



DEVELOPMENT PERMIT

I, Ifan Thomas, Superintendent, Waterton Lakes National Park of Canada, pursuant to the provisions of the regulations respecting buildings in the National Parks of Canada, do hereby permit

PARKS CANADA

To undertake development at various locations in Waterton townsite in accordance with the development proposal for the:

- Installation of new sanitary and water mains and decommissioning of existing sanitary and water mains
- Replacement of existing roadways including milling and stockpiling road surface, installation of utilities, re-building and paving roadway and installation of new concrete sidewalks.

This Development Permit is subject to the following condition and attached Schedule(s) and to all National Park Regulations now in force or which hereafter may be made from time to time by the Governor-in-Council.

Condition:

1. All mitigations as per the Model Class Screening reports WLNP-2015-06-11 and WLNP 2015-06-12 shall be followed.

Signed and dated at Waterton Park this 17th day of June, 2015


Ifan Thomas, Superintendent





DEVELOPMENT PERMIT Schedule A

Terms and Conditions:

1. The permit holder and a designated agent of the Superintendent shall be the respective contact personnel for the Project in regards to and in issues arising from the construction of the Project and the Terms and Conditions of the Development Permit.
2. The Permit holder is responsible to ensure that all Consultants, Contractors, Sub-Contractors, Suppliers and their respective employees are adequately informed and supervised to ensure compliance with the environmental protection requirements of this Project and the Terms and Conditions of the Development Permit. Any changes or amendments to submitted drawings or other information may require an amendment to the submitted Environmental Assessment (EA). Discovery of known or suspected contaminants shall be reported to Parks Canada immediately. In the event of suspected contaminants, all work shall cease until direction can be provided by Parks Canada.
3. All fill that is going to be brought into the Park must now be inspected and approved **"At The Source"** prior to shipping. This applies to ALL projects carried out within the Park. Contact Edwin Knox at 403-859-5180 to arrange for an inspection.
4. All Consultants, Contractors, Sub-Contractors and Suppliers shall obtain a National Park business license prior to the commencement of their contracts or work in accordance with the National Park Business Regulations. Provide a list of Sub-Contractors to be employed in the construction of your development project to the Municipal Officer (403-859-5117).
5. All work associated with the Project must proceed according to working drawings and specifications noted above, as well as work descriptions and inspection reports submitted and approved by the Park Superintendent. Any changes to the project construction must be submitted and approved by the Superintendent.
6. Construction safety measures and actions as required by the Occupational Health and Safety Board, the Workers Compensation Board and all other applicable Federal and Provincial statutes and regulations are the responsibility of the permit holder and shall be enforced.





7. Construction activities and methods shall comply with the National Fire Code and all other applicable Fire Safety Requirements for Building Construction regulations or directives as issued by the Dominion Fire Commissioner.
8. The Contractor will confine all operations and procedures within the perimeter of the project site as approved by the Superintendent. The storage of construction equipment, material and waste must be contained and secured within the project site.
9. The Contractor shall ensure the disposal of all construction waste, including but not limited to; concrete, masonry, metal products, gyproc (drywall), wood, shingles, roofing materials and other waste material generated by the project, is entirely removed from the Park in suitable containers and conveyances. Waste shall not be deposited in the Parks Canada Transfer Station, community dumpsters nor at the "Burn Pit" located at Parks Canada's upper compound.
10. The site service locations must be confirmed prior to excavation.
11. Any historic artifacts shall be reported immediately to Parks Canada.
12. Inspection reports from inspection firm must be submitted and approved by Parks Canada to be provided by the leaseholder or the manager of the construction project. These reports must confirm that the project is being built to applicable codes and regulations, and to the conditions of approvals. The reports must be provided on a regular basis; firstly to confirm that they have reviewed the working drawings, excavation, foundation, and completion, as applicable, or once every month while the project is under construction. The reports must be prepared and signed by a professional architect, an engineer or a building inspector as certified by the Province of Alberta.
13. Any changes to the drawings as submitted on file without the knowledge of Parks Canada may cause approvals associated with this application to be null and void.





Figure 7.1 Soils and other heritage resources in the community of Waterton.



Figure 7.2 Vegetation in the community of Waterton (BR1 – Belly River 1, BR8 – Belly River 8, LB3 – Lookout Butte 3)



Figure 7.3 Wildlife habitat areas and wildlife corridors in the community of Waterton.



Figure 7.4 Natural hazards in the community of Waterton.



Figure 7.5 Landuse zoning in the community of Waterton.

Appendix 9: Waterton Specific Mitigations

1. Emergencies: In the event of emergency call (403) 859-2636.
2. All other inquiries: Parks Canada Switch Board (403) 859-2224.
3. Disposal of Waste: All domestic garbage should be stored over the short term in wildlife-proof dumpsters. Domestic recycling should be put in appropriate facilities. Contaminated materials are to be taken out of the Park.
4. Removal of Trees: Permits are required from the warden service if a tree is to be removed. Contact the warden office at (403) 859-5140. The municipal officer may also give permission for a dead tree to be removed without the consent of the Warden Service. Three young trees, from our native species or approved introduced species list, must be planted for each tree removed.
5. Dewatering: Dewatering of a construction site will require a special permit.
6. Replanting: The warden service (and the Municipal Officer) have a list of native grasses, shrubs, flowers and trees for appropriate revegetating.

Modifications of existing buildings are conducted according to industry standards. Modifications of Heritage Buildings and Canada Parks Service (CPS) buildings are encouraged to reflect the heritage character of the building. Procedures similar to those used for original building construction are used for Heritage Buildings.

