Springbank Airport
Land Use &
Development Guidelines

Calgary Airport Authority
# Table of Contents

1.0 DEFINITIONS ............................................................................................................. 5

2.0 PROCEDURES ............................................................................................................ 9

  2.1. Development Process ............................................................................................. 9
  2.2. Development Submission Requirements ............................................................... 10
  2.3. Building Permits ..................................................................................................... 12

3.0 LAND USE PLAN ..................................................................................................... 14

  3.1. Land Use Areas ..................................................................................................... 14
  3.2. Airfield District ...................................................................................................... 14
  3.3. Operational Services District ................................................................................. 14
  3.4. Airside Commercial District .................................................................................. 15

4.0 DEVELOPMENT GUIDELINES ................................................................................. 17

  4.1. Performance Standards .......................................................................................... 17
  4.2. General Development Information ........................................................................ 17

    4.2.1. Utilities ............................................................................................................. 17
    4.2.2. Grading ............................................................................................................. 17
    4.2.3. Building Height ............................................................................................... 18
    4.2.4. Landscaping ..................................................................................................... 18
    4.2.5. Building Design Guidelines .............................................................................. 18
    4.2.6. Tenant Landscaping Guide .............................................................................. 18
    4.2.7. Yards ............................................................................................................... 19
    4.2.8. Corner Visibility Triangle ............................................................................... 19
    4.2.9. Vehicle Parking Facilities ............................................................................... 19
    4.2.10. Loading Spaces .............................................................................................. 21
    4.2.11. Outside Storage .............................................................................................. 22
    4.2.12. Refuse Areas .................................................................................................. 22
    4.2.13. Lighting ......................................................................................................... 22
    4.2.14. Utilities ........................................................................................................... 23
    4.2.15. Environmental Management ......................................................................... 23

5.0 SIGN GUIDELINES .................................................................................................... 24

  5.1. Approving Authority ............................................................................................... 24
  5.2. Traffic Signs ........................................................................................................... 24
  5.3. General Rules for Signs ......................................................................................... 24
APPENDICES

APPENDIX A ............................................................................................................. 25
APPENDIX B ............................................................................................................. 27
APPENDIX C ............................................................................................................. 31
APPENDIX D ............................................................................................................. 37
APPENDIX E ............................................................................................................. 43
APPENDIX F ............................................................................................................. 49
APPENDIX G ............................................................................................................. 53
1.0 DEFINITIONS

Definitions

1) “Airport Maintenance and Operational Facilities” means any facility that houses the equipment, materials, or motor vehicles necessary to maintain airport lands, buildings and facilities. This may include garages, workshops, mobile equipment yards, outdoor storage areas, as well as their associated uses such as an office, lunchroom or change room, or overnight accommodations i.e. pilots;

2) “Apron” means the part of an aerodrome, other than the maneuvering area, intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance and parking of aircraft, and any movement of aircraft, vehicles and pedestrians necessary for such purpose;

3) “Building” includes anything constructed or placed on, in, over or under land but does not include a highway or public roadway, or bridge forming a part of a highway or public road;

4) “Building Height” means that height determined by creating a line parallel to grade along each building elevation and separated vertically from grade by the maximum allowable height for the district. Such line may be exceeded only by part of the building, on no more than one building elevation, and ancillary structures;

5) “Building Permit” means a permit issued pursuant to the Municipal District of Rocky View Permit By-Law authorizing construction;

6) “MD of Rocky View” means the Municipal District of Rocky View and the land lying within the limits of the municipal district;

7) “Corner Visibility Triangle” means a triangular area formed on a corner site by the roadway edge and a straight line that intersects them 7.5 metres from the corner where they meet;

8) “Development” means; an excavation or stockpile and the creation of either of them a Building or an addition to, or replacement or repair of a Building and the construction or placing in, on, over or under land of any of them, a change of use of land or a Building or an act done in relation to land or a Building that results in or is likely to result in a change in the use of the land or Building, a change in the intensity of use of land or a Building or an act done in relation to land or a Building that results in or is likely to result in a change in the intensity of use of the land or Building;

9) “Emergency Response Services” mean development that is required for the protection of persons and property from injury, harm or damage together with
incidental storage for emergency vehicles and equipment. Typical uses would include fire stations, police stations, paramedic and security services, bomb disposal facilities, and fire training facilities and other related services;

10) “Essential Airport Services” means those services provided by the Calgary Airport Authority, the government, contracted by the government (federal, provincial), Nav Canada, or regulatory agencies required for safe and efficient operation of the airport, (e.g. fire, police, emergency medical services, hazardous materials);

11) “Fence” means a vertical physical barrier constructed to provide visual screening or to prevent unauthorized access;

12) “Final Utility Service”, means water and sewer utilities that are connected to municipal utilities, or that are so connected through the airport utility system, or alternatively, a private water and sanitary treatment system within the Springbank Airport lands that has been approved by the Calgary Airport Authority as a final utility servicing. In the case of storm water, this may be in the form of a planned overland stormwater management system;

13) “Frontage” means the width of a lot or a site where it abuts a street including a lane;

14) “Grade” means the elevation of the finished ground surface, excluding an artificial embankment, at any point immediately adjacent the building;

15) “Interim Use” means a use specified as an Interim Use in a Land Use District that may be allowed in the District prior to the installation if final utility services;

16) “Land Use District” means a district as defined throughout this document;

17) “Land Use Plan” means an approved Land Use Plan (see Section 3.0);

18) “Landscaped Area” means the portion of a site that is required to be landscaped;

19) “Landscaping” means the modification and enhancement of a site through the use of any or all of the following elements soft landscaping consisting of vegetation such as trees, shrubs, hedges, grass and ground cover. Hard landscaping consisting of non-vegetation materials such as brick, stone, concrete, tile and wood, excluding monolithic concrete and asphalt, architectural elements consisting of wing walls, sculpture and the like;

20) “Lease Line” means the line that defines the boundary of a site that is being leased by the Calgary Airport Authority or it’s predecessors in interest to another party, or a property line, or the boundaries of the site as defined by the Calgary Airport Authority;
21) “Loading Space” means a space to accommodate a commercial vehicle while it is being loaded or unloaded;

22) “Lot Area” means the area contained within the boundaries of a lot as shown on a plan of subdivision or described in a certificate of title or the boundaries shown on a lease agreement;

23) “Lot Coverage” means that portion of the lot area covered by the principal building, accessory buildings or similar covered structures;

24) “Lot Frontage” means the shortest lot line which abuts a street, other than a bridge, lane, or walkway and in the case of a lot which has two equal lot lines each of which abut a street, other than a bridge, lane, or walkway, means the street to which the lot has the site address;

25) “Lot Width” means the distance between the side property lines of the lot and measured at right angles from the midpoint of the shortest property line;

26) “Outside Storage” means an outside area set-aside for the storage of products, goods or equipment;

27) “Parking Area” means a portion of the land or of a building set aside for parking and maneuvering of motor vehicles;

28) “Primary Access” means the principal means of vehicular entry to and exit from a site or building;

29) “Principal Use” means the main purpose for which a building or site is used;

30) “Property Line” means a legal boundary of an area of land;

