



Geoexchange Project

This checklist outlines all the information necessary to evaluate and provide a timely review and issuance of your application. Applications and materials submitted must be clear, legible, and precise. Plans/drawings stamped with "not for construction", "preliminary", or "for permit purposes only" are not acceptable.

NOTE: Building and development permit applications must be submitted without personal information on any plans. Omitting this information will protect builders and tenants by reducing the risk of any personal information being wrongfully displayed, while also following the Province of Alberta's FOIP Act. Failure to follow this requirement may result in an incomplete application. If you consider the information to be personal, do not put it on the plans.

SECTION 1: Project Details

Project Address:

Drilling company:

Contact name:

Phone Number:

SECTION 2: Application Requirements

Supporting Documents

- A. Completed Mechanical Permit Application Form
B. An approved development permit, if the Land Use Bylaw requirements are not met

Plans

- C. One (1) copy of a site plan (preferred scale is Metric 1:200 or Engineer 1" =20'-0")
1 Address
2 Property lines
3 Names of adjacent city streets
4 Site area & coverage
5 Front, side and rear yard dimensions
6 If applicable: Right-of-way setbacks, easements and utility rights-of-way
7 Overhead utilities
8 Outline of all structures on property covered by permit
9 Outline of all structures on adjoining properties (private or public)
10 Planned ground exchanger field with bore hole placements, piping sizes, depths and spacing
11 Layout of all ground circuits and headers including into structure

Project Information

- D. System Information - Contractor verification. Failing to meet standard requirements may result in replacement of any or all non-compliant equipment and materials
1 Part 3 (commercial) system per National Building Code - Alberta Edition 2019 definition - Mechanical Engineer stamped and signed drawings
2 Part 9 (residential/small building) system per National Building Code - Alberta Edition 2019 definition - Mechanical Engineer OR geoexchange designer drawings
3 Cathodic protection system designed by Corrosion Engineer or system specialist, if DX system
4 All pipe shall be line printed in compliance with CAN/CSA C448 and be marked with "C448" and "Geo" or "Geothermal"

E. Ground loop information

1 Refrigerant (DX) information

Refrigerant specification sheet

Refrigerant type (per CAN/CSA B52 and/or ASHRAE 34)

 R-22 R-410A Other: _____

Operating pressures

Maximum: _____ Minimum: _____

2 Thermal Transfer Fluid Information

Transfer fluid specification sheet

 Propylene glycol Ethanol Methanol Other:Dilution level of antifreeze: _____ % water _____ Litres of antifreeze
_____ % antifreeze _____ Litres total volume

Additional Documentation (where required)

F. Thorough heat loss calculation for main structure (to meet CAN/CSA F280 for Part 9 applications and ASHRAE standards for Part 3 applications)**G.** Thorough and separate heat loss calculations for each peripheral heating/cooling load on-demand domestic hot water (not applicable for desuperheater function) pool snow/ice melt Other : _____ spa**H.** Back-up heat source specification sheet including type, size, output, etc**I.** For DX systems only – Certified brazer's (refrigeration) certificate (photocopy is acceptable)**J.** For DX systems only – cathodic protection documentation (per NACE)**K.** Alberta Environment approval letter for regulated open loop system**L.** Energy Resources Conservation Board licence for bores > 150 m.**M.** Geotechnical report**N.** Hydrogeological report (required if Alberta Environment letter is required)**O.** Copy of independent utility locate report**P.** Copies of specification sheets for each equipment item

NOTE: Land Use Bylaw 1P2007 Part 2, Division 3, Section 23 states: A development permit is required for every development unless it is otherwise exempted. Furthermore, Building Permit Bylaw Number 64M94 states: An application for a permit may be refused if, within 90 days from the date of receipt, adequate information and documentation is not supplied to the Safety Codes Officer, and there shall be no refund of any fees that have been paid