The procedures and activities used to construct, modify, maintain and repair, and decommission and abandon these service lines must meet industry standards and follow Standards Manuals prepared by the following operators:

- Natural gas - Chief Mountain Natural Gas Co-op
- Water and sanitary waste - Community of Waterton Park
- Power - Fortis Utilities
- Telephone - Telus

Table 9.2 Sub-Class 2: Service Lines - Mitigation for Reducing Impacts of Service Line Projects

Activity	Potential Impacts	Mitigation Measures
Underground and Aboveground Services		
Pre-Planning		
General activities	Runoff / sedimentation; soil contamination	<ol style="list-style-type: none"> 1. Prepare an Emergency Response Plan for the worst case, i.e., heavy rainfall and runoff events, high winds, spills, fires, etc. 2. In the event of emergency operations (as defined in Section 9.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2. 3. Ensure all activities are conducted at least 30 m from waterbodies.
	Dust production	<ol style="list-style-type: none"> 4. Have a water source available to wet down exposed soil and dry areas.
	Wind and water erosion	<ol style="list-style-type: none"> 5. Prepare a satisfactory Sediment and Erosion Control Plan covering all construction and restoration periods. 6. Acquire necessary sediment control equipment (i.e., straw bales, landscaping fabric, sediment fences, etc.) and install prior to construction. 7. Extra planning should be used for areas with silty deposits and sloped areas with sandy deposits.
	Compaction of soils	<ol style="list-style-type: none"> 8. Identify soils susceptible to compaction (fine textured and organic soils) 9. Wherever possible, use equipment of low bearing weight, low PSI tires, or tracked vehicles, especially in sensitive sites. 10. Building material storage must be contained in one area and clearly flagged to prevent soil compaction and reduce area of disturbance.
	Slope failure	<ol style="list-style-type: none"> 11. Assess slope stability (based on slope length, soil texture, steepness, soil depth) and adjust activities to avoid these areas if possible. Use appropriate setbacks. 12. Pay particular attention when planning for slopes of Class 6 (15-30%) or greater, especially where soils are shallow and likely to move with disturbance.
	Habitat loss and fragmentation or encroachment on wildlife movement corridor	<ol style="list-style-type: none"> 13. Identify wildlife habitat that may be impacted by activities and avoid sensitive areas. 14. Identify and avoid wetlands. 15. Ensure only necessary vegetation is removed and delineate areas to be avoided with biodegradable flagging tape and/or temporary fences.

Activity	Potential Impacts	Mitigation Measures
	Sensory disturbance and mortality of wildlife	<p>When working adjacent to natural areas:</p> <p>16. According to the wildlife that may be present, schedule high noise level activities and other intrusive construction activities to avoid critical life stages (breeding, nesting, rearing, migration). Consult with Parks Canada to discuss any localized wildlife concerns.</p> <p>17. Confine “noise” activities to hours set out in Attachment 2.</p> <p>18. Consider posting wildlife signs to reduce vehicle speeds and increase driver awareness near construction areas where wildlife mortality has or is likely to occur.</p> <p>19. Educate workers to not harass or attract wildlife, keep the site free of food scraps, and dispose of garbage in bear proof containers.</p>
	Disturbance of archaeological resources	<p>20. Determine whether there are archaeological sites in the area (see attached maps).</p> <p>21. Consult with Parks Canada if sites are identified.</p> <p>22. If potential archaeological sites may be subject to ground disturbance, adapt activities to avoid them.</p> <p>23. Educate workers to stop work immediately and to notify site supervisor upon finding any archaeological artefacts. Contact Parks Canada immediately.</p>
	Public safety	<p>24. Outline traffic control measures and assess the need for flagging personnel.</p> <p>25. Call utility line companies to identify infrastructure locations.</p>
	Reduced aesthetics (visual and noise)	<p>26. Evaluate the site layout, access routes and construction activities to minimize their visual impact.</p> <p>27. Plan work schedule to confine “noise” activities to hours set out in Attachment 2.</p>
Site Preparation		
Clearing of vegetation	Dust production	<p>28. Wet down dry, exposed soils, particularly during windy periods.</p> <p>29. Ensure materials being stored or transported are covered with tarps or equivalent material.</p>
	Runoff / sedimentation	<p>In all ecosites and on areas with a slope class of 5 (5-15%) or greater:</p> <p>30. Minimize vegetation cover removal.</p> <p>31. Assess slopes stability (based on slope length, soil texture, steepness, soil depth).</p> <p>32. Use appropriate geo-technical control measures to stabilize slopes.</p> <p>33. To minimize site runoff, control overland flow up and down gradient of exposed areas by use of diversion ditches, bales, vegetative filter strips, and/or sediment traps.</p> <p>34. When possible, hand clear slopes > 35%. Wait to clear steep sloped areas until immediately before scheduled construction and reclaim immediately afterwards.</p> <p>35. Regularly inspect and repair erosion control structures.</p>

Activity	Potential Impacts	Mitigation Measures
	Wind and water erosion	<p>Particularly in areas with silty deposits and sloped areas with sandy deposits:</p> <ul style="list-style-type: none"> 36. Clear minimum area necessary in ROW. Where possible, leave stumps and roots in place. 37. Protect exposed soils with granular materials, mulches, or straw. 38. Cover stockpiles of soil with polyethylene sheeting, tarps, or vegetative cover. 39. Minimize grubbing. 40. Where possible schedule clearing in winter to minimize soil disturbance.
	Damage to adjacent vegetation	<p>To protect areas adjacent to development site:</p> <ul style="list-style-type: none"> 41. Minimize area cleared. Clearly mark area to be cleared with biodegradable flagging tape and/or temporary fences. 42. Ensure sensitive resources identified in Attachment 3 and 4 (if applicable) are protected. 43. See Attachment 2 for replanting directions. 44. Fencing around trees to be retained must be installed beyond the tree's drip line before starting work on site. 45. Where required obtain permit before removing any trees. See Attachment 2 for details. 46. Ensure excavated material does not damage or bury plant material that is to be retained on the site or in adjacent areas. 47. Trees are to be cut so they fall inside the cleared perimeters. 48. Care must be taken during grubbing and stripping to ensure trees and roots on the edge of the cleared area are not disturbed. 49. Grubbing and stripping may not be permitted on steep slopes to reduce the potential for erosion.
	Habitat fragmentation and wildlife corridor encroachment, loss of wilderness quality	<p>When working adjacent to undeveloped areas and areas bordering natural habitat:</p> <ul style="list-style-type: none"> 50. Clear only the minimum area required for construction activities. 51. Retain vegetation barriers where possible, especially trees and shrubbery.
Thawing	Decrease in ambient air quality due to emissions	<ul style="list-style-type: none"> 52. Only use ground thawing measures in emergency situations. 53. Minimize use of propane for thawing by scheduling activities for spring/summer/fall.
Grading and excavation	Dust production / aesthetics	<ul style="list-style-type: none"> 54. Wet down dry, exposed soils, particularly during windy periods. 55. Ensure fine materials being stored or transported are covered with tarps or equivalent material. 56. Minimize grading and excavation on windy days to limit dust production.