31) “Screening” means the total or partial concealment of a building, structure or activity by a fence, wall, berm or soft landscaping;

32) “Signs” means any visual medium, including its structure and other component parts, which are used on a permanent or temporary basis to convey information, or to advertise or attract attention to a product, service, place, activity, person, institution, or business, excluding third party advertising;

33) “Site” means an area of land on which a Building or use exists for which a request or application for confirmation and authorization of development is made;

34) “Storey” means the space between the top of any floor and the top of the next floor above it, and if there is no floor above it, the portion between the top of the floor and the ceiling above it;
35) “Structure” means any thing constructed or erected with a fixed location on the ground or attached to something having a fixed location on the ground and includes walls, light standards, fences and signs;

36) “Use” means the primary function of the site or building on a site

37) “Utilities” means any of the following:
   a) systems for the distribution of gas, whether artificial or natural, electricity, telephone or cable television.
   b) facilities for the storage, transmission, treatment, distribution or supply of water.
   c) facilities for the collection, treatment, movement or disposal of sanitary sewage.
   d) storm sewer drainage facilities.
   e) Interim or limited services as contemplated in the Land Use Districts in this document;

Note: For any references in this document for which a ‘Definition’ has not been provided, please see the Calgary Airport Authority’s Agreement on Land Use Development Guidelines and Acreage Assessment Levies or the Calgary International Airport’s Tenant Design Guidelines and Standards.
2.0 PROCEDURES

2.1. Development Process

All development proposal applications at the Springbank Airport require formal review by the Calgary Airport Authority ("Airport Authority") prior to approval. A completed Construction and Installation Permit (CIP) application (see Appendix "B") and any materials deemed necessary by the Airport Authority must be submitted by the Applicant along with the CIP application before the review process can proceed.

All development proposals will require an environmental review and Environmental Assessment by the Airport Authority to determine the environmental impacts of the proposed development on the airport lands during the planning, construction and operational phases of the development. The Airport Authority may also require the application to submit an Environmental Construction Operations Plan (ECO Plan) depending on the scope of the proposal.

The Development Process generally consists of, but is not limited to, the following steps:

a) Submission of a completed CIP application for the proposed development and any supporting materials by the Applicant to the Springbank Airport Manager

b) The completed application will be forwarded to the Airport Authority.

c) The CIP application will be circulated for internal review by the Airport Authority. Additional materials or requirements may be requested from the Applicant. Modifications to the Applicant’s development proposal may be requested by the Airport Authority. Any modifications to the development proposal must be completed prior to the Airport Authority authorizing the Applicant to apply for a Building Permit.

The internal review of the Applicant’s development proposal may also include a review by NAV Canada and/or Transport Canada and additional due diligence by the Airport Authority to ensure the development proposal is consistent and compatible with the Springbank Airport’s operations.

d) Upon completion of the internal review to the satisfaction of the Airport Authority, a letter will be provided authorizing the Applicant to proceed with the submission of a Building Permit application to the Municipal District of Rocky View. A copy of the Building Permit must be provided to the Airport Authority by the Applicant upon approval by the MD of Rocky View prior to proceeding with any work on site. Approval of a Building Permit does not constitute approval by the
Airport Authority for the Applicant to proceed.

e) Once the Building Permit has been issued by the MD of Rocky View and provided to the Airport Authority, a Construction Installation Permit (CIP) will be issued to the Applicant subject to the Airport Authority’s approval. The CIP must be posted on-site during the construction/development of the site.

f) Prior to construction beginning on-site, the Applicant may, at the discretion of the Springbank Airport general Manager, be required to attend a start-up meeting with the Airport Authority in order to coordinate scheduling, hours of work, and security. The Applicant will be required to provide emergency contact information prior to commencement of construction.

g) Upon completion of the construction/development of the site, a final inspection will be conducted to ensure the final construction meets with the approved CIP.

h) The MD of Rocky View may inspect the site to ensure it meets with building codes. An Occupancy Permit may be required by the MD of Rocky View to ensure the building meets applicable codes and regulations. A copy of the Occupancy Permit must be provided to the Airport Authority prior to occupation of the building premises.

i) As-built drawings are to be provided to the Airport Authority within 30 days of completion of construction.

2.2. Development Submission Requirements

Any person proposing new development or modifications to an existing building at the Springbank Airport will first contact the Springbank Airport General Manager and identify the nature of the business, the land requirements and the types of buildings/structures to be constructed/modified at the site.

Upon acceptance of the development proposal in principle and depending on the scope of the development proposal, the Airport Authority will provide a Tenant Package to assist the Applicant in the preparation of the development submission. Details on the Tenant Package are provided in Appendix “C”: Engineering Considerations.

The applicant’s development submission shall include the following information:

a) a completed Construction Installation Permit application form
b) copies of a Site Plan showing the following information if applicable:
   i) north arrow;
   ii) scale of plan;
   iii) lot number and location plan;
   iv) property or lease lines, shown and labeled;
v) location of sidewalk and/or curbs;
vi) side yard requirements, shown and labeled;
 vii) site topography and special conditions;
 viii) location and size of existing trees and buildings;
 ix) location of any buildings, dimensioned to property lines or lease lines, and any structure including utility poles;
 x) retaining walls, trees, landscaping and other physical features both existing and proposed on the site and adjoining boulevards;
 xi) dimensioned layout of existing and proposed parking areas, entrances and exits, abutting streets. Shown and labeled;
 xii) all easements, shown and labeled, outline to scale of adjacent buildings on adjoining sites, indicating building height, yard dimensions, the use of the building and any windows overlooking the new proposal, and
 xiii) fencing, screening, garbage and storage areas.

c) copies of the Mechanical Engineering Site plans including the following 
i) all relevant grading information and topography
ii) location of existing and proposed servicing tie-ins
iii) calculations for stormwater flow rates and requirements for sanitary sewer and water connections
iv) complete information relating to the proposed site operations and activities to take place on site
 v) legal description of the Site
vi) dimensions of the Site
 vii) the location, dimensions and relationships to property lines of the existing and proposed buildings
 viii) location of deep and shallow utility lines
ix) loading and parking areas
x) access to and from the Site
 xi) garbage and storage areas and the fencing and screening proposed for the same
 xii) location and approximate dimensions of landscaping areas
 xiii) location of existing and proposed wells, septic tanks, disposal fields, and culvert crossings indicating inverts; and
 xiv) top of slab grade as provided by Authority.

d) plans showing the elevation, floor plan and a perspective of the proposed development, including a description of the exterior finishing materials;

e) landscaping plans based on the site plan showing:
i) the existing topography with the vegetation that is to be retained and that to be removed clearly identified
ii) the layout of soft and hard landscaping, pedestrian circulation and open space systems, screening, berms, slopes and retaining walls; and
iii) the types, sizes and numbers of plant material and the types of hard landscaping;
f) a vicinity map of appropriate scale, indicating the location of the proposed development in relation to nearby streets and other significant physical features which may have a bearing on the proposed project;

g) photographic prints showing the site in its existing condition and immediately adjacent properties and/or buildings;

h) All drawings required to be submitted shall be drawn on standard drafting material to scale and shall be fully dimensioned, accurately figured, explicit and complete.

i) In addition, the Airport Authority may require:
   i) copies of a plan of survey prepared by an Alberta Land Surveyor showing the site to be developed;
   ii) samples of exterior finishing materials;
   iii) plans, photographs, studies or other materials as the Airport Authority may consider necessary to properly evaluate the proposed development.

