the potential for the project to impact wetland function (the Saskatchewan Ministry of Highway and Infrastructures field assessment of wetlands in the project area is attached). Transport Canada trusts that Saskatchewan Ministry of Highways and Infrastructure will be willing to discuss and develop with Transport Canada, and other Federal departments, if applicable, the option(s), which would allow all parties to be satisfied with the level of compensation and mitigation as per the Policy.

In addition, it should be noted that the determination of exclusion is separate from the duty to conduct aboriginal consultations, as the duty to consult and accommodate is a separate process and obligation from the environmental assessment process.

Should you have any questions with this exclusion please do not hesitate to contact  
Mohammad Tayyaran at 613-990-1589 or myself at 613-949-8197

Yours sincerely,

A handwritten signature in black ink that reads "Ronald Hall". The signature is written in a cursive style with a large, prominent "R" and "H".

Ronald Hall  
Environmental Assessment Officer  
Transport Canada  
AHSA

Attachment: Completed EA Determination Form  
Lewvan Drive Interchange Project, Field Inventory Summary

cc:

CEAA – Jean Philippe-Croteau  
EC - Lynne Quinnett-Abbott