Activity	Potential Impacts	Mitigation Measures
	Runoff/ sedimentation	<p>57. Halt construction activity on exposed soil during events of high rainfall intensity and runoff.</p> <p>58. Assess slopes stability (based on slope length, soil texture, steepness, soil depth).</p> <p>59. Use appropriate geo-technical control measures to stabilize slopes.</p> <p>60. Cover stockpiles of soil with polyethylene sheeting, tarps, or vegetative cover.</p> <p>Sites close to waterbodies, but not closer than 30 m:</p> <p>61. To ensure site runoff is minimized, control overland flow up and down gradient of excavated areas by use of effective diversion ditches, bales, vegetation filter strips, or sediment traps.</p>
	Wind and water erosion	<p>Particularly in areas with silty deposits and sloped areas with sandy deposits:</p> <p>62. Protect exposed soils with coarse granular materials, mulches, or straw.</p> <p>63. Cover stockpiles of soil with polyethylene sheeting, tarps, or vegetative cover.</p>
	Loss of top soil and/or top soil/subsoil mixing	<p>64. Topsoil separation is required.</p> <p>65. Topsoil will be stored away from any slopes, subsoils, spoil material, construction activities and day-to-day operations.</p>
	Slope failure	<p>66. Avoid work on steep slopes, especially areas with slope Class 6 (15-30%) or greater.</p> <p>67. Assess slopes stability (based on slope length, soil texture, steepness, soil depth).</p> <p>68. Use appropriate geo-technical control measures to stabilize slopes.</p> <p>69. Topsoil will be stored away from any slopes, subsoils, spoil material, construction activities and day-to-day operations.</p>
	Non-point source hydrocarbon contamination	<p>70. When constructing and upgrading storm sewers, install oil sumps.</p>
Dewatering	Runoff / sedimentation	<p>71. Dewatering is not permitted into any waterbody.</p> <p>72. Dewatering is permitted on previously disturbed vegetation or natural vegetation if the following conditions are met:</p> <ul style="list-style-type: none"> • sediment controls are used (i.e., silt fences, silt bags, etc.). • water velocity is controlled to dissipate energy, prevent soil erosion and allow for infiltration. • dewatering structures are continuously monitored to ensure no damage is being done to soil or vegetation. <p>73. Dewatering into the sanitary or stormwater system is restricted as indicated in Attachment 2.</p> <p>74. Sediment from the traps may be used as fill on the construction site.</p>
	Damage to adjacent vegetation	<p>75. For undeveloped areas adjacent to development site, ensure water and sediment is directed away from natural areas.</p>

Activity	Potential Impacts	Mitigation Measures
	Sensory disturbance and mortality of wildlife	<p>When working adjacent to natural areas:</p> <p>76. According to the wildlife that may be present, schedule high noise level activities and other intrusive construction activities to avoid critical life stages (breeding, nesting, rearing, migration). Consult with Parks Canada to discuss any localized wildlife concerns.</p> <p>77. Confine “noise” activities to hours set out in Attachment 2.</p> <p>78. Consider posting wildlife signs to reduce vehicle speeds and increase driver awareness near construction areas where wildlife mortality has or is likely to occur.</p> <p>79. Educate workers to not harass or attract wildlife.</p>
Underground Services		
Installation, Maintenance and Repair		
Trenching, backfilling, compacting, grading	Dust production / aesthetics	<p>80. Minimize the amount of open trench at any given time.</p> <p>81. Cover stockpiles of soil with polyethylene sheeting, tarps, or vegetative cover.</p> <p>82. Wet down dry, exposed soils, particularly during windy periods.</p> <p>83. Minimize trenching, backfilling and compacting on windy days.</p>
	Runoff / sedimentation	<p>84. Assess slopes stability (based on slope length, soil texture, steepness, soil depth).</p> <p>85. Use appropriate geo-technical control measures to stabilize slopes.</p> <p>86. All excavations will remain free of water (see mitigations for “Dewatering”).</p> <p>Sites close to waterbodies, but not closer than 30 m:</p> <p>87. To ensure site runoff is minimized, control overland flow up and down gradient of excavated areas by use of effective diversion ditches, bales, vegetation filter strips, or sediment traps.</p> <p>88. Stockpiles related to excavations will be stored a minimum of 2 m from embankments, slumps, water bodies and containment sources to prevent material loss or degradation.</p> <p>89. Following excavations, lightly tamp disturbed areas to minimize slumping and potential pooling or water.</p>
	Non-point source hydrocarbon contamination	<p>90. When constructing and upgrading storm sewers, install oil sumps.</p>
	Erosion (wind and water)	<p>91. Install trench breakers of impervious material to direct groundwater seepage to the surface.</p> <p>92. Minimize the length of exposed trench and the time of excavated soil exposure.</p> <p>93. Use interceptor ditches or berms (bales) upgradient of construction to divert overland flow around exposed soil surfaces.</p> <p>94. Line steep ditches with filter fabric, rock or polyethylene lining to prevent channel erosion.</p>
	Trench collapse	<p>95. Delay trenching until just prior to lowering-in pipeline.</p> <p>96. Use trench reinforcement device (i.e. cage), if possible.</p>