2.3. Building Permits

Applicants intending to undertake building construction at the Springbank Airport will require a Building Permit issued by the MD of Rocky View. A letter authorizing the Applicant to make a Building Permit submission will be provided to the Applicant upon completion of a review of the Building Permit drawings by the Airport Authority. Upon issuance of the Building Permit by the MD of Rocky View, the Applicant must provide a copy of the approved permit to the Airport Authority. Approval of a Building Permit does not constitute approval by the Airport Authority for the Applicant to proceed.

a) The Applicant shall provide a copy of the Building Permit submission to the Airport Authority as submitted to the MD of Rocky View.

b) The applicant will pay the appropriate application fees for Building Permits as per the MD of Rocky View fee schedule for Building Permits existing at the time, and provide to the MD of Rocky View a Letter of Authorization from the Springbank Airport General Manager authorizing the applicant to apply for a Building Permit on the specific site.

c) A copy of the approved Building Permit will be provided to the Airport Authority prior to the start of construction. Upon receipt of the Building Permit, the Airport Authority will issue a Construction Installation Permit (CIP) subject to the Airport Authority’s approval. The Applicant can then proceed with construction in accordance with the approved CIP, Building Permit and procedures of the MD of Rocky View.
d) Occupancy of any Building or portion thereof, is allowed only after the owner obtains an Occupancy Permit from the MD of Rocky View and provides a copy of the Occupancy Permit to the Airport Authority.
3.0 LAND USE PLAN

3.1. Land Use Areas

The Springbank Airport is divided into three (3) Land Use Districts; the Airfield District, the Operational Services District and the Airside Commercial District. The boundaries of these districts are defined in the Land Use Plan Concept.

3.2. Airfield District

The purpose of this area is to provide for the movement of aircraft, and other facilities directly related to aviation and includes land uses on the airfield.

Permitted Uses

Examples of Permitted Uses within the Airfield District may include but are not limited to those related to aircraft refueling and maintenance; airfield and airport maintenance, support and operations; communications, navigation and surveillance (CNS) systems; essential airport and emergency services; and utilities.

All development applications within the Airfield District will be evaluated on a case by case basis. The Airport Authority has sole discretion for approving development applications on Airport lands.

3.3. Operational Services District

The purpose of this area is for airside aviation related facilities and services.

Permitted Uses

Examples of Permitted Uses within the Operational Services District may include but are not limited to those related to airfield and airport maintenance, support and operations; communications, navigation and surveillance (CNS) systems; essential airport and emergency services; and utilities.

All development applications within the Operational Services District will be evaluated on a case by case basis. The Airport Authority has sole discretion for approving development applications on Airport lands.
3.4. Airside Commercial District

The purpose of this area is to provide for a variety of industrial and business uses that make use of airside access or require proximity to an airfield.

Permitted Uses

Uses within the Airside Commercial District may include Commercial, Industrial or Business Uses that provide or require airport services; facilities requiring airfield/airside access; organizations or businesses that provide supplies, equipment or services to the aviation or aircraft industry; commercial or business uses that will be primarily for the benefit or use of persons employed on airport lands or utilize the facilities at the airport; and utilities.

All development applications within the Airside Commercial District will be evaluated on a case by case basis. The Airport Authority has sole discretion for approving development applications on Airport lands.
4.0 DEVELOPMENT GUIDELINES

4.1. Performance Standards

To ensure the safety of airport operations, no development shall cause or create any objectionable condition such as but not inclusive of the following:

a) electronic interference
b) air contaminants
c) earthborn vibrations
d) visible emissions
e) heat
f) particulate emissions
g) odours
h) toxic matter
i) high brightness light sources
j) attraction to birds and wildlife
k) height obstructions

4.2. General Development Information

4.2.1. Utilities

a) Utility Services

Any use, other than an Interim Use, must be provided with final utility services, unless the Airport Authority allows a specific exemption.

b) Interim Utility Services

i) If final utility services are not available, and an Interim Use is proposed, freshwater storage tanks and sewage holding tanks may be considered and such facilities must receive prior approval from the Airport Authority and shall be installed at the applicant’s expense.

ii) All Developments will be required to ensure that the stormwater runoff will not adversely affect their lease or any adjacent area.

4.2.2. Grading

a) Applicants are required to grade the Site so as to support and compliment the existing drainage system throughout the airport lands.
b) Applicants are required to use satisfactory stormwater management techniques to ensure the stormwater runoff will not adversely affect any adjacent area.

4.2.3. Building Height

a) The height of any Building, including any Building equipment, shall not exceed an elevation that would penetrate airspace as defined by Transport Canada. Aviation Zoning Regulations have precedence over any other Building Height provisions outlined in these guidelines, where Aviation Zoning Regulations impose a lower height limit.

b) In general, Building height is limited to 12 metres with the exception of Aircraft Hangars where Building Heights in excess of 12 metres will be allowed as determined by The Authority. In all cases, Aviation Zoning Regulations apply.

4.2.4. Landscaping

a) To enhance the appearance of each development, all properties must be landscaped. Each applicant will provide a landscape plan for approval to the Springbank Airport General Manager. The plans must conform to the Airport Landscape Management Plan.

b) At a minimum the Site will be landscaped in:

i) Front yards
ii) Side yards between the front and rear of the principal building where they are not used for vehicular circulation
iii) The strip adjacent to the front of the building to an average depth of 2.5 metres
iv) All adjoining boulevards

4.2.5. Building Design Guidelines

Please see Appendix “D” - Springbank Airport Building Design Guidelines

4.2.6. Tenant Landscaping Guide

Please see Appendix “E” - Tenant Wildlife Control Guidelines
4.2.7. Yards

All street frontages shall be treated as front yards. If a development abuts two streets, the Springbank Airport General Manager will designate which street is the street frontage.

a) Front yard

A minimum depth of 6 metres from the Lease Line

b) Side Yard

A minimum of 1.2 metres from the Lease Line except where a side yard is used to provide vehicular access to the rear yard, in which case a side yard must be a minimum of 6 metres.

c) Rear Yard

A minimum of 1.2 metres from the Lease Line except where the wall of a structure is built of a material which normally would not require maintenance.

4.2.8. Corner Visibility Triangle

Notwithstanding any other provisions contained in these standards, no vegetation, finished lot grade, building or structure may impede visibility within the area defined as the Corner Visibility Triangle.

