YYC CALGARY AIRPORT AUTHORITY

DEERFOOT NORTH
YYC GLOBAL LOGISTICS PARK

DEVELOPMENT AND SUSTAINABILITY STANDARDS

December 2013

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INTRODUCTION

The Deerfoot North YYC Global Trade Park Development & Sustainability Standards were created to:

- **Recognize the prominence and importance of the Deerfoot North YYC Global Trade Park within the Calgary International Airport property.**
- **Enhance and maintain the quality of the architectural and site design of the trade park.**
- **Provide guidelines to be incorporated by tenants and/or design professionals for the planning of leaseholds within the trade park.**
- **Foster and promote the implementation of high-quality tenant improvements for all leaseholds.**
- **Encourage environmental sustainability through the introduction of appropriate and innovative low-impact design elements and operational practices.**
- **Supplement the existing airport land development standards and requirements as identified in the Calgary Airport Authority/City of Calgary Agreement on Land Use, Development Guidelines, and Acreage Assessment Levies.**

1. SUBMISSION REQUIREMENTS

1.1 Calgary Airport Authority/City of Calgary Agreement on Land Use, Development Guidelines, and Acreage Assessment Levies

All airport land development, including the Deerfoot North YYC Global Logistics Park, must conform to the criteria set out in the *Calgary Airport Authority/City of Calgary Agreement on Land Use, Development Guidelines, and Acreage Assessment Levies* (hereinafter referred to as the "Land Use Agreement"). It is important to note that airport land development does not fall under the City of Calgary Land Use Bylaw. **Development submissions shall include, as a minimum, the required information as detailed in Section 4.2(C) of the Land Use Agreement.**

The Deerfoot North YYC Global Logistics Park Development & Sustainability Standards has been designed as supplementary design criteria to the requirements contained in the Land Use Agreement. Unless otherwise noted, in the event that any requirement identified in these Standards conflicts with or is contrary to a similar requirement contained in the Land Use Agreement, the requirement in the Land Use Agreement shall prevail.

1.2 Construction & Installation Permit

All development proposals for the Deerfoot North YYC Global Logistics Park are reviewed and approved according to the Airport Authority's Construction & Installation Permit (hereinafter referred to as "CIP") approval process. This process identifies the requirement to apply for a CIP when there is:

- Construction or installation of any new building, structure or underground service (communications, utilities) on airport property.
- Any modification to existing buildings or structures which: changes the exterior appearance or internal floor plan; changes the use of the facility or its occupancy capacity; results in an increase or decrease in the size or elevation of a facility; or results in changes to utilities or service connections.
- Any project which creates or modifies vehicle, aircraft or people moving facilities including roads, parking lots, driveways, sidewalks, access/egress lanes, aircraft aprons, taxiways & runways.
- Any construction or modification of landscaping, signage, exterior lights, gates or fencing.
- Any demolition or removal of facilities or services.

Tenants are required to complete and sign the CIP application. Tenants may identify an "authorized representative" who will act on behalf of the tenant for the duration of the project. All sub-tenant work is subject to the requirements of the CIP process (including CIP application, submission packages, acquisition of all applicable City of Calgary permits, etc.). Sub-tenants who submit a CIP application must obtain the authorization signature of the primary tenant (who signs the CIP application).

The CIP application form must be completed in its entirety and returned to the Airport Authority Development Services offices for processing along with all required drawings and plans. Once the application has been submitted and checked for completeness, it will enter the preliminary review stage. The development proposal will be reviewed internally by the Airport Authority and comments will be forwarded to the tenant, or their authorized representative. A submission may require revision if it is incomplete or does not meet the requirements as identified in these Standards and/or the Land Use Agreement

In addition to a completed CIP, submission packages are to include:

- **Construction Drawings**

  Construction drawings shall be submitted in the form of three (3) sets of black or blue line prints and one set of electronic files unless otherwise approved by the Planning and Engineering Department.

