



To: Planning Committee

Date: May 4, 2004

From: Terry Crowe
Manager, Policy Planning

File: 0153-01

Re: AIRPORT BUILDING HEIGHT OPTIONS

Staff Recommendation

That, as per the Manager, Policy Planning report entitled: Airport Building Height Options, dated May 4, 2004, Council authorize staff to explore, with the Vancouver International Airport Authority (VIAA), the possibility and implications of increasing building height in Richmond.

Terry Crowe
Manager, Policy Planning

Att. 3

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Staff Report

Purpose

The purpose of this report is to identify the City's options regarding the management of building height in Richmond, due to the airport restrictions, as set out in the Aeronautics Act.

Origin

On October 7, 2003, the Richmond City Council approved the following motion:

"That staff present to a future Planning Committee meeting, options for the City to request a relaxation of the 45 m (147.5 ft) building height maximum of the Aeronautics Act".

Note: This topic is separate from the airport noise research which is currently underway.

Findings Of Fact

Existing City Building Height Limitations

Currently, the City regulates building height through its Zoning and Development Bylaw. The allowable height varies within the City. Each zoning district schedule provides a maximum building height (e.g. 9 m (29.52 ft) in Townhouse District R2; 45 m (147.63 ft) in Downtown Commercial District C7; no maximum building height in Industrial District I2).

Existing Federal Building Height Limitations

Transport Canada regulates building height through the authority of the Vancouver International Airport Zoning Regulations, established under the Aeronautics Act. Building height is limited to a maximum of 47 m (154.20 ft) above sea level close to the airport (e.g. generally the area north of Blundell Road and west of No. 4 Road). As well, a more restrictive limit is imposed below the take-off and landing approaches to the runways (See **Attachment 1**).

Consultation

In response to this Council referral, City staff have:

- met with the Civil Aviation Safety staff of Transport Canada, Aerodrome Safety to research the Aeronautics Act and the Vancouver International Airport Zoning Regulations, and
- begun general discussions with the Vancouver International Airport Authority (VIAA) regarding Council's referral.

Questions

The following questions need to be considered:

1. Who has the authority to make the final decision on building height in the vicinity of the airport?
2. What federal criteria are used to decide whether or not to allow an increase in building height?
3. Who may make an application to request an increase in building height?
4. What is the role of the VIAA in the regulation of building height?
5. What is the application process?
6. What are the matters which must be addressed in preparing an application?
7. What are the City's costs involved in requesting an application to be made?
8. How long will a federal decision take?

Answers

1. Who has the authority to make the final decision on building height in the vicinity of the airport?

(1) General

The federal government (Minister Transport Canada) makes the final decision (See Attachment 2).

(2) Type Of Decision

It appears that, if an increase in building height were to be approved, the federal decision may involve either:

- amending the federal regulations or,*
- granting an exemption to the regulations. An exemption to the regulations may be granted directly by the Minister, in exceptional circumstances, where it can be demonstrated that the regulation ought not apply, and the exemption is in the public interest and is not likely to affect aviation safety (Attachment 3).*

2. What federal criteria are used to decide whether or not to allow an increase in building height?

An amendment of the Airport Zoning Regulations or an exemption from existing Regulations is assessed against both of the following tests (Attachment 3):

- 1. Is it in the public interest?*
- 2. Is it likely to affect aviation safety?*

3. Who may make an application to request an increase in building height?

Only the certificate holder, the Vancouver International Airport Authority, may make an application to request an increase in building height.

4. What is the role of the VIAA in changing building height regulations?

The Airport Certificate holder, Vancouver International Airport Authority, is responsible for making application to the Minister through the Regional Director of Civil Aviation, along with:

- a commitment to pay costs,*
- the posting of surety bond,*
- submitting drawings, maps or charts.*

Transport Canada is responsible for:

- Providing technical assistance, within limits of resources.*

Affected land owners rights:

- Airport Zoning Regulations do not apply to pre-existing non-conforming uses,*
- No compensation for loss in land value or any other loss.*

5. What is the application process?

- *A Federal process is required for either amending or exempting the existing Airport Zoning building height requirements.*
- *The process involves City research, VIAA collaboration, developer and community consultations, option analysis, preparing an application, submitting it and a federal decision.*