4.2.9. Vehicle Parking Facilities

Reference Appendix “F” for minimum dimensions.

a) Location

All parking spaces must be located on the lease. In certain circumstances the Springbank Airport General Manager may approve required parking spaces on a site other than the proposed development site, provided that the alternate site is:

i) Within 120 meters of the approved site use.
ii) Is used exclusively for the purpose of vehicle parking, and
iii) Can be leased for a time period similar to that of the approved use

b) Handicapped Parking

A minimum of one handicapped parking stall having a width of 4 metres, must be provided in all parking facilities, and must be clearly designated as such and
located close to the Building entrances. For lots that contain 50 or more parking spaces, a minimum of two percent of the spaces must be set aside and designated for handicapped parking.

c) Surfacing

Any parking space or maneuvering area located in a front yard, side yard or main travel lane must be graveled or surface treated.

d) Number of Parking Spaces

i) Where the calculation of the required number of parking spaces results in a fractional number of parking spaces, the next higher number must be provided.

ii) Developments containing or providing for more than one use must provide parking facilities that are equal to the sum of the requirements for the individual uses.

iii) Unless otherwise allowed, the required parking facilities for any use are as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancillary retail uses</td>
<td>Same rate as principal use</td>
</tr>
<tr>
<td>Air Traffic Control Tower</td>
<td>1.5 space per employee on duty at one time</td>
</tr>
<tr>
<td>Aircraft Service, aircraft specialty and paint shops</td>
<td>1 space per 46m² of gross floor area</td>
</tr>
<tr>
<td>Aviation related Private clubs and organizations</td>
<td>1 space per 3.5m² of net floor area.</td>
</tr>
<tr>
<td>Bed &amp; Breakfast Homes</td>
<td>1 space per sleeping unit plus</td>
</tr>
<tr>
<td>Canada Customs</td>
<td>1 space per employee on site at one time</td>
</tr>
<tr>
<td>Emergency and Protective Services</td>
<td>1 space per 10m² of gross floor area</td>
</tr>
<tr>
<td>Lounges as an ancillary use</td>
<td>1 space per four seats based on maximum occupancy</td>
</tr>
<tr>
<td>Maintenance Buildings</td>
<td>5 spaces per individual establishment, or 1 space per 3 employees on a maximum shift, or 1 space per 93m² up to 1860m² and 1 additional space for each subsequent 465m², whichever is the greatest</td>
</tr>
<tr>
<td>Use</td>
<td>Requirement</td>
</tr>
<tr>
<td>--------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Museums and libraries</td>
<td>1 space per 46m² of net floor area.</td>
</tr>
<tr>
<td>Offices</td>
<td>1 space per 46m² of net floor area.</td>
</tr>
<tr>
<td>Participant Outdoor Recreational Services (Soccer Pitch)</td>
<td>1 space per employee on duty plus 1 space per 3 users</td>
</tr>
<tr>
<td>Private General Aviation Hangers</td>
<td>1 space per hanger for units up to 200m²; 1 space per 150m² for units greater that 200m²</td>
</tr>
<tr>
<td>Restaurants as an ancillary use</td>
<td>1 space per 3.5m² of net floor area excluding the kitchen.</td>
</tr>
<tr>
<td>Training and/or Flight schools</td>
<td>0.75 spaces per student plus 1 space per employee based on operating capacity.</td>
</tr>
</tbody>
</table>

4.2.10. Loading Spaces

a) Location

Loading spaces must be designed and located so that all vehicles using those spaces can be parked and maneuvered entirely within the bounds of the site before moving onto adjacent streets.

b) Dimensions

A loading space must be a minimum width of 3.1 metres and a minimum length of 9.2 metres and maintain an overhead clearance of 4.3 metres.

c) Number of Spaces

Unless otherwise allowed, the required loading facilities for any use are as follows:

<table>
<thead>
<tr>
<th>Use</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office buildings</td>
<td>1 space per 9300 m² of gross floor area</td>
</tr>
<tr>
<td>Public and quasi-public buildings</td>
<td>1 space per 9300 m² of gross floor area</td>
</tr>
<tr>
<td>Restaurants</td>
<td>1 space per 9300 m² of gross floor area</td>
</tr>
<tr>
<td>Retail</td>
<td>1 space per 9300 m² of gross floor area</td>
</tr>
</tbody>
</table>
4.2.11. Outside Storage

a) Outside storage may be allowed to the side or rear of Buildings provided that:

i) Such Storage Areas do not include any required minimum yards, or required parking or loading spaces.

ii) The Storage Area is suitably shielded from the public view by an approved method of screening.

iii) All storage is related to business or industry located on the Site.

Outside display areas may be allowed to the front or side of a principal Building outside any required minimum yard provided that such displays are limited to examples of equipment or items related to the business or industry located on the Site.

4.2.12. Refuse Areas

a) All proposed developments must minimize the visual impact of their refuse area.

b) In general, all refuse areas should be located within a principal Building, or to the side or rear of a principal Building, provided that it is not in a required minimum yard clearance or in a required parking or loading space.

c) Applicants are required to visually screen all refuse areas from adjacent sites and streets in a manner that is compatible with the design and external materials of the principal Building on the Site.

d) Refuse containers must be covered and kept cleared at all times.

4.2.13. Lighting

All exterior lighting must be located, oriented, and shielded so as to not adversely affect adjacent Sites, or interfere with airport operations. Specific fixture designs or shielding may be required to prevent conflict with airport operations.
4.2.14. Utilities

For new developments that do not require final water or sanitary utility servicing for their use, the Permitted Uses in this district may be approved provided the interim water and sanitary servicing arrangements meet applicable standards for the type of occupancy.

4.2.15. Environmental Management

All development proposals within the airport boundary must comply with the environmental management guidelines established by the Airport Authority.

As part of the development process, applicants may be required to submit an Environmental Construction Operations Plan (ECO Plan, See Appendix “G”). This is required in order for the Airport Authority to review and respond to potential environmental impacts of the proposed development on the airport lands during the planning, construction and operational phases of the development.
5.0 SIGN GUIDELINES

5.1. Approving Authority

The Springbank Airport General Manager is the approving authority for sign enlargement, relocation, erection, construction or alteration. All signs, which will be viewed by the public, require authorization.

5.2. Traffic Signs

The Springbank Airport General Manager will be responsible for the provision and maintenance of all signage required for the direction of motor vehicles and the safe operation of airport streets, and the direction and control of aircraft on runways. This signage will not be subject to review by anyone other than the Springbank Airport General Manager.

5.3. General Rules for Signs

a) A sign shall not conflict with the general character of the surrounding streetscape or the architecture of nearby buildings.

b) A sign or sign structure shall not be located or extend horizontally closer to the existing or future curb line than 750 mm back from the existing or future curb line.

c) A sign shall not be attached to a light pole, public bench or in the Corner Visibility Triangle without the Springbank Airport General Manager’s permission.

d) If trees are removed or damaged during sign installation, new trees must be planted or landscaping improved to the Springbank Airport General Manager’s satisfaction.
APPENDIX A
Development Application Process Flowchart
CIP Application Flowchart