Model Class Screening Report for Routine Projects

Activity	Potential Impacts	Mitigation Measures
	Compaction	97. Compact soil to approximate preconstruction conditions while allowing for settling.
	Habitat loss, fragmentation, wildlife mortality	98. Minimize the length of open trench, and the time a trench is open to reduce its affect as a barrier or trap for terrestrial wildlife. 99. Fence trench if it is to be left unattended over night.
Right-of-way maintenance (outside community boundaries)	Dust production / aesthetics	100. Wet down dry, exposed soils, particularly during windy periods. 101. Ensure materials being stored or transported are covered with tarps or equivalent material. 102. Minimize trenching, backfilling and compacting on windy days.
	Loss of wilderness quality	103. Retain vegetation barriers where possible, especially trees and shrubbery. 104. Minimize the amount of vegetation removed.
	Contamination from fertilizers and herbicides	105. Accurately assess the need for chemicals during right-of-way maintenance. An approved current integrated pest management plan must be in place. 106. Avoid herbicide/fertilizer use in proximity to, or where runoff may reach waterbodies.
	Wind and water erosion	107. Where possible schedule vegetation clearing in winter to minimize soil disturbance.
Cleaning storm sceptors (stormwater sewers)	Sedimentation/contamination of water	108. Ensure stormwater storm sceptors are cleaned regularly. 109. Dispose of sediment and trapped oils and debris at appropriate facilities.
<i>Decommissioning and Abandonment</i>		
Disconnection and removal of pipes/cables	Runoff / sedimentation	110. Stockpiles related to excavations will be stored a minimum of 2 m from embankments, slumps, water bodies and containment sources to prevent material loss or degradation. 111. Following excavations, lightly tamp disturbed areas to minimize slumping and potential pooling or water.
	Wind and water erosion	112. Begin revegetation immediately. 113. Protect exposed soils with coarse granular materials, mulches, or straw.
	Compaction	114. Select appropriate equipment, especially in erosion/slump prone areas. If possible, use wide tracked equipment, rubber tired vehicles and low bearing pressure weight equipment in sensitive areas.
	Other	115. Pipes to be abandoned must be pressure tested for leaks and sealed with no part of the line exposed above the surface. 116. The proponent will retain responsibility for the line until it is removed.
Aboveground Services		
<i>Installation, Maintenance and Repair</i>		

Activity	Potential Impacts	Mitigation Measures
Removal of poles and lines	Compaction	<p>117. Compact soil to approximate precondition conditions while allowing for settling.</p> <p>118. Select appropriate equipment, especially in erosion/slump prone areas. If possible, use wide tracked equipment, rubber tired vehicles and low bearing pressure weight equipment in sensitive areas.</p>
Digging holes for poles	Slope failure	<p>119. Assess slopes stability (based on slope length, soil texture, steepness, soil depth).</p> <p>120. Use appropriate geo-technical control measures to stabilize slopes.</p>
	Loss of or damage to vegetation, weed invasion	121. Protect undisturbed land by only stockpiling materials on heavy canvas or polypropylene tarpaulins to protect native vegetation. Excavated material should not be permitted to damage or bury plant material that is to be retained on the RoW or in adjacent areas.
Planting poles and stringing	Heavy equipment and excavation activities may result in soil compaction, loss of organic matter, erosion and loss of topsoil	122. Soil that has been temporarily moved away from poles and placed on tarps will be shovelled back against the pole and lightly tamped to prevent slumping or pooling of water.
	Reduced aesthetics (noise)	123. Confine “noise” activities to hours set out in Attachment 2.
Right-of-way maintenance	Dust production / aesthetics	<p>124. Wet down dry, exposed soils, particularly during windy periods.</p> <p>125. Ensure fine materials being stored or transported are covered with tarps or equivalent material.</p>
	Contamination from fertilizers and herbicides	<p>126. Accurately assess the need for chemicals during right-of-way maintenance. An approved current integrated pest management plan must be in place.</p> <p>127. Avoid herbicide/fertilizer use in proximity to, or where runoff may reach waterbodies.</p>
	Loss of wilderness quality	<p>128. Retain vegetation barriers where possible, especially trees and shrubbery.</p> <p>129. Minimize the amount of vegetation removal.</p>

Activity	Potential Impacts	Mitigation Measures
<i>Decommissioning and Abandonment</i>		
Removal wires and poles, refilling holes	Heavy equipment and excavation activities may result in soil compaction, loss of organic matter, erosion and loss of topsoil.	130. Soil that has been temporarily moved away from poles and placed on tarps will be shovelled back against the pole and lightly tamped to prevent slumping or pooling of water.
	Weed invasion	131. See mitigations for "Revegetation".
	Sensory disturbance	When working adjacent to natural areas: 132. According to the wildlife that may be present, schedule high noise level activities and other intrusive construction activities to avoid critical life stages (breeding, nesting, rearing, migration). Consult with Parks Canada to discuss any localized wildlife concerns. 133. Educate workers to not harass wildlife. 134. Trade waste will be disposed of at appropriate facilities.
Revegetation	Runoff/ sedimentation, wind and water erosion	135. Initiate replanting of disturbed areas immediately after construction is completed. 136. Protect exposed soils with coarse granular materials, mulches, or straw. 137. Use stockpiled topsoil to facilitate reclamation.
	Contamination from fertilizers and herbicides	138. Accurately assess the need for chemicals during right-of-way maintenance. An approved current integrated pest management plan must be in place. 139. Do not use fertilizers and herbicides in areas where residue or runoff may enter a waterbody or drainage pathway. 140. Do not over water.
	Compaction	141. Cultivate affected areas before reclaiming, especially areas with fine textured or organic soils.
	Weed invasion	142. Revegetate exposed areas at first opportunity. 143. Ensure topsoil is clean and weed free. If clean fill is unavailable, monitor the site, and treat as needed, to ensure appropriate weed control for 3 years following landscaping (applicable to construction crews only). 144. Revegetate with Parks Canada approved grass seed mix, if applicable, or the Town seed mix for landscape rehabilitation (see Attachment 2). 145. An approved current integrated pest management plan must be in place.
	Habitat loss, fragmentation and wildlife corridor encroachment.	146. Revegetate exposed areas at first opportunity.
	Attraction of wildlife to palatable, non-native species	147. Seed with Parks Canada-approved seed mix (see Attachment 2) and native plants that are non-palatable to wildlife.
Underground and Aboveground Services		

Activity	Potential Impacts	Mitigation Measures
General Activities		
Materials handling/storage	Dust production	148. Wet down dry soil or cover with tarp. 149. Ensure materials being stored or transported are covered with tarps or equivalent material.
	Runoff/sedimentation	150. Cover stockpiles with polyethylene sheeting, tarps, or vegetative cover.
	Damage to adjacent vegetation	151. Excavated material will not be permitted to damage or bury plant material that is to be retained on the site or in adjacent areas. 152. Protect undisturbed land by only stockpiling materials on heavy canvas or polypropylene tarpaulins to protect native vegetation. Excavated material should not be permitted to damage or bury plant material that is to be retained on the construction site or in adjacent areas.
Equipment operation and maintenance	Decrease in ambient air quality due to emissions	153. Ensure all equipment is properly tuned, free of leaks, in good operating order, and fitted with standard air emission control devices. 154. Minimize idling of engines at all times.
	Dust production	155. Wet down dry and dusty roads. 156. Do not use oil-based dust suppressants. 157. Reduce speeds. 158. Ensure materials being stored or transported are covered with tarps or equivalent material.