  In general, all drawings are to be presented on a standard B1 size format, information is to be metric and drawing text shall be a minimum of 2.5 millimeters in height and suitable for ½ size printing and scanning. Airport base plan information is available in AutoCAD .dwg format from the Airport Authority and it is desirable to have tenant submissions in the same format.

- **Architectural Renderings**

  Submission packages should include colour building elevations as well as colour site perspectives collectively depicting the completed project.

- **Material Sample/Colour Boards**

  Material samples and colour boards may form part of the submission package in instances where additional information or clarity is required for the development proposal.

- **Telecommunication Service Request (TSR)**

  The Telecommunication Services Request (TSR) form is provided by the Airport Authority and TELUS to tenants for voice and data service requests.

  This form must be used in all instances when requesting a change, addition, disconnection or removal of telecommunication services including voice, data, video, internet, telecom networks or equipment.

- **Development Security Deposit**

  A refundable Development Security Deposit (in the form of a Letter of Credit) is required for all land development projects and is returned to the tenant once all the terms and conditions of the CIP have been fulfilled.

- **Environmental Requirements**

  Environmental requirements will vary on a development by development basis but in general, all developments will require an *Environmental Construction Operations (ECO) Plan*, and *Erosion & Sediment Control Plan*. The criteria by which tenants should use in the preparation of both Plans can be obtained from the Airport Authority.

  In addition, environmental baselines studies or assessments may be required before development is approved. The Airport Authority will confirm with the tenant what additional studies and assessments are required.

2. DEVELOPMENT APPROVAL PROCESS

2.1 Confirmation and Authorization of Development & Building Permits

Once a development submission has been reviewed and the Airport Authority is satisfied with the submission content, the Airport Authority will issue a letter of authorization for the tenant to apply to the City of Calgary for a **Confirmation and Authorization of Development** (similar to obtaining a Development Permit for off-airport projects), and/or **Building Permit**. The City of Calgary will not accept or process applications from the tenant without a letter of authorization from the Airport Authority.

A copy of the approved permits from the City of Calgary must be submitted to the Airport Authority prior to a CIP being issued. **An approved Confirmation and Authorization of Development and/or Building Permit from the City of Calgary does not constitute approval for a CIP application.** If the project requires a Building Permit, an Occupancy Permit is issued by the City of Calgary and a copy must be supplied to the Airport Authority.

2.2 Additional Approvals – Transport Canada and NAV CANADA

As part of the development review process, the Airport Authority may prepare a development area site analysis to be submitted to Transport Canada and NAV CANADA for review and approval. The site analysis identifies any potential constraints or issues arising from the proposed development (including the use of temporary construction cranes) which may impact aeronautical operations, navigation equipment or regulatory violations. **Note: land development projects in the Deerfoot North YYC Global Logistics Park and the use of cranes will require approval from Transport Canada and NAV CANADA.**

2.3 Compliance with Governing Authorities

The review of plans, specifications, and construction details, and the issuance of a CIP by the Calgary Airport Authority in no way relieves the tenant/owner and/or their consultants and contractors from complying with all applicable bylaws, codes, regulations, and the most stringent requirements of all authorities having jurisdiction.

2.4 Planning & Engineering Office

The Tenant Development Coordinator represents the Calgary Airport Authority and is the liaison between the tenant and the Airport Authority for all review and approval phases from preliminary design to completion of construction.

2.5 Airport Authority Responsibilities

- **Base Plan Drawings** – the Airport Authority will provide the tenant with base plan drawings for the development area.
- **Submission Review** – the Airport Authority will review the submission within a reasonable time frame. Airport Authority comments may be provided if changes are required to the development submission.
- **Coordination** – the Tenant Development Coordinator will assist the tenant where at all possible in order to ensure the project runs smoothly and in an expedient manner.
- **Project Start-up Meeting** – the Tenant Development Coordinator will arrange for a pre-construction coordination/start-up meeting prior to the commencement of any work.