**Tenant submits complete CIP application to Springbank Airport General Manager**

**Application forwarded to Airport Development**

**Internal Review by Airport Authority (Additional requirements identified)**

**Authorization to apply to MD of Rocky View for building permit**

**CIP issued**

**Project Coordination / Construction (Start-up meeting, scheduling, contact information, etc)**

**Project complete as-builts submitted to Airport Development (Inspections, occupancy permit)**

**Application sent to the Environment Department for environmental**

**Does the project fall under an EA exclusion?**

**Yes**

**Tenant prepares/ submits an ECO plan**

**The Environment Department conducts an EA screening on the project**

**EA screening and circulation list is completed**

**Circulation list is signed and returned to Airport Planning**

**No**

**Does the project require an ECO plan?**

**Yes**

**Tenant prepares/ submits an ECO plan**

**The Environment Department conducts an EA screening on the project**

**EA screening and circulation list is completed**

**Circulation list is signed and returned to Airport Planning**

**No**

**No**
APPENDIX B

CIP Application Form
## SPRINGBANK AIRPORT
**Construction Installation Permit Application**

### Part I - Identification

<table>
<thead>
<tr>
<th>TENANT</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Tenant</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Postal Code</td>
</tr>
<tr>
<td>Contact</td>
<td>Phone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TENANT AUTHORIZED REPRESENTATIVE (If different from Tenant)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Representative</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Postal Code</td>
</tr>
<tr>
<td>Key Contact</td>
<td>Phone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTRACTOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Contractor</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Postal Code</td>
</tr>
<tr>
<td>Key Contact</td>
<td>Phone</td>
</tr>
</tbody>
</table>
SUB-CONTRACTORS

<table>
<thead>
<tr>
<th>Company</th>
<th>Key Contact</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part II – Scope of Work**

DESCRIPTION OF JOB (use back of page if required)


**Part III - ECO Plan Checklist**

Environmental aspects may be impacted by project activities. In order to mitigate these adverse impacts an ECO Plan may be required. Please complete the following Environmental Questionnaire to determine the requirement for an ECO Plan.

- [ ] Topsoil stripping
- [ ] Excavation
- [ ] Site drainage
- [ ] Storage and use of hazardous materials
- [ ] Equipment maintenance
- [ ] Refueling operations
- [ ] Solid waste generation
- [ ] Wetland removal
- [ ] Landscaping

**PART IV – Location of Work (Please select location)**

- [ ] Airfield Services District
- [ ] Operation District
- [ ] Airside Commercial District

**Part IV – Submission of Application**

<table>
<thead>
<tr>
<th>Applicant Representative (Print)</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>
APPENDIX C
Engineering Considerations
Engineering Considerations

All submissions for development and building approval must provide details consistent with the Springbank Airport – Land Use & Development Guidelines document and in accordance with the following engineering considerations.

Depending on the specific proposed development or redevelopment The Airport Authority may provide a “Tenant Package” to the applicant typically consisting of several 11 x 17 drawings detailing site specifics on dimensions, access (both airside and landside), grading and utilities. The Tenant Package will also include part or all of the following:

1) Geotechnical Investigation – The Airport Authority may provide geotechnical information including borehole logs and other details pertaining to existing geotechnical site conditions if they are available, depending on site location. Regardless, proponents must undertake their own site specific investigations in order to ascertain site conditions and to gain appropriate foundation and pavement design information.

2) Site Grading – The Airport Authority will provide general site topography details. The proponent must provide verification surveys as appropriate for the proposed development. The import and export of earthworks will be the tenant’s responsibility and in general must be from/to off airport locations.

3) Stormwater Management – An overview of The Springbank Airport Stormwater Management Master Plan (SMMP) is available for viewing on the Springbank Airport website (August 2007). All proposed development must comply with the SMMP. Depending on the location of the proposed development, the proponent will need to address stormwater management as follows.

Either the site will require grading and subsequent surface treatments to direct runoff to existing drainage courses (ditches), or will be required to provide controlled release facilities. In the latter case the proponent will be required to adhere to specific detention volume and site runoff criteria which will be provided by The Airport Authority. Also in this case, the proponent’s design will require catch basins and possible ICD’s (inlet control devices) to provide on-site stormwater management with connection to the airport’s storm trunk and pond system.

To further comply with the SMMP proponents are encouraged to utilize techniques in both their site and building design which limits runoff and recycles rainwater and snowmelt for irrigation and other uses. Green spaces should be maximized (consistent with Appendix C) to increase water infiltration and decrease runoff. Area of green spaces should be minimum 10% of total development area.
4) Roads and Taxiways – Details of existing road and taxiways adjacent to the proposed development will be provided by The Airport Authority, including dimensions and construction cross sections. Proponents will be required to design and construct the required “approaches (road connections) and “stubs” (taxiway connections) utilizing good engineering practice. The Airport authority can provide guidance if required.

5) Water and Sanitary Sewer – The Springbank Airport water system consists of looped pressurized water mains (typically 250mm pvc piping) on an independent water system. An underground reservoir, located west of MacLaurin Drive near the Mount Royal College hangar, maintains a volume capacity of 406,000 litres which will be increased to a total 1,116,000 litres in 2007. The system is pressurized by two distribution pumps that maintain residual pressure between 40 and 60 psi. In addition two fire pumps driven by a diesel powered generator provide fire flow service as necessary. The design fire flow is 9,100 litres/min for two hours.

Water service generally exists adjacent to, or stubbed, into any proposed development lot. It is the developer’s responsibility to connect to either the water main (hot tap) or to the stubbed line, in accordance with City of Calgary standard specifications and good engineering practice.

The Springbank Airport sanitary sewer system consists of collection lines (which generally follow the waterline alignment), two lift stations to service low lying areas, and a gravity collection system to an existing two celled lagoon located north of Runway 07-25. Developers are again responsible for sanitary sewer connections in accordance with City of Calgary standard specifications and good engineering practice. In order to minimize the impact on Springbank Airport’s sewer system developers are encouraged to consider various forms of rainwater harvesting, and to utilize low flow washroom and related fixtures.

The Calgary Airport Authority is currently investigating several options for connecting both water and wastewater systems to nearby municipal systems.

Independent water and wastewater facilities on new development lots are not permitted, however depending on the circumstances may be reviewed on a case by case basis.

6) Shallow Utilities – Natural gas, electricity and communication infrastructure are available adjacent to most development lots and it is the tenant’s responsibilities to make arrangements directly with the specific service provider (Atco, Fortis and Telus respectively) for connections. Depending on the amount of work involved the shallow service provider may be required to submit engineering details, and obtain a CIP, separate from the developer’s application.

Developers are required to submit plans and specifications as detailed in the Land Use and Development Guidelines document. In the case of site development and
mechanical servicing, plans must be stamped and signed by a Professional Engineer registered in the province of Alberta.

All submissions will be reviewed for general compliance by The Calgary Airport Authority’s Airport Development department.
APPENDIX D

Building Design Guidelines
INTRODUCTION:

A key “community issue” which was identified during the preparation of the Springbank Airport 10 Year Development Plan related to the overall appearance of the airport. In general terms, area landowners felt that the Springbank Airport did not represent a high quality built environment and was visually unattractive. In addition, outdoor storage areas are in some cases very visible.

Any airport typically takes on an “industrial” character by nature. As such, simple buildings which utilize inexpensive materials (e.g. metal cladding) and outdoor storage areas are to be expected. With regard to Springbank Airport, however, there are areas which merit careful consideration prior to being developed. These areas include:

- The lands which front on to Township Road 250 (48 Ave.) and which are visible from Highway #1;
- The main access road into the airport. (MacLaurin Drive)

These areas are considered to be worthy of a higher degree of design control and are shown on Figure 1. If these two key corridors are developed appropriately, they will enhance – rather than detract – from the surrounding area. As such, The Calgary Airport Authority is committed to the following design guidelines for these areas.