Activity	Potential Impacts	Mitigation Measures
	Contamination of soil and water from accidental spill	<p>159. Prepare an appropriate Spill Response Plan. In the event of emergency operations (as defined in Section 9.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2. All spills must be reported to Parks Canada.</p> <p>160. Avoid work in high risk areas, particularly in areas of high water table, steep slopes or in close proximity to streams.</p> <p>161. Spill contingency plans, equipment and supplies (to clean up 110% of the site's largest possible fuel/chemical spill) will be present on-site at all times and employees trained in their use.</p> <p>162. Ensure all construction equipment is free of leaks from oil, fuel or hydraulic fuels.</p> <p>163. The crossing of any waterbody (including wetlands) by construction equipment, or the use of such equipment within waterbodies is strictly prohibited unless prior approval has been confirmed.</p> <p>164. Designate refuelling areas at least 100 m away from any water body. Stationary stores of fuel will be bermed with an impermeable liner to contain 125% of the anticipated fuel quantity. Any contaminated rainwater will be moved out of the park.</p> <p>165. Refuelling activities should not be conducted where run-off could carry contaminants into drainage pathways (including storm sewers).</p> <p>166. Equipment will be fuelled on hardened surfaces.</p> <p>167. Dispose of contaminated materials at provincially certified disposal sites outside of the park. No treatment of contaminated soils (e.g., bioremediation) is allowed in the park. All applicable documentation demonstrating proper disposal will be provided to Parks Canada.</p>
	Compaction of soils	<p>168. Restrict vehicular travel and other equipment operation to the construction site and approved access routes.</p> <p>169. Vehicle parking will be restricted to specialized areas on the construction site.</p> <p>170. Minimize or halt construction traffic during wet conditions when the soil shows signs of ponding or rutting. Use low impact equipment when possible and repair rutted areas with approved methods</p> <p>171. In sensitive areas, if possible, use equipment that minimizes surface disturbance including low ground pressure tracks/tires, blade shoes and brush rake attachments.</p>
	Damage to adjacent vegetation	<p>Undeveloped areas adjacent to development site:</p> <p>172. Careful machine operation is required to ensure that damage to surrounding vegetation does not occur.</p> <p>173. Excavated material must not be permitted to bury plant material that is to be retained. Snow fences may be used to prevent excavated material escaping into the surrounding forest.</p>

Activity	Potential Impacts	Mitigation Measures
	Weed invasion	<p>174. All construction equipment from outside a national park will be steam cleaned prior to arrival to minimize the risk of introducing weeds.</p> <p>175. Construction equipment from outside the park will not be washed while in the park.</p>
	Sensory disturbance to wildlife	<p>All undeveloped areas and areas bordering natural habitat, especially wildlife movement corridors and natural wetlands:</p> <p>176. Use existing roadways, pathways and previously disturbed areas for site access and travel within the site.</p> <p>177. Educate workers not to enter wildlife corridors.</p> <p>178. Confine “noise” activities to hours set out in Attachment 2.</p>
	Increased traffic levels	179. Time construction activities to minimize vehicle conflicts on access roads and/or use flagging personnel.
	Public Safety	<p>180. If equipment infringes on driving lane, flag persons are required.</p> <p>181. All roadway signage must be in accordance with provincial standards. Signs must be bilingual or symbolic.</p> <p>182. The proponent is responsible for site security at all times.</p>
	Aesthetics	183. All heavy equipment operating on paved surfaces should be equipped with street pads. Damage to paved surfaces will be restored to original conditions.
Waste management (general)	Contamination of soil and water from accidental spill or improper disposal	184. No rock, silt, cement, grout, asphalt, petroleum product, lumber, vegetation, domestic waste, or any deleterious substance shall be placed or allowed to disperse into any stream, river, pond, storm or sanitary sewer, or other water course. Excess material will not be disposed of on or adjacent to the site.
	Aesthetics (visual and smell)	<p>185. Collect all waste, store appropriately and dispose of trade waste at appropriate landfills.</p> <p>186. All garbage and food must be stored in bear-proof bins.</p> <p>187. Keep site maintained in a tidy condition, free from the accumulation of waste products, debris and litter.</p> <p>188. Construction sites must undergo thorough clean-up, including removal of general litter, survey stakes and flagging tape at project completion.</p>

Table 10.2 Sub-Class 3: Mitigations for reducing impacts from Road, Sidewalk, Boardwalk and Parking Lot Projects

Activity	Potential Impacts	Mitigation Measures
<i>Pre-Planning</i>		
General activities	Runoff / sedimentation; Soil contamination	<ol style="list-style-type: none"> 1. Prepare an Emergency Response Plan for the worst case, i.e., heavy rainfall and runoff events, high winds, spills, fires, etc. 2. In the event of emergency operations (as defined in Section 10.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2. 3. Ensure all activities are conducted at least 30 m from waterbodies.
	Dust production	<ol style="list-style-type: none"> 4. Have a water source available to wet down exposed soil and dry areas.
	Wind and water erosion	<ol style="list-style-type: none"> 5. Prepare a satisfactory Sediment and Erosion Control Plan covering all construction and restoration periods. 6. Acquire necessary sediment control equipment, (i.e., straw bales, landscaping fabric, sediment fences, etc.) and install prior to construction. 7. Extra planning should be used for areas with silty deposits and sloped areas with sandy deposits.
	Compaction of soils	<ol style="list-style-type: none"> 8. Identify soils susceptible to compaction (fine textured and organic soils) 9. Wherever possible, use equipment of low bearing weight, low PSI tires, or tracked vehicles, especially in sensitive sites. 10. Building material storage must be contained in one area and clearly flagged to prevent soil compaction and reduce area of disturbance.
	Slope failure	<ol style="list-style-type: none"> 11. Assess slope stability (based on slope length, soil texture, steepness, soil depth) and adjust activities to avoid these areas if possible. Use appropriate setbacks. 12. Pay particular attention when planning for slopes of Class 6 (15-30%) or greater, especially where soils are shallow and likely to move with disturbance.
	Habitat loss and fragmentation or encroachment on wildlife movement corridor	<ol style="list-style-type: none"> 13. Identify wildlife habitat that may be impacted by activities and avoid sensitive areas. 14. Identify and avoid wetlands. 15. Ensure only necessary vegetation is removed and delineate areas to be avoided with biodegradable flagging tape and/or temporary fences.