6. What matters must be addressed in preparing an application?

- *understanding the existing airport building height restriction legislation model and its purpose and the impacts;*
- *identifying where in Richmond a building height increase might be possible;*
- *identifying what new building height(s) to request;*
- *identifying the implications (pros, cons), benefits and costs of an increase in building height;*
- *identifying how to address the concerns of the VIAA and stakeholders;*
- *addressing the federal criteria regarding an increase in building height (e.g., demonstrating that an increase is in the public interest and does not adversely affect aviation safety); and*
- *other, as necessary.*

7. What are the City's costs involved in requesting an application?

- *Initially none, as discussion with the VIAA is required first.*
- *To prepare an application appears to involve research, data, analysis, engineering, modelling, administrative procedures, legal advice, consultations with the VIAA and stakeholders (e.g., developers, public), and the co-operation of the VIAA*
- *Any costs would be reviewed as they arise.*

8. How long will a federal decision take?

- *The process can be quite lengthy, depending on other priorities of the Government.*
- *For example, when the City requested an increase in the height of the flagpole at City Hall, it took approximately six (6) months to have it approved.*
- *An application, which involves a general increase in building height, will take longer to prepare and may take longer to have approved.*

AnalysisGeneral Comments

Staff's preliminary findings are:

- The regulations under the Aeronautics Act which control the building height maximum around the Vancouver International Airport are based on a generalized hypothetical model.
- The regulations developed for the Vancouver International Airport do not necessarily reflect the site specific relationship between the airport runways and the adjacent Richmond community.
- Further discussion and information may be undertaken to determine if the blanket application of this model has unnecessarily limited development opportunities in Richmond.

Precedents

In the past, there have been exemptions to airport building height in Richmond.

The City's Building Application Department indicates that:

- the flagpole at Richmond City Hall was granted an exemption to the height limit,
- the Executive Inn, at 7311 Westminster Highway, which exceeded the height limit for buildings below the Outer Surface, received an exemption,
- developers typically apply directly to the VAAA for temporary exemptions for construction cranes, with the exemption carefully monitored by the airport control tower.

Vancouver International Airport Authority's (VAAA) View

Given the fact that only the VAAA can make an application to change the airport height regulations, City staff have met with VAAA staff to discuss under what conditions VAAA might support an increase in current building height.

VAAA staff advised that they would be pleased to discuss the matter of height with the City. However, they are clearly concerned about the City's review of land use with respect to airport noise.

If the City wants to pursue an increase in building height, it makes sense to only do so in co-operation with the VAAA.

It must be emphasized that the outcomes of these discussions are not certain.

In addition to the City's current airport noise research, VAAA indicated that they are considering the following airport noise studies:

- a review of the NEF contours to identify which areas within each NEF contour may be more severely impacted by airport noise than other areas within the same NEF contour within the City;
- research to identify the experience that other airports have had with adjacent residential development;
- research to determine the implications neighbouring residential development is having upon other airports (e.g. degree of complaints, lawsuits, operations, long range planning, etc.); and
- the development of the Airport Master Plan (20 - 40 year Plan) and its impact on land uses.

If the City were to proceed with exploring building height increase possibilities, a broader more detailed discussion of the issue and exploration of the possible ways by which the VAAA may support an application to increase building height will need to be undertaken.

As the City and the VAAA are longstanding partners, if this matter is pursued, it is suggested that the City collaborate and co-operate with the VAAA explore the possibilities of increased building height.

Options

Option 1 - Status Quo

Continue with the current airport building height restrictions

Pros

- Consistency with established requirements,
- No work or cost required.

Cons

- An increase in building height is not explored or achieved,
- No clarification is achieved,
- Uncertainty will remain regarding whether or not it is possible to increase building height around the airport.

Option 2 – Collaborate With the VIAA To Explore Airport Height Increase Possibilities
(Recommended)

Direct staff to:

- explore, with the VIAA, the possibility of increasing building height, and preparing an application to increase the building height.

Pros

- this longstanding matter can be clarified,
- continues the City's partnerships with the VIAA,
- best chance to increasing building height regarding the airport, while addressing other stakeholder interests,
- the possible benefits are significant and could include increasing:
 - the development (e.g., residential, retail, office) capacity of the City,
 - housing and jobs,
 - the City's tax base,
 - the benefits of RAV,
- maintain airport safety.

Cons

- may not be successful,
- will involve City staff time.

Financial Impact

No cost is involved in exploring the matter with the VIAA.

Conclusion

Further collaboration with the VIAA is the best chance for Richmond to increase building height with respect to the airport.