BUILDING DESIGN GUIDELINES:

Architectural Style

- Architectural Style will not be restricted, however buildings located within the areas shown on Figure 1 will be expected to be developed to a higher design quality than those which currently exist on airport.
- Prospective tenants and their designers will be required to develop buildings which will enhance these areas of the airport as well as the surrounding community.
- Buildings which are in keeping with the regional architecture of the Foothills and Rocky Mountain regions will be encouraged.

Building Massing

- Buildings within the Springbank Airport fall into two categories, single occupancy buildings and multi-occupancy buildings. All buildings will be considered to be comprised of two fundamental components, namely the shop/hanger portion and the office/public entrance portion.
- The office component and its public entrance should face towards the front yard and the main street. In the case of corner lots, only the yards facing the main street are considered front yards.
- The public entrance is to be clearly expressed architecturally to create a strong building/corporate image and sense of entrance. Massing changes, colour, material changes and entrance canopies are all examples of architectural devices which can be employed to create an appropriate sense of entrance.
- The massing of the shop/hanger portion of any facility and the massing of the office/public entrance portions are to be distinct and different in profile. For example,
a facility which has a large hangar structure and a protruding lower scale single storey attached office component is acceptable over a plan structural box where the office public entrance is incorporated inside the box with minimal windows and entrance doors. Architectural devices such as different roof planes and height, using different geometric shapes for the different portions of the facility, stepping walls in or out between the hangars/shops and office components are all examples of devices which will create visual interest. A two storey office component is permitted provided there is a distinct change in massing from the hangar portion of the facility.

Roofs
- Variation in rooflines will be encouraged, as will be sloped roofs. Sloped roofs should have a minimum pitch of 4 in 12. Roof overhangs are encouraged.

Street Façade
- A higher degree of architectural detail will be required on buildings within these areas.
- The use of more than one material on the street façade will be encouraged.
- The main entrance to the buildings will be located on the street façade, and will be required to be visually dominant.
Exterior Materials
- Exterior materials will not be restricted, however they will be required to be used such that they are aesthetically pleasing.
- The range of material colours on a building will be required to be complimentary.

Outdoor Storage
- Outdoor Storage will not be permitted in the front yards of the lands in question.
- Outdoor storage areas will be required to be suitably screened from view through the use of fencing and/or landscaping.

Landscaping
- Street Tree Planting will consist of drought tolerant plant species and will emulate the wind breaks of the prairies consisting of linear plantings of poplar, ash, spruce and caragana.
- Lot landscaping should be a mixture of deciduous and coniferous trees and a variety of shrubs and planted in modules. The modules should consist of a minimum of the following plant materials, three (3) deciduous trees, two (2) coniferous trees and ten (10) shrubs.
- In addition to providing screening of buildings, storage yards and tarmac areas, the landscape modules are to serve as rainwater collection sites. In effect each site is to have a trap low area which also functions as the planting bed. These trap low areas will function as mini-storage areas during storm events.
- All landscape modules should be mulched with clean coniferous tree mulch to a depth of 75mm. This will reduce weeding requirements and conserve soil moisture.
APPENDIX E
Tenant Wildlife Control Guidelines
TENANT WILDLIFE CONTROL GUIDELINES

Background

Conflicts between aircraft and wildlife are a major concern to the aviation industry. Each year, hundreds of millions of dollars are spent to repair and replace damaged aircraft parts as a result of wildlife strikes. In addition, countless delays and inconveniences result from aborted takeoffs and landings.

WILDLIFE FEEDING POLICY

UNDER NO CIRCUMSTANCES SHALL ANYONE FEED WILDLIFE, EXPOSE FOOD WASTES, OR ENCOURAGE WILDLIFE TO THEIR FACILITIES BY PROVIDING NESTING OR OTHER ATTRACTIVE FORMS OF HABITAT.

Birds easily adapt to human development, and make full use of the many opportunities that human activity provides. The built-up areas of airports offer these birds a variety of nesting and roosting sites, as well as sources of food. “Any bird activity that poses a threat to aviation safety should be reported to the Springbank Airport General Manager at 286-1494 or Environmental Services at 735-1441.”

In an effort to assist the Airport Authority in minimizing wildlife hazards to aviation safety, the Authority has developed a number of mitigation measures for tenants to guide them in their activities and operations as a part of the overall Wildlife Control Plan.

Land Development:

- Top soil stripping of development sites should be aware that this activity will potentially attract flocks of gulls to the site to feed on worms and insects.
  - If this occurs contact the Springbank Airport General Manager at 286-1494 who will notify the Wildlife Control staff.
  - Minimize the hazard by exposing only the areas that need to be developed at that time.

- Ponding on project sites will attract gulls, shorebirds and waterfowl. Ensure proper drainage on project sites.

- Ensure all garbage on project sites is stored in closed containers that will not allow access to wildlife.
Building Design:

- Consideration should be given during the design of buildings at the airport to minimize nesting, roosting, and perching habitat. It is much more cost effective to design a facility to minimize bird habitat before it is built rather than after the fact.
  - Minimize ledges, holes and overhangs where pigeons and perching birds will access for nesting. (This will benefit the tenant by preventing pests, such as pigeons, from covering their windows, aircraft and walkways with droppings.)
  - Slope building ledges to an angle of 45 degrees or greater
- When design is not feasible or, as in most cases, the building has been standing for some time there are a number of control options:
  - Screen or block holes and openings in hangars.
  - Installing flexible netting across the base of rafters to exclude birds from the rafter system.
  - Vertical plastic blinds installed in doors that are frequently left open will repel many birds from entering in hangars and buildings.
  - Install netting, sheet metal, or other barrier materials under overhanging eaves and ledges to prevent access by swallows
  - Fine parallel wires stretched across ledges or on the roof to discourage birds from perching and roosting.
  - Spikes on ledges can also be effective.
  - Sticky materials can be applied to ledges and perching areas but often need to be re-applied.

Landscaping:

Trees and shrubs around an airport are aesthetically pleasing but can create attractive bird habitat resulting in an increased risk to aviation safety. Many common shrubs produce fruit and seeds, which in turn attract a wide variety of birds to the airport to feed. Trees can also create hazards by providing shelter, roosting and nesting sites.

In an effort to guide tenants in their landscaping decisions, the Calgary Airport Authority has developed a complete list of acceptable and unacceptable trees and shrubs. This list incorporates Transport Canada’s list of Ornamental Trees and Shrubs Attractive to Birds as well as Calgary’s local ornamental and native trees and shrubs. All the plants designated as unacceptable have been reviewed and a reason for the exclusion at the airport has been provided.
Ornamental Trees and Shrubs Attractive to Birds (non-permitted) [Transport Canada, 2002].