Activity	Potential Impacts	Mitigation Measures
	Sensory disturbance and mortality of wildlife	<p>When working adjacent to natural areas:</p> <ol style="list-style-type: none"> 16. According to the wildlife that may be present, schedule high noise level activities and other intrusive construction activities to avoid critical life stages (breeding, nesting, rearing, migration). Consult with Parks Canada to discuss any localized wildlife concerns. 17. Confine “noise” activities to hours set out in Attachment 2. 18. Consider posting wildlife signs to reduce vehicle speeds and increase driver awareness near construction areas where wildlife mortality has or is likely to occur. 19. Educate workers to not harass or attract wildlife, keep the site free of food scraps, and dispose of garbage in bear proof containers.
	Disturbance of archaeological resources	<ol style="list-style-type: none"> 20. Determine whether there are archaeological sites in the area (see attached maps). 21. Consult with Parks Canada if sites are identified. 22. If potential archaeological sites may be subject to ground disturbance, then activities should be adapted to avoid them. 23. Educate workers to stop work immediately and to notify site supervisor upon finding any archaeological artefacts. Contact Parks Canada immediately.
	Public safety	<ol style="list-style-type: none"> 24. Outline traffic control measures and assess the need for flagging personnel. 25. Call utility line companies to identify infrastructure locations. 26. All roadway signage must be in accordance with provincial standards. Signs must be bilingual or symbolic.
	Reduced aesthetics	<ol style="list-style-type: none"> 27. Evaluate the site layout, access routes and construction activities to minimize their visual impact. 28. Plan work schedule to confine “noise” activities to hours set out in Attachment 2. 29. Work should be conducted during periods of low park visitation to reduce noise and visual impacts
<i>Modification of Roads and Construction, Modification, Decommissioning and Abandonment of Sidewalks, Boardwalks and Parking Lots</i>		
Grading and gravel resurfacing; Material stripping, excavation, subgrade repair; Road shoulder modifications; Replace or modify culverts and ditches; Re-surfacing (asphalt)	Dust production / aesthetics	<ol style="list-style-type: none"> 30. Wet down dry, exposed soils, particularly during windy periods. 31. Ensure materials being stored or transported are covered with tarps or equivalent material. 32. Minimize grading and excavation on windy days to limit dust production. 33. Avoid spillage and excess applications.
	Runoff / sedimentation (through intermittent drainage pathways including storm sewer systems)	<p>Particularly areas with slope class of 5 (5-15%) or greater and sites close to water.</p> <ol style="list-style-type: none"> 34. Wet down or cover stockpiles with polyethylene sheeting, tarps, or vegetative cover. 35. Minimize vegetation cover removal. 36. Filter or settle out sediment before the water enters any drainage pathway; including stormwater systems. 37. Control overland flow up and down gradient of exposed areas by use of diversion ditches, bales, vegetative filter strips, and/or sediment traps.

Activity	Potential Impacts	Mitigation Measures
	Wind and water erosion	<p>All Ecosites in steeply sloped areas, and sloped areas with sandy loam/loamy sand soils for water erosion:</p> <p>38. Protect exposed soils with coarse granular materials, mulches, or straw along drainage pathways.</p> <p>39. Cover fills or stockpiles with polyethylene sheeting, tarps, or vegetative cover.</p> <p>40. Line steep ditches with filter fabric, rock or polyethylene lining to prevent channel erosion.</p>
	Contamination from runoff of poorly adhered seal coat	41. Only apply seal coat to dry surface and not prior to (within 24 hrs.) or during rainfall.
	Sensory disturbance	<p>42. According to the wildlife that may be present, schedule high noise level activities and other intrusive construction activities to avoid critical life stages (breeding, nesting, rearing, migration). Consult with Parks Canada to discuss any localized wildlife concerns.</p> <p>43. Educate workers to not harass or attract wildlife, keep the site free of food scraps, and dispose of garbage in bear proof containers.</p>
Post installation and replacement	Sensory disturbance and mortality to wildlife	44. See mitigations for “General activities”.
Painting lines	Contamination from accidental spills	<p>45. Spill contingency plans, equipment and supplies will be present on-site at all times and employees trained in their use.</p> <p>46. Paints should be selected that have minimal amounts of potentially harmful substances, particularly water soluble organic chemicals, lead and other metals. Rust inhibiting paints should be chosen over barrier types of paints to reduce the total volume of paint required over the long term.</p> <p>47. Hand painting is preferred over spray painting. Where sprayers are used, they must be properly adjusted and shielded to minimize the amounts of paint lost to overspray.</p> <p>48. Do not spray in high winds.</p>
Sidewalk, curb and guttering installation	Reduced aesthetics	49. See mitigations under “General activities”.
Light installation (10 or more)	Runoff / sedimentation	<p>50. Light installations requiring small excavations for pre-formed concrete bases should minimize the amount of disturbed soil.</p> <p>51. Minimize the time that borrow is exposed and the excavation remains open. Where required, use site specific erosion control methods (see mitigations for “Grading and gravel resurfacing”).</p> <p>52. Do not schedule work during wet weather</p>
	Reduced aesthetics	53. See mitigations under “General activities”.
Maintenance and Repair of Roads		
Patching	Runoff of poorly adhered seal coat	54. Only apply seal coat to dry surface and not prior to (within 24 hrs.) or during rainfall