2.6 Tenant Responsibilities

- **Verification of Information** - it is the tenant's responsibility to confirm on-site conditions (including ground elevations) and to verify all information provided by the Airport Authority.
- **Permit to Practice** – it is the responsibility of the tenant to hire qualified consultants and contractors, licensed to practice in the Province of Alberta.
- **Final Inspection** – the tenant must ensure that all consultants who are responsible for the construction documents perform a final inspection and ensure that the project has been constructed as per the construction documents and that all equipment and systems are operating as specified and designed. Copies of all final inspections must be forwarded to the Tenant Development Coordinator before the project will be deemed as complete.
- **Security** – if the development takes place in a secure area, the tenant is responsible for following Transport Canada regulations and providing or arranging for security escorts for the duration of the project.
- **External Services Shut-downs/Locates & Airside Excavation** – if service shut-downs, locates and/or excavation within the development area are required during the construction period, the tenant or their authorized representative must complete the appropriate application form providing at least forty-eight (48) hours notice.
- **As-built Drawings** – it is a condition of the CIP that as-built drawings be submitted at the completion of the project.

3. LAND USE PLAN AND SUSTAINABLE DEVELOPMENT

3.1 Land Use Plan

The development concept for the Deerfoot North YYC Global Logistics Park is represented by **Map 1**. The land use concept identifies aviation services, light industrial, commercial, and airport recreational districts, storm water retention areas, major roads, and pedestrian pathways. The overall concept involves approximately 330 acres to be developed and leased to service a variety of airport needs including cargo handling, general aviation, operational support and some commercial activity.

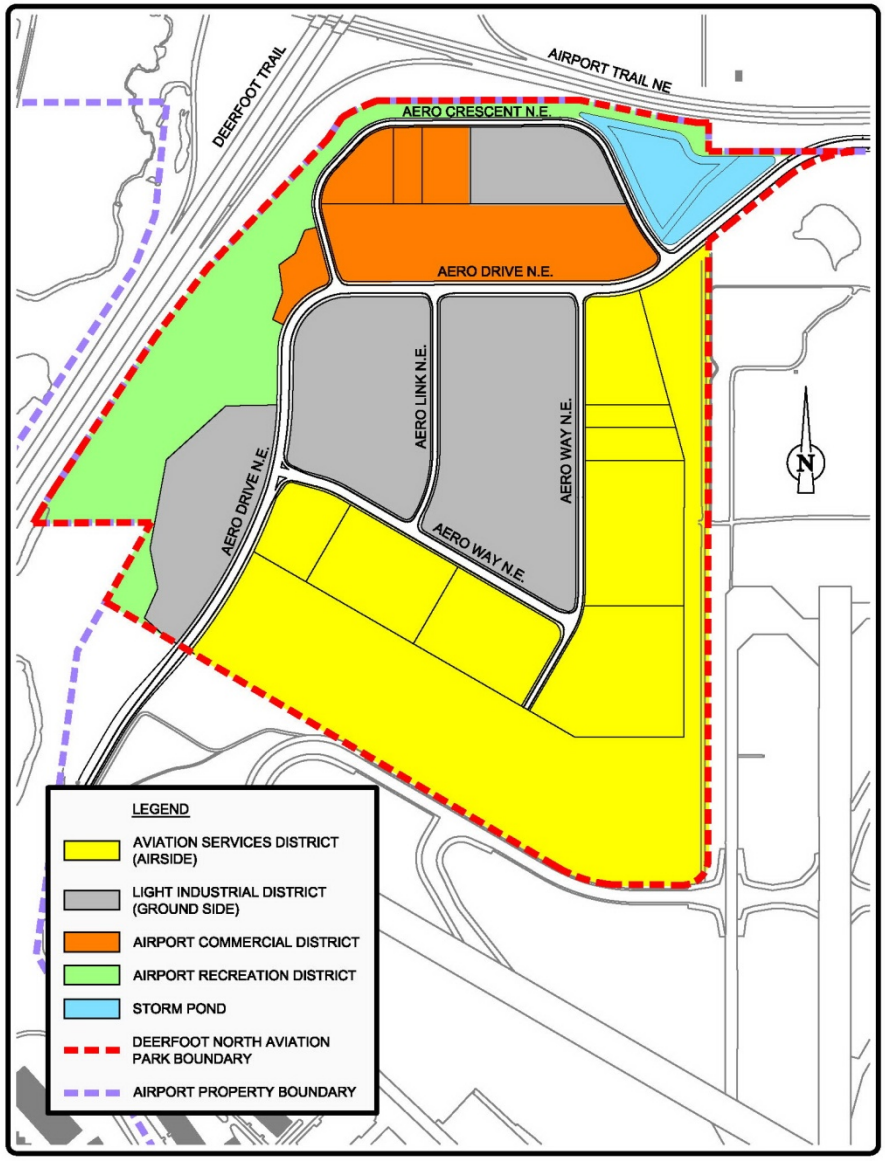
The Airport Authority has incorporated many sustainable development design components in the overall roads, utilities, recreation and storm water plan including: bio-swales, rain gardens, and engineered wetlands to encourage and support sustainable tenant development.