<table>
<thead>
<tr>
<th><strong>Common Name</strong></th>
<th><strong>Scientific Name</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Serviceberry</td>
<td><em>Amelanchier canadensis</em></td>
</tr>
<tr>
<td>Alleghany serviceberry</td>
<td><em>Amelanchier laevis</em></td>
</tr>
<tr>
<td>Western white birch</td>
<td><em>Betula commutata</em></td>
</tr>
<tr>
<td>Yellow birch</td>
<td><em>Betula lutea</em></td>
</tr>
<tr>
<td>River birch</td>
<td><em>Betula nigra</em></td>
</tr>
<tr>
<td>Paper Birch</td>
<td><em>Betula papyrifera</em></td>
</tr>
<tr>
<td>Grey Birch</td>
<td><em>Betula populifolia</em></td>
</tr>
<tr>
<td>Cutleaf peashrub</td>
<td><em>Caragana arborescens</em></td>
</tr>
<tr>
<td>Weeping caragana</td>
<td><em>Caragana arborescens</em></td>
</tr>
<tr>
<td>Tidy caragana</td>
<td><em>Caragana microphylla</em></td>
</tr>
<tr>
<td>Silverleaf dogwood</td>
<td><em>Cornus alba</em></td>
</tr>
<tr>
<td>Siberian dogwood</td>
<td><em>Cornus alba</em></td>
</tr>
<tr>
<td>Yellowdoge dogwood</td>
<td><em>Cornus alba</em></td>
</tr>
<tr>
<td>Flowering dogwood</td>
<td><em>Cornus florida</em></td>
</tr>
<tr>
<td>Japanese dogwood</td>
<td><em>Cornus kousa</em></td>
</tr>
<tr>
<td>Cornelian cherry</td>
<td><em>Cornus mas</em></td>
</tr>
<tr>
<td>Pacific dogwood</td>
<td><em>Cornus nuttalii</em></td>
</tr>
<tr>
<td>Red osier dogwood</td>
<td><em>Cornus stolonifera</em></td>
</tr>
<tr>
<td>Yellow twig dogwood</td>
<td><em>Cornus stolonifera</em></td>
</tr>
<tr>
<td>Rockspray cotoneaster</td>
<td><em>Cotoneaster horizontalis</em></td>
</tr>
<tr>
<td>Peking cotoneaster</td>
<td><em>Cotoneaster acutifolia</em></td>
</tr>
<tr>
<td>Early cotoneaster</td>
<td><em>Cotoneaster adpressa praecox</em></td>
</tr>
<tr>
<td>Hedge cotoneaster</td>
<td><em>Cotoneaster lucida</em></td>
</tr>
<tr>
<td>English hawthorn</td>
<td><em>Crataegus oxyacantha</em></td>
</tr>
<tr>
<td>Paul's scarlet hawthorn</td>
<td><em>Crataegus sp.</em></td>
</tr>
<tr>
<td>Toba hawthorn</td>
<td><em>Crataegus x mordenesis</em></td>
</tr>
<tr>
<td>Cockspur thorn</td>
<td><em>Crutaegus crus-galli</em></td>
</tr>
<tr>
<td>Russian Olive</td>
<td><em>Elaeagnus angustifolia</em></td>
</tr>
<tr>
<td>American beech</td>
<td><em>Fagus grandifolia</em></td>
</tr>
<tr>
<td>Purple beech</td>
<td><em>Fagus sylvatica</em></td>
</tr>
<tr>
<td>Weeping birch</td>
<td><em>Fagus sylvatica</em></td>
</tr>
<tr>
<td>Witch-hazel</td>
<td><em>Hamamelis virginiana</em></td>
</tr>
<tr>
<td>Oregon grape</td>
<td><em>Mahonia aquifolium</em></td>
</tr>
<tr>
<td>Plant Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Betchel crabapple</td>
<td><em>Malus ioensis</em></td>
</tr>
<tr>
<td>Virginia creeper</td>
<td><em>Partenocissus quinuenfolia</em></td>
</tr>
<tr>
<td>Western sand cherry</td>
<td><em>Partenocissus tomentosa</em></td>
</tr>
<tr>
<td>Flowering almond</td>
<td><em>Partenocissus triloba</em></td>
</tr>
<tr>
<td>Pissard plum</td>
<td><em>Prunus cerasifers</em></td>
</tr>
<tr>
<td>Amur Cherry</td>
<td><em>Prunus maackii</em></td>
</tr>
<tr>
<td>Amur choke cherry</td>
<td><em>Prunus maackii</em></td>
</tr>
<tr>
<td>May day tree</td>
<td><em>Prunus padus commutata</em></td>
</tr>
<tr>
<td>Autumn flowering higan cherry</td>
<td><em>Prunus subhirtella</em></td>
</tr>
<tr>
<td>Shubert choke cherry</td>
<td><em>Prunus virginiana</em></td>
</tr>
<tr>
<td>Schubert Chokecherry</td>
<td><em>Prunus virginiana</em></td>
</tr>
<tr>
<td>Alpine currant</td>
<td><em>Ribes alpinum</em></td>
</tr>
<tr>
<td>Austrian brier rose</td>
<td><em>Rosa foetida</em></td>
</tr>
<tr>
<td>Shining rose</td>
<td><em>Rosa nitida</em></td>
</tr>
<tr>
<td>Redleaf rose</td>
<td><em>Rosa rubrifolia</em></td>
</tr>
<tr>
<td>Burnett rose</td>
<td><em>Rosa spinosissima</em></td>
</tr>
<tr>
<td>White cedar</td>
<td><em>Thuja occidentalis</em></td>
</tr>
<tr>
<td>Korean spice viburnum</td>
<td><em>Viburnum carlesii</em></td>
</tr>
<tr>
<td>Wayfaring tree</td>
<td><em>Viburnum lantana</em></td>
</tr>
<tr>
<td>Highbush cranberry</td>
<td><em>Viburnum sp.</em></td>
</tr>
</tbody>
</table>

**Common names vary from plant to plant for that reason it is important to use the scientific name for species identification.**

**For more information:**
Contact the Calgary Airport Authority:

Terry Thompson  
Environmental Services Manager  
Ph: (403) 735-1405  
Fax: (403) 735-1418  
Email: TerryT@yyc.com

Shaye Folk  
Environmental Services Specialist  
Ph: (403) 735-1407  
Fax: (403) 735-1418  
Email: shayef@yyc.com

Gary Kindrat  
Environmental Services Specialist  
Ph: (403) 735-1407  
Fax: (403) 735-1418  
Email: garyki@yyc.com
APPENDIX F

Parking Requirements
MINIMUM DIMENSIONS FOR THE DESIGN OF PARKING FACILITIES

Unless otherwise allowed, the minimum dimensions for the design of parking facilities for full sized and compact automobiles are as follows:

<table>
<thead>
<tr>
<th>Stall Width (Metres)*</th>
<th>Parking (Angle)</th>
<th>Aisle Width (Metres)</th>
<th>Stall Width Perpendicular to Aisle (Metres)</th>
<th>Stall Width Parallel to Aisle (Metres)</th>
<th>Half Unit Parking Depth (Metres)</th>
<th>Full Unit Parking Depth (Metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FULL-SIZED AUTOMOBILES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>30°</td>
<td>3.2</td>
<td>5.0</td>
<td>4.8</td>
<td>8.2</td>
<td>13.2</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.6</td>
<td>5.8</td>
<td>3.4</td>
<td>9.4</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>6.0</td>
<td>6.2</td>
<td>2.7</td>
<td>12.2</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>7.9</td>
<td>5.8</td>
<td>2.4</td>
<td>13.7</td>
<td>19.5</td>
</tr>
<tr>
<td>2.6</td>
<td>30°</td>
<td>3.1</td>
<td>5.2</td>
<td>5.2</td>
<td>8.3</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.3</td>
<td>5.9</td>
<td>3.7</td>
<td>9.2</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>5.8</td>
<td>6.3</td>
<td>3.0</td>
<td>12.1</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>7.6</td>
<td>5.8</td>
<td>2.6</td>
<td>13.4</td>
<td>19.2</td>
</tr>
<tr>
<td>2.8</td>
<td>30°</td>
<td>3.1</td>
<td>5.3</td>
<td>5.6</td>
<td>8.4</td>
<td>13.7</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.1</td>
<td>6.1</td>
<td>4.0</td>
<td>9.2</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>5.6</td>
<td>6.4</td>
<td>3.2</td>
<td>12.0</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>7.3</td>
<td>5.8</td>
<td>2.8</td>
<td>13.1</td>
<td>18.9</td>
</tr>
<tr>
<td>2.9</td>
<td>30°</td>
<td>3.0</td>
<td>5.4</td>
<td>5.8</td>
<td>8.4</td>
<td>13.8</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.1</td>
<td>6.2</td>
<td>4.1</td>
<td>9.3</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>5.4</td>
<td>6.5</td>
<td>3.3</td>
<td>11.9</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>7.0</td>
<td>5.8</td>
<td>2.9</td>
<td>12.8</td>
<td>18.6</td>
</tr>
<tr>
<td>3.1</td>
<td>30°</td>
<td>2.9</td>
<td>5.6</td>
<td>6.2</td>
<td>8.5</td>
<td>14.1</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.0</td>
<td>6.3</td>
<td>4.4</td>
<td>9.3</td>
<td>15.6</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>5.1</td>
<td>6.6</td>
<td>3.6</td>
<td>11.7</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>6.7</td>
<td>5.8</td>
<td>3.1</td>
<td>12.5</td>
<td>18.3</td>
</tr>
<tr>
<td><strong>COMPACT AUTOMOBILES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>30°</td>
<td>2.8</td>
<td>4.4</td>
<td>4.6</td>
<td>7.2</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>45°</td>
<td>3.1</td>
<td>5.1</td>
<td>3.3</td>
<td>8.2</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>60°</td>
<td>5.3</td>
<td>5.4</td>
<td>2.3</td>
<td>10.7</td>
<td>16.1</td>
</tr>
<tr>
<td></td>
<td>90°</td>
<td>7.0</td>
<td>4.9</td>
<td>2.3</td>
<td>11.9</td>
<td>16.8</td>
</tr>
</tbody>
</table>

*A minimum width of 3.1 metres shall be provided wherever an end stall abuts a physical barrier.*
APPENDIX G

ECO Plan Guidelines
Environmental Construction Operations Plan (ECO Plan) Guidelines
INTRODUCTION

In order for the environment to be protected during construction, it is critical that all parties to Airport contracts, agreements, permits and authorizations, be aware of the environmental impact of their construction activities and provide measures and due diligence to protect the environment.

An Environmental Construction Operations Plan (ECO Plan) consists of guidelines and written procedures that address the environmental protection issues relevant to the specific project activities being performed. The Contractor must submit the ECO Plan to the Calgary Airport Authority (the Authority) prior to commencement of the work and in sufficient time to allow evaluation of the suitability of the proposed strategy.

PRIMARY RESPONSIBILITIES

The required ECO Plan prepared by the Contractor shall be directed to the Authority. The following are the primary responsibilities of the Contractor, concerning environmental protection on Airport contracts.

- Develop an ECO Plan and submit it to the Authority for evaluation prior to commencement of the work.
- Implement environmental protection measures in accordance with the ECO Plan.
- Monitor the work zone to ensure that the ECO Plan is effective for all conditions, including inclement weather conditions during periods of construction and shut down.
- Maintain all environmental control and protection devices.
- Take appropriate and timely action to correct any deficiencies.
- Take action (i.e. shut down work) where it is recognized that an impact to the environmental will occur.
- Ensure that staff and subcontractors are trained and empowered to identify, address and report potential environmental problems.
- Report all environmental incidents to the Authority immediately and provide a copy of the incident report to the proper authorities.
- Attend any meetings initiated by the Authority to address any concerns regarding the performance of the ECO Plan.
- Ensure that all subcontractors comply with the ECO Plan.
- Provide a knowledgeable individual at the work site to maintain the environmental control devices and address any environmental issues that arise. The Contractor must identify this individual to the Authority at the construction start-up meeting.

ECO PLAN SCOPE

The ECO Plan details the Contractor’s plan for satisfying the environmental requirements associated with the specific project. The ECO Plan submitted by the General Contractor must cover the activities of any subcontractors. The plan must:

1. Provide a statement of the Contractor’s commitment for protection of the environment, compliance with environmental legislation and satisfying the Authority’s contractual and policy requirements.
2. Identify and address, construction procedures, the environmental requirements and potential impacts associated with various construction activities.
3. Provide emergency response procedures to minimize potential impacts of emergency situations on the environment.
4. Describe how monitoring and reporting will be conducted to satisfy contractual and regulatory requirements.
5. Describe how the ECO Plan will be implemented by establishing plans for training, communication, documentation, auditing, management review and adjustments.

PREPARING AN ECO PLAN

To prepare an ECO Plan, a Contractor would conduct the following steps:

1. Develop a commitment statement to the Authority’s Environmental Policy that is appropriate to the project
2. Identify the environmental aspects and potential impacts of the project. To identify environmental aspects and potential impacts of the project, the Contractor would review:
   - Environmental impacts of site activities
   - Environmental regulations pertaining to the project
3. Describe procedures to address the environmental aspects and potential impacts relating to:
   - Site activities of specific project stages
   - Construction site management
   - Construction materials management
   - Waste management
4. Describe emergency response procedures for all potential environmental site emergencies
5. Describe procedures for monitoring and reporting information to satisfy environmental legislation and contractual requirements
6. Describe how the ECO Plan will be implemented, reviewed and adjusted as appropriate
   - Define roles and responsibilities
   - Provide a plan for staff training and communication of the ECO Plan
   - Indicate what documentation is to be kept (see Documentation section)
   - Review ECO Plan performance regularly and after incidents
   - Adjust ECO Plan as appropriate for environmental protection condition changes and continual improvement.

ECO PLAN IMPLEMENTATION

Implementation is critical to the success of the ECO Plan. It is important to have corporate support and for the staff to have ownership of the ECO Plan. The Contractor is responsible for the implementation of the ECO Plan for the duration of the project and ensuring that all personnel on site abide by the plan.

To provide more detail in developing the ECO Plan the document “ECO Plan Framework” may be obtained from the Calgary Airport Authority, Airport Development Office.