Activity	Potential Impacts	Mitigation Measures
Storage and application of road salts and abrasives	Salt contamination/ salt impact on vegetation	<p>55. Store salt under dry shelter, away from wind or water erosion on impervious platform.</p> <p>56. Ensure no runoff from storage of salt to soil or water.</p> <p>For dangerous locations:</p> <p>57. Minimize the application rate of salt to the road.</p> <p>58. Restrict application of salt (including liquid deicer) to the traveled surface of the road, and ensure calibration is tightly controlled.</p> <p>59. Salt-minimizing measures include pre-wetting of salt; calibration of spreaders; combined use with sand and gravel; early snow removal from roads</p>
	Contamination from accidental spills	60. Prepare an appropriate Spill Response Plan In the event of emergency operations (as defined in Section 10.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2. Parks Canada must be notified in the event of a spill.
	Attraction of wildlife to roads (salt) causing mortality	<p>61. Minimize the application rate of salt to the roads, particularly in proximity to wildlife corridors.</p> <p>62. Restrict salt to the traveled surface of the road.</p> <p>63. Reduce speed limits.</p>
Snow removal and storage	Salt contamination	<p>64. Accumulated snow contaminated with salt should only be disposed at designated areas away from sensitive vegetation and drainage pathways.</p> <p>65. Dispose of snow in designated Parks Canada snow dump.</p> <p>66. Minimize the application rate of salt to the roads, and ensure the calibration is tightly controlled so salt application is restricted to the road surface.</p>
Vegetation management	Contamination from fertilizers and herbicides	<p>67. Accurately assess the need for chemicals during right-of-way maintenance. An approved current integrated pest management plan must be in place.</p> <p>68. Avoid herbicide/fertilizer use in proximity to, or where run-off may reach waterbodies.</p> <p>69. Ensure adjacent natural areas are not affected by herbicide use.</p>
	Damage to adjacent vegetation, loss of native vegetation	<p>To protect areas adjacent to development site:</p> <p>70. Minimize area cleared. Clearly mark area to be cleared with biodegradable flagging tape and/or temporary fences.</p> <p>71. Ensure sensitive resources listed on the form or attached are protected.</p> <p>72. Fencing around trees to be retained must be installed beyond the tree's drip line prior to commencement of site work.</p> <p>73. Where required obtain permit before removing any trees. See Attachment 2 for details.</p> <p>74. Ensure excavated material does not damage or bury plant material that is to be retained on the site or in adjacent areas.</p> <p>75. Trees are to be cut so they fall inside the cleared perimeters.</p> <p>76. Care must be taken during grubbing and stripping to ensure trees and roots on the edge of the cleared area are not disturbed.</p> <p>77. Minimize grubbing in all areas. Grubbing and stripping may not be permitted on steep slopes.</p>

Model Class Screening Report for Routine Projects

Activity	Potential Impacts	Mitigation Measures
Dust control	Runoff of CaCl into water bodies	78. Avoid spillage and excess applications. Use water, when possible.
<i>Site Reclamation and Restoration</i>		
Grading	Dust production	79. Wet down dry, exposed soils, particularly during windy periods. 80. Ensure materials being stored or transported are covered with tarps or equivalent material.
	Runoff/ sedimentation	81. Halt grading on exposed soil during events of high rainfall intensity and runoff. Consult the Sediment and Erosion Control Plan. 82. Cover stockpiles of soil with polyethylene sheeting, tarps, or vegetative cover. Establish containment structures to trap runoff.
	Wind and water erosion	Particularly in areas with silty deposits and sloped areas with sandy deposits: 83. Protect exposed soils with coarse granular materials, mulches, or straw along drainage pathways. 84. Recontour slopes to predisturbance conditions.
Revegetation	Runoff / Sedimentation (through intermittent drainage pathways including storm sewers)/erosion	85. Initiate replanting of disturbed areas immediately after construction is completed. 86. For every tree cleared, plant at least two native trees, or as directed by Attachment 2. 87. Protect exposed soils with coarse granular materials, mulches, or straw along drainage pathways.
	Compaction of soils	88. Cultivate affected areas before reclaiming, especially areas with fine textured or organic soils.
	Contamination from fertilizers and herbicides	89. Accurately assess the need for chemicals during site revegetation. An approved current integrated pest management plan must be in place. 90. Do not use fertilizers and herbicides in areas where residue or run-off may enter a waterbody or drainage pathway. 91. Do not over water.
	Weed invasion	92. Revegetate exposed areas at first opportunity. 93. Ensure topsoil is clean and weed free. If clean fill is unavailable, monitor the site, and treat as needed, to ensure appropriate weed control for 3 years following landscaping (applicable to construction crews only). 94. Revegetate with Parks Canada approved grass seed mix, if applicable, or the Town seed mix for landscape rehabilitation (see Attachment 2). 95. An approved current integrated pest management plan must be in place.
<i>General Activities</i>		
Materials handling/storage	Dust production	96. Wet down dry, exposed soils or cover with tarps. 97. Ensure materials being stored or transported are covered with tarps or equivalent material.