Eric Fiss,
Policy Planner (4193)

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Summary
Aeronautics Act: Vancouver International Airport Zoning Regulations Zoning
Regulations Affecting Vancouver International Airport, 1980

1. Introduction

The Vancouver International Airport Zoning Regulations control the height of buildings, structures and objects including objects of natural growth; and prohibit the disposal or accumulation of waste material or substances edible by or attractive to birds on the lands to which the regulations apply. The zoning is intended to protect the airspace to ensure that aircraft may safely enter and depart the airport.

The Regulations establish protected zones within 15 kilometres of the airport, with the creation of three protected surfaces, which describe imaginary planes a given distance above the ground plane, above which obstructions are not allowed. Measurements for the purpose of describing the protected surfaces are based on an established reference point, which is located in the approximate centre of the Airport, at an elevation of 2 m above sea level (geodetic datum).

The Outer Surface

A general protected surface, known as the "Outer Surface", establishes a basic height limit 45 m above the airport reference point (that is, 47 m above sea level), for a distance of 4 kilometres from the reference point (**Schedule 1**).

Outer Surface Plan

This surface has been rationalized based on local road networks and development and extends generally from the western Municipal boundary eastward to Garden City Road, but also including McLennan North Sub-Area (Section 10-4-6); and from the northerly Municipal boundary southward to Blundell Road.

This description of the "Outer Limits of Land" was established by the Department of Transport, November 2, 1978.

The Approach Surface

Additionally, areas within the flight paths from the three runways are also protected. The "Approach Surface" is the sloped imaginary surface extending upward and outward from the three runways, in each direction, for a distance of 15 kilometres. The Approach Surface is more restrictive than the Outer Surface for areas within close proximity of the airport, where its elevation is less than 45 m above the reference point, and continues to limit height as it passes through the Outer Surface and extends beyond the Outer Limits of Land (**Schedule 1**).

The Vancouver International Airport zoning plans are on deposit at the Land Title Office and are available for viewing at the offices of Transport Canada or the Vancouver International Airport Authority.

The City has a copy of the Area maps of the Regulations for reference.

The City refers building applications to Transport Canada when the site is in the vicinity of the airport to determine if the proposal is in conformance with the regulations.

As well, the City advises the VIAA of building proposals, who in turn are required by the International Civil Aviation Organization to report obstacles within 10 km of a runway threshold which project above a 1.2% slope (which is more restrictive than the 2% slope specified in the Regulations).

2. Excerpts From: AERONAUTICS ACT Vancouver International Airport Zoning Regulations

REGULATIONS RESPECTING ZONING AT VANCOUVER INTERNATIONAL AIRPORT

Short Title

1. These Regulations may be cited as the Vancouver International Airport Zoning Regulations.

Interpretation

2. In these Regulations,
 - "airport" means Vancouver International Airport, in the Township of Richmond, in the Province of British Columbia; (aéroport)
 - "airport reference point" means the point described in Part I of the Schedule; (point de repère de l'aéroport)
 - "approach surface" means an imaginary inclined plane extending upward and outward from an end of a strip along and at right angles to the projected centre line of the strip, which approach surface is more particularly described in Part III of the Schedule; (surface d'approche)
 - "Minister" means the Minister of Transport; (Ministre)
 - "outer surface" means an imaginary surface located above and in the immediate vicinity of the airport, which outer surface is more particularly described in Part IV of the Schedule; (surface extérieure)
 - "strip" means the rectangular portion of the landing area of the airport, including the runway, prepared for the take-off and landing of aircraft in a particular direction, which strip is more particularly described in Part V of the Schedule; (bande)
 - "transitional surface" means an imaginary inclined plane extending upward and outward from the lateral limits of a strip and its approach surfaces, which transitional surface is more particularly described in Part VI of the Schedule; (surface de transition)
3. For the purposes of these Regulations, the assigned elevation of the airport reference point is two metres above sea level.

Application

4. These Regulations apply to all lands and lands under water, including public road allowances, adjacent to or in the vicinity of the airport, the outer limits of which lands are described in Part II of the Schedule, but these Regulations do not apply to such lands as from time to time form part of the airport.

General

5. No person shall erect or construct on any land or land under water to which these Regulations apply any building, structure or object or any addition to any existing building, structure or object, the highest point of which will exceed in elevation at the location of that point any of the surfaces hereinafter set out that project immediately over and above the surface of the land at that location, namely,
 - (a) the approach surfaces;
 - (b) the outer surface; or
 - (c) the transitional surfaces.

Natural Growth

6. Where an object of natural growth on any land to which these Regulations apply exceeds in elevation any of the surfaces set out in paragraphs 5(a) to (c), the Minister may make a direction that the owner or occupier of the land on which that object is growing remove the excessive growth thereof.

Disposal of Waste

7. No owner or occupier of any land or land under water to which these Regulations apply shall permit such land or any part thereof to be used for the disposal or accumulation thereon of any waste material or substance edible by or attractive to birds.

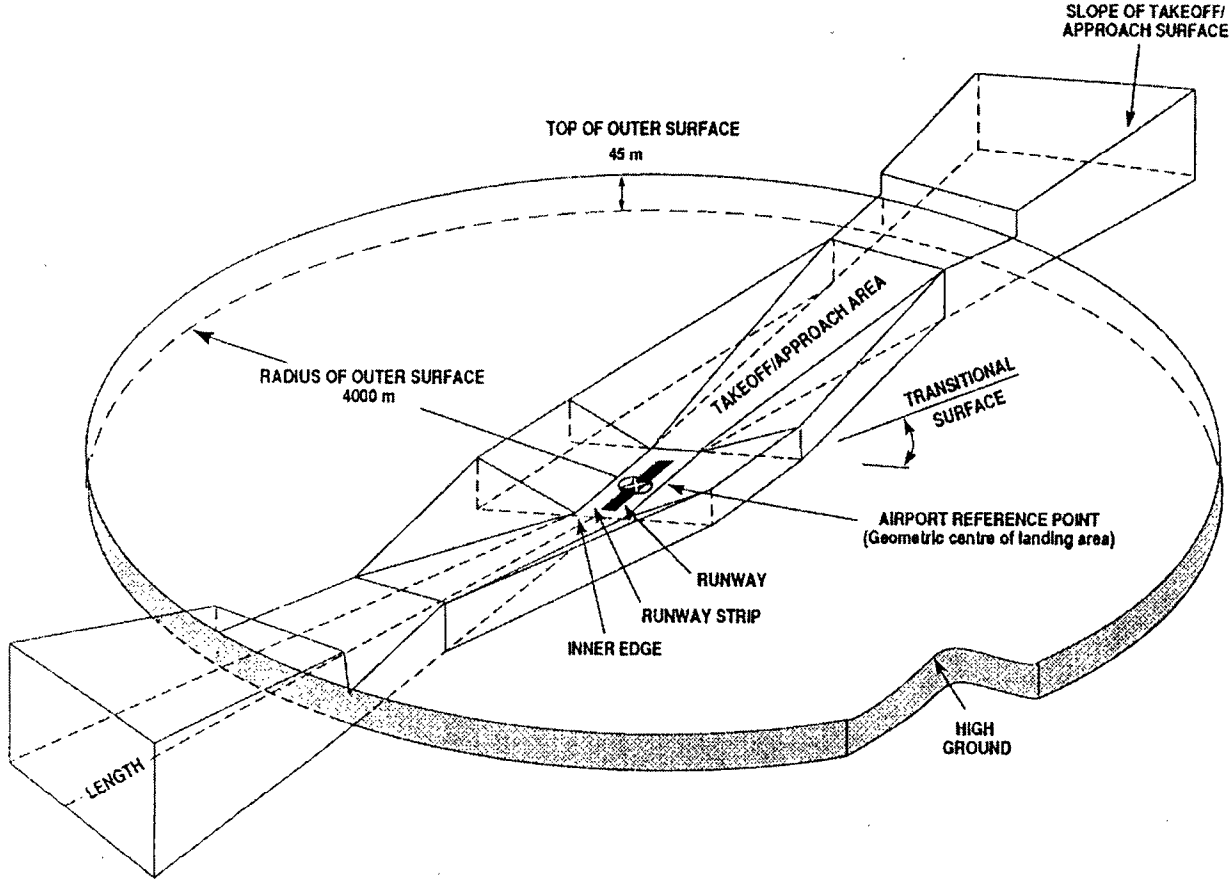
SCHEDULE

PART I

Description of Airport Reference Point

Being a point distant 720.532 metres measured Northerly at right angles to the centre line of runway 08R-26L, from a point thereon distant 1 514.206 metres measured Easterly along that centre line from the end of the strip associated with runway approach 08R, which distances are ground level distances.

The Outer Surface and the Approach Surface



**WHO HAS THE AUTHORITY
TO MAKE THE FINAL DECISION ON BUILDING HEIGHT IN THE VICINITY OF THE AIRPORT?**

(1) General

The federal government make the final decision).

The federal Minister of Transport is vested with the authority to administer the Aeronautics Act.

The responsibility for regulatory policy may be delegated to the Director General, Civil Aviation.

(2) Legal Context

(a) Aeronautics Act and the Canadian Aviation Regulations

The regulation of aviation safety in Canada is the responsibility of the Federal government, and is established by legislation in the Aeronautics Act and the Canadian Aviation Regulations.

(b) Aerodrome Standards, TP 312, Chapter 4

Transport Canada has prepared the Aerodrome Standards and Recommended Practices to guide the preparation of regulations.

The objectives of Transport Canada's Aerodrome Standards are:

- *"to define the airspace around aerodromes to be maintained free from obstacles in order to minimize the dangers presented by obstacles to an aircraft, either during an entirely visual approach or during the visual segment of an instrument approach, and*
- *to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome."*

(c) Aeronautics Act: Vancouver International Airport Zoning Regulations

Richmond's City Centre, Bridgeport, East Cambie and West Cambie areas are in close proximity to the Vancouver International Airport (YVR) and its flight paths and, as such, are within the obstacle limitation zones of the Airport, as established under the Aeronautics Act: Vancouver International Airport Zoning Regulations. (**Attachment 1**).

The purposes of the Act are to:

- Limit height of obstacles on runway approach and take-off;
- Limit height of obstacles within 4 km radius of airport;
- Protect aircraft from bird strikes by restricting land uses that attract birds; and
- Protect aircraft from electronic interference.

(3) Type Of Decision

It appears that, if an increase in building height were to be approved, the federal decision may involve either:

- amending the federal regulations or,
- granting an exemption to the regulations (See **Attachment 3**).

**DIRECTIVE NO. 1 REVISION 3
EXEMPTIONS FROM REGULATORY REQUIREMENTS**

Policy Objective

To define parameters on how the Minister's opinion is formed, and against what criteria, in granting exemptions from regulatory requirements and to ensure the exemption process is equitable to all those who come forward with a request, while simultaneously ensuring the best interests of the public are protected.

Background

The *Aeronautics Act* delegates to the Minister of Transport the power to exempt from the application of regulatory requirements made pursuant to the Act only in exceptional situations when a regulation cannot or ought not apply, and if certain conditions are met. Such exemptions are issued by delegated officials in accordance with the Delegation of Authority Document.

When Parliament enacts a law, or a regulation or an order is made under an Act of Parliament, it is a fundamental requirement of the Canadian legal system that legislative enactments will be applied universally and govern all members of the affected public equally. This enables each person to know what is required by the law and to act with the expectation that all persons to whom the law applies will be obeying the known requirements of that law.

However, it has long been recognised that, in certain situations governed by law, there may be occasions when the regulation cannot or ought not to apply. In such cases, it may be appropriate to issue an "exemption" which excuses compliance from all or part of the regulatory requirement.

The legislation governing aviation safety in Canada is the *Aeronautics Act*, together with the *Canadian Aviation Regulations*. Parliament has vested the authority for administering this legislation in the Minister of Transport. The Minister has in turn delegated responsibility for regulatory policy to the Director General, Civil Aviation (DGCA). In order to ensure the orderly and safe development of aviation in Canada, operational restrictions have been imposed on virtually all aviation activities. The authority to exempt from regulatory requirements has been delegated to the Minister's departmental officials identified in the Delegation of Authority Document.

Policy Statement

Civil Aviation is committed to implementing national standards and procedures for the consistent processing of exemption requests and a rationale in the development of criteria to either grant or deny exemptions from regulatory requirements.

Application

This policy applies to all parties involved in the civil aviation exemption-granting process in the Regions and at Headquarters.

Definitions

* Exemption: An exemption entitles a person to act outside the normal regulatory requirements.

Generally speaking, there are two ways in which compliance with a regulation governing aviation will not be required:

1. Exemption Pursuant to a Regulation with Criteria (Authorisation):

The first type of exemption is provided for in the regulation itself, by the use of such words as "unless authorised by the Minister", followed by criteria on which the authorisation will be based. Where these criteria form a complete guide for the granting of the exemption, the person who holds the Minister's delegated authority may issue the exemption once all the criteria have been met. Since the conditions are actually set out in the regulation, the public is aware that an exemption is granted on that basis and that there will be no discrimination.

2. Exemption by Executive Decision Pursuant to subsection 5.9(2) of the *Aeronautics Act*

(Executive Decision Exemption):

Where the regulation itself does not include any provision for exemptions, subsection 5.9(2) of the *Aeronautics Act* may be invoked. This subsection authorises the Minister to exempt from the provisions of that Act or regulations made under it, on such terms and conditions that he deems necessary.

Exemptions will be granted under subsection 5.9(2) only in unforeseen circumstances which are unlikely to recur or when the regulation is being amended to address certain situations. The Director General Civil Aviation, or the Regional Directors Civil Aviation hold the Minister's delegated authority to issue such exemptions.

5.9(2) "The Minister may, on such terms and conditions as the Minister deems necessary exempt any person, aircraft, aerodrome, facility or service from the application of any regulation or order made under this Part if, in the opinion of the Minister, the exemption is in the public interest and is not likely to affect aviation safety."

* Public Interest:

The concept of public interest has no fixed meaning in law and its scope may be broadened or narrowed according to the circumstances. It is clear, however, that the simple protection of a "private interest" will not satisfy the public interest test. Consideration must be given to how the exemption will impact on other members or segments of the regulated community as well as on the public at large. (Please refer to Appendix A for factors to consider in the determination of "public interest" during the decision-making process of whether to grant or deny an exemption request.

* Aviation Safety:

Any exemption issued under subsection 5.9(2) of the *Aeronautics Act* must be such that it is not likely to reduce the level of aviation safety afforded by the regulation to which the exemption applies.

Approach

The test for assessing the merits of an exemption request therefore is two-fold:

1. Is it in the public interest?
2. Is it not likely to affect aviation safety?

Each question stands on its own and must be addressed independently of the other by the OPI (and OTI as appropriate). In other words, the results of the test must be that the exemption is both in the public interest and is not likely to affect aviation safety.

In most cases, exemptions are issued only in exceptional circumstances and may be granted only after a thorough analysis is conducted on the impact the granting of the exemption may have on aviation safety. An equivalent level of safety is established through the development of terms and conditions that will provide alternate requirements or procedures to ensure any safety concerns are satisfied and safety is not compromised. In this regard, consideration should be given to any pending amendments to the regulation as well as the terms and conditions of previously issued exemptions.

A person may also be exempt from the application of standards incorporated by reference into a regulation. For that purpose, the person must be exempt from the regulation but only to the extent that compliance to the standards is required. Subsection 5.9(2) would then be used, and the link between the regulation and the standard would be clearly spelled out in the wording of the exemption.

Policy letters cannot be used to change regulations or standards. Until the entire regulation-making process to amend a regulation or standard is completed, the old regulation stands. In some instances where the intended change to the regulation is to bring relief rather than impose stricter requirements, exemptions can be used to bring the change into effect before the amendment officially comes into force. Policy letters can be used to provide background and rationale for the planned issuance of the exemption.

With respect to the release of exemptions to the public, the departmental position is that the process available under the *Access to Information Act* need not be used in order for third parties to get copies. The information can be released by the issuing office following a general inquiry. At the same time, Transport Canada must exercise discretion to determine whether the text contains references to either personal or proprietary information and, in such cases, this information must be purged first before release.

The authority to issue an exemption is a power that must be exercised judiciously. To ensure that exemptions are granted in a non-discriminatory and consistent fashion at Transport Canada Civil Aviation Headquarters

The authority to issue an exemption is a power that must be exercised judiciously. To ensure that exemptions are granted in a non-discriminatory and consistent fashion at Transport Canada Civil Aviation Headquarters as well as in the Regions, the delegation of authority and procedures for issuing exemptions found in Appendix A are provided to assist in exercising this authority. Please also refer to all other Appendices for further guidance throughout the exemption request process, and document drafting.

Supplementary guidance material for granting an exemption from regulatory requirements is contained in Appendices (A-I).

Reporting

A report will be provided to NCAMX on a quarterly basis by the Chief, Regulatory Affairs.

Further Information

Nicole Girard
Chief, Regulatory Affairs (AARBH)
Telephone number: (613) 990-1184
Facsimile number: (613) 990-1198
E-mail: GIRARDN@TC.GC.CA

Art LaFlamme
Director General
Civil Aviation

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