Specific zones within the trade park have been identified as requiring enhanced design requirements through intentional consideration for site sustainability and aesthetics for tenant development initiatives.

3.2 Commitment to Sustainability

The Authority believes that sustainable development is a long-term business approach based on our role in economic and social development and in environmental stewardship. It focuses on the integration of our core values into policies, procedures, and ongoing business practices in meeting our corporate objectives and stakeholder expectations while enhancing the benefits to our community.

This approach to sustainability is an integral part of our Vision, is a Key Business Principle, and provides guidance in the development of our Strategic Objectives and Organizational Values. Our **Vision - *"In support of our customers, our business partners and the entire Calgary community, we will operate and develop our airports in an efficient, innovative and sustainable manner"* -** guides the Deerfoot North YYC Global Logistics Park development strategy, and encourages tenant development to implement initiatives outlined in this document.



Map 1 – Deerfoot North YYC Global Logistics Park

4. ENHANCED VISIBILITY CORRIDORS AND BUFFER AREAS

4.1 Enhanced Visibility Corridors (EVCs)

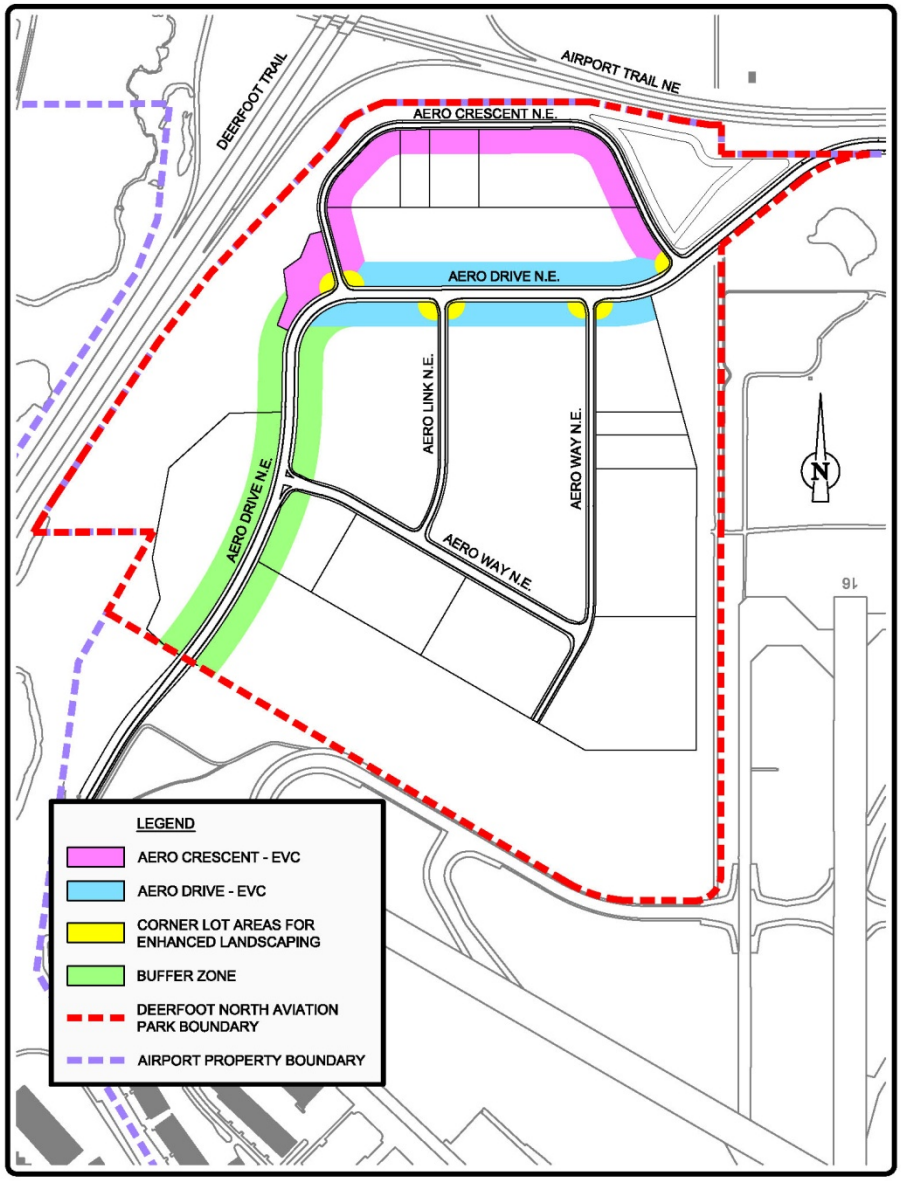
Specific areas within the Deerfoot North YYC Global Logistics Park have been designated as "Enhanced Visibility Corridors" due to a combination of intended land use and public accessibility. Leasehold parcels within these corridors will require a higher standard and density of landscaping requirements as well as higher level of architectural embellishment.

Two primary Enhanced Visibility Corridors (herein after referred to as "EVCs") have been defined for the Deerfoot North YYC Global Logistics Park **(see Map 2)**:

- **Aero Crescent EVC** - Those leasehold parcels adjacent to Aero Crescent and designated as Airport Commercial or Light Industrial.
- **Aero Drive EVC** – Those leasehold parcels on the north and south sides of Aero Drive between the east and west intersections with Aero Crescent (either whole or in part) and designated as Light Industrial or Aviation Services.

All leasehold parcels with frontages along these two EVCs shall on that frontage:

- Have a front yard setback of 7.5m from the lease line.
- Have a combination of mound berming and bio-swales over a minimum of 50% of the front yard setback.
- Be landscaped at a ratio of 1 tree per 35 square meters within the said yard setback.
- Incorporate a minimum of 75% of the principal building's primary façade predominant building material and colour scheme from the recommended theme materials and colour palette **(see *6. Materials and Finishes*)**.
- Demonstrate considered site and building design that reinforces separation with adjacent leasehold parcels.
- Have freestanding signage as per *9.0 Signage*.
- Incorporate aesthetic landscaping elements such as large scale stones, shrubs and grasses in a manner which supports the trade park theme **(see *6.2 Theme*)** at street intersections for all corner lot leasehold parcels. **Note: landscaping must conform to the requirements as detailed in *Section 6.3.4 - Corner Visibility Triangle* of the Land Use Agreement.**



Map 2 – Enhanced Visibility Corridors & Buffer Area

4.2 Buffer Area

In addition to EVC areas, portions of leasehold parcels designated as along the "buffer area" **(see Map 2)** shall be developed by the tenant to create separation between lots and public thoroughfares through intentional site and building design. Buffer areas help reduce the impacts of industrial/commercial development on surrounding land use by visually, acoustically, and aesthetically mitigating the impact of each development upon public areas and of adjacent developments upon one another. They also provide opportunity for enhancing storm water retention through increased depth of topsoil and bio-swales to minimize the environmental impact of the development.

Mound Berming and bio-swales with appropriate landscaping within the front yard setback will form a common and enforced design strategy. Berms shall be contoured at a recommended 3:1 slope typically and shall be landscaped to form an aesthetically pleasing screening element.

Within the designated buffer area, all street frontages are considered as front yards and require a minimum 6m landscaped setback from the lease line. As this landscaped buffer is intended to screen storage or operational aspects of the property from the public roadway, vehicle circulation or parking areas are not allowed within this area.

5. LEASEHOLD SITE DESIGN

5.1 General

New development should enhance the character of its surrounding area through quality architecture, enhanced landscaping incorporating low-impact development practices where practical, and appropriate site configuration. The various site components should be configured to emphasize the aesthetically positive aspects while minimizing the less pleasing aspects of the development.

5.2 Sustainability Considerations

The Airport Authority encourages all forms of environmentally responsible development including water capture and conservation, use of energy conscious materials, use of recycled materials, and responsible waste management

practices on site. Tenants are encouraged to consider and incorporate some of the following suggestions into their development design where ever practical and appropriate:

- Low-impact development storm water management strategies such as capturing and filtering rain water to reduce storm water run-off, recharge ground water and supplement on-site irrigation.
- Grey water treated with an on-site system such as a bio-swale as opposed to discharging directly to the public sewer system.
- Increased tree ratios around paved areas by 1 tree per 10 sq. m.
- Provide for a landscape maintenance program without pesticides or herbicides.

5.3 Site Configuration

Sites which occupy more prominent locations within the overall trade park – eg. EVC areas, "gateway" sites at the entrances into the trade park, corner or intersection sites – shall accept the responsibility to provide upgraded or improved site design commensurate with their position in the overall development.

Sites developed after adjacent sites are completed shall be sensitive to the design aesthetics and direction of neighbouring developments.

Buildings should be oriented so that public entrances, office areas, and pedestrian-scaled amenities are situated on the publicly-visible sides of the site. **Primary building entrances should be clearly defined to promote visual interest and architectural presence.**

All service areas – vehicle activity yards, garbage enclosures, outside storage, loading areas, at-grade or roof-top mechanical equipment – shall be located so as to be visually screened from public thoroughfares, and, where the screening is man-made, shall be integrated with the pervading building character – preferably constructed of the same materials employed on the principal building(s).

Where reasonable, public and staff vehicular access shall be separated from truck/loading access.

5.4 Site Elements

On the street sides of all development parcels without a public sidewalk system, pedestrian walkways connecting to the trade park sidewalk system will be encouraged.

Outdoor amenity spaces utilizing setback and other landscaped areas for public and employee gathering spots should be integrated into all site designs.

Perimeter landscaping in every development shall transition or integrate with the landscaping of adjacent sites to create streetscape continuity.

For multi-phase and/or multi-building developments, an apparent visual relationship between buildings or phases shall be evident by employing massing relationships, architectural or landscape design elements to conceptually connect the overall development. Land which has yet to be developed shall not be left in a manner which is untidy or unfinished in appearance and must be developed, as an interim measure to full development, at least to a point where it does not look like an active construction site.

3. BUILDING DESIGN

6.1 General

All structures within the Deerfoot North YYC Global Logistics Park are to be constructed to meet the basic requirements identified in this section. Exemptions from certain design criteria for structures in the Aviation Services and Light Industrial Districts may be allowed upon approval by the Airport Authority.

6.2 Theme

The Airport Authority has chosen an over-all design theme which has been branded and packaged as "*Ranchlands*" for the Deerfoot North YYC Global Logistics Park. Designers are encouraged to consider building materials and colours, soft and hard landscaping, and architectural elements which collectively reinforce the *Ranchlands* theme. It is not the intent of these Standards to create an trade park which employs obvious or inappropriate elements or to have a development which resembles a "theme park" atmosphere. Rather, tenants should innovatively and selectively integrate elements that reference a common design inspiration and create an aesthetically pleasing and harmonious development that visually represents a sense of prairie, agriculture, and geographic and historical place.

6.3 Principal Elevations

Appropriate building design and construction standards must be used to create a structure with equally attractive sides. Primary emphasis should be placed on the most visible sides of a building.

Principal facades of buildings visible from the public street shall include architectural elements such as plane articulation, changes in material, texture, and colour, and a more generous percentage of windows and openings in order to suitably address the expected attention due to this elevation's position. Building materials and design elements used on the principal façade are to be wrapped around each building corner, minimum 10% length of the adjoining side exterior wall surfaces **(See Fig. 1 and Fig. 2)**.

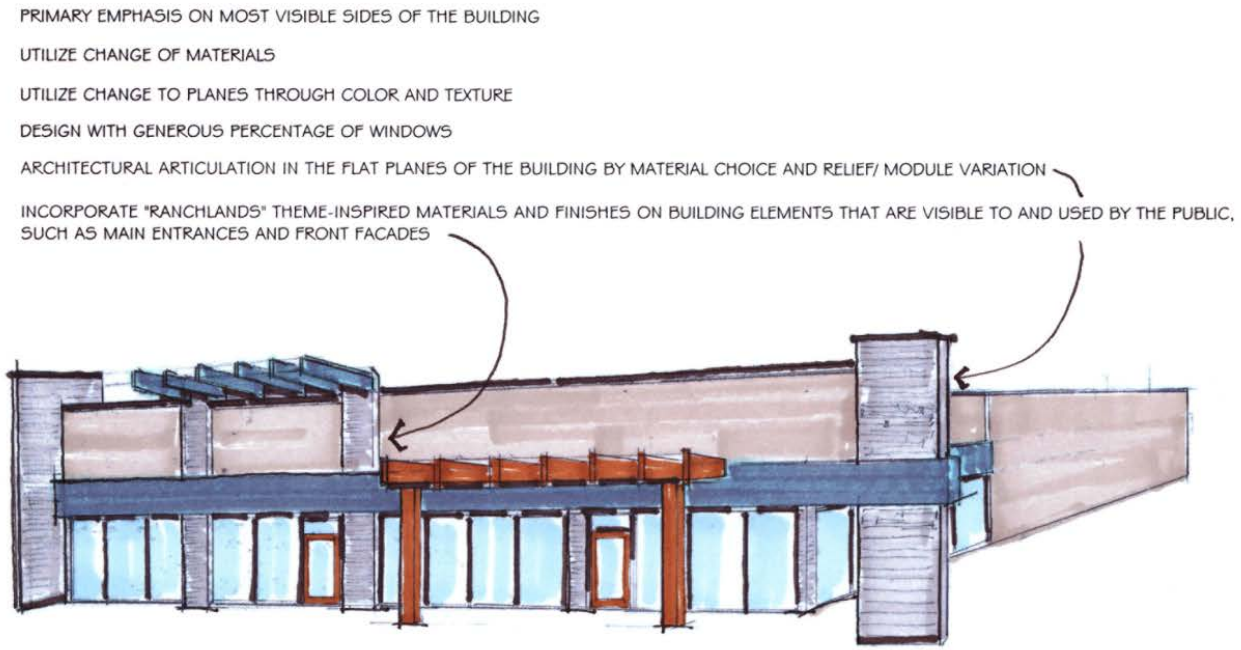


Figure 1