Activity	Potential Impacts	Mitigation Measures
	Damage to adjacent vegetation	<p>98. If tree damage does occur, a horticultural sealant will be applied to the tree damage as soon as possible. Diseased vegetation should be disposed of through burning. A burning permit must be obtained.</p> <p>99. Protect undisturbed land by only stockpiling materials on heavy canvas or polypropylene tarpaulins to protect native vegetation. Excavated material will not be permitted to damage or bury plant material that is to be retained on the construction site or in adjacent areas.</p>
	Decreased aesthetics (visual) and public safety	100. Materials will be stored within the delineated confines of the work site.
Equipment operation and maintenance	Decrease in ambient air quality due to emissions	<p>101. Ensure all equipment is properly tuned, free of leaks, in good operating order, and fitted with standard air emission control devices.</p> <p>102. Minimize idling of engines at all times.</p>
	Dust production	<p>103. Wet down dry and dusty roads.</p> <p>104. Do not use oil-based dust suppressants.</p> <p>105. Reduce speeds.</p> <p>106. Ensure materials being stored or transported are covered with tarps or equivalent material.</p>
	Contamination of soil and water from accidental spill	<p>107. Prepare an appropriate Spill Response Plan. In the event of emergency operations (as defined in Section 10.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2. All spills must be reported to Parks Canada.</p> <p>108. Avoid work in high risk areas, particularly in areas of high water table, steeply sloped sites or in close proximity to streams.</p> <p>109. Spill contingency plans, equipment and supplies (to clean up 110% of the site's largest possible fuel/chemical spill) will be present on-site at all times and employees trained in their use.</p> <p>110. Ensure all construction equipment is free of leaks from oil, fuel or hydraulic fuels.</p> <p>111. In-stream crossing of any waterbody (including wetlands) by construction equipment, or the use of such equipment within waterbodies is strictly prohibited unless prior approval has been confirmed by Parks Canada.</p> <p>112. Designate refuelling areas at least 100 m away from any water body. Equipment will be fuelled on hardened surfaces. Stationary stores of fuel will be bermed with an impermeable liner or other suitable secondary containment to contain 125% of the anticipated fuel quantity. Any contaminated rainwater will be moved out of the park.</p> <p>113. Refuelling activities should not be conducted where run-off could carry contaminants into drainage pathways (including storm sewers).</p> <p>114. Dispose of contaminated materials at provincially certified disposal sites outside of the park. No treatment of contaminated soils (e.g., bioremediation) is allowed in the park. All applicable documentation demonstrating proper disposal will be provided to Parks Canada.</p>

Activity	Potential Impacts	Mitigation Measures
	Compaction of soils	<p>115.Restrict vehicular travel and other equipment operation to the construction site and approved access routes.</p> <p>116.Vehicle parking will be restricted to specialized areas on the construction site.</p> <p>117.Minimize or halt construction traffic during wet conditions when the soil shows signs of ponding or rutting.</p> <p>118.In sensitive areas, if possible, use equipment which minimizes surface disturbance including low ground pressure tracks/tires, blade shoes and brush rake attachments.</p>
	Damage to adjacent vegetation	<p>Undeveloped areas adjacent to development site:</p> <p>119.Careful machine operation is required to ensure that damage to surrounding vegetation does not occur.</p> <p>120.Excavated material must not be permitted to bury plant material that is to be retained. Snow fences may be used to prevent excavated material escaping into the surrounding forest.</p>
	Weed invasion	<p>121.All construction equipment from outside a national park will be steam cleaned prior to arrival to minimize the risk of introducing weeds.</p> <p>122.Construction equipment from outside a park will not be washed while in the park.</p>
	Sensory disturbance to wildlife	<p>All undeveloped areas and areas bordering natural habitat, especially wildlife movement corridors and natural wetlands:</p> <p>123.Use existing roadways, pathways and previously disturbed areas for site access and travel within the site.</p> <p>124.Educate workers not to enter wildlife corridors.</p> <p>125.Confine “noise” activities to hours set out in Attachment 2.</p>
	Increased traffic levels	<p>126.Time construction activities to minimize vehicle conflicts on access roads and/or use flagging personnel.</p>
	Public Safety	<p>127.If equipment infringes on driving lane, flag persons are required.</p> <p>128.All roadway signage must be in accordance with provincial standards. Signs must be bilingual or symbolic.</p> <p>129.The proponent is responsible for site security at all times.</p>
	Aesthetics	<p>130. All heavy equipment operating on paved surfaces should be equipped with street pads. Damage to paved surfaces will be restored to original conditions.</p>
Waste management (general)	Contamination of soil and water from accidental spill or improper disposal	<p>131.No rock, silt, cement, grout, asphalt, petroleum product, lumber, vegetation, domestic waste, or any deleterious substance shall be placed or allowed to disperse into any stream, river, pond, storm or sanitary sewer, or other water course. Excess material will not be disposed of on or adjacent to the site.</p>
	Aesthetics (visual and smell)	<p>132.Collect all waste, store appropriately and dispose trade waste at appropriate facilities.</p> <p>133.All garbage and food must be stored in bear-proof bins.</p> <p>134.Keep site maintained in a tidy condition, free from the accumulation of waste products, debris and litter.</p> <p>135.Construction sites must undergo thorough clean-up, including removal of general litter, survey stakes and flagging tape at project completion.</p>

Activity	Potential Impacts	Mitigation Measures
Hazardous materials collection and handling	Contamination of soil or water	<p>136.Prepare an appropriate Spill Response Plan. In the event of emergency operations (as defined in Section 10.11 of the MCSR), call Emergency Services and/or Parks Canada at the phone numbers indicated on Attachment 2.</p> <p>137.All toxic/hazardous materials will be identified during demolition and will be handled as required under the Canadian Environmental Protection Act, Transportation of Dangerous Goods Act and Workplace Hazardous Materials Information Service.</p> <p>138.Dispose of contaminated materials at provincially certified disposal sites outside of the park. No treatment of contaminated soils (e.g., bioremediation) is allowed in the park. All applicable documentation demonstrating proper disposal should be obtained.</p> <p>139.All hazardous materials and wastes will be clearly labelled with WHMIS labels and information.</p> <p>140.Spill contingency plans, equipment and supplies will be present on-site at all times and employees trained in their use.</p> <p>141.All fuels, oils, lubricants and other petrochemical products will not be stored within 100 meters of any waterbody (including wetlands).</p> <p>142.Do not store fuels, lubricants, solvents, paints, and other chemicals on site overnight except within construction trailers secured with lock and key. Storage should be on a bermed, impervious site (secondary containment). Contact Parks Canada to determine if an additional permit is necessary.</p> <p>143.No rock, silt, cement, grout, asphalt, petroleum product, lumber, vegetation, domestic waste, or any deleterious substance shall be placed or allowed to disperse into any stream, river, pond, storm or sanitary sewer, or other water course.</p> <p>144.All construction sites will be equipped with containers suitable for the secure, temporary storage of hazardous wastes. Hazardous wastes will be separated by type. Follow all applicable regulations and codes for the management and handling of hazardous wastes.</p> <p>145.If any hazardous waste is uncovered during excavation/construction it must be investigated, source identified, properly removed and disposed to an approved landfill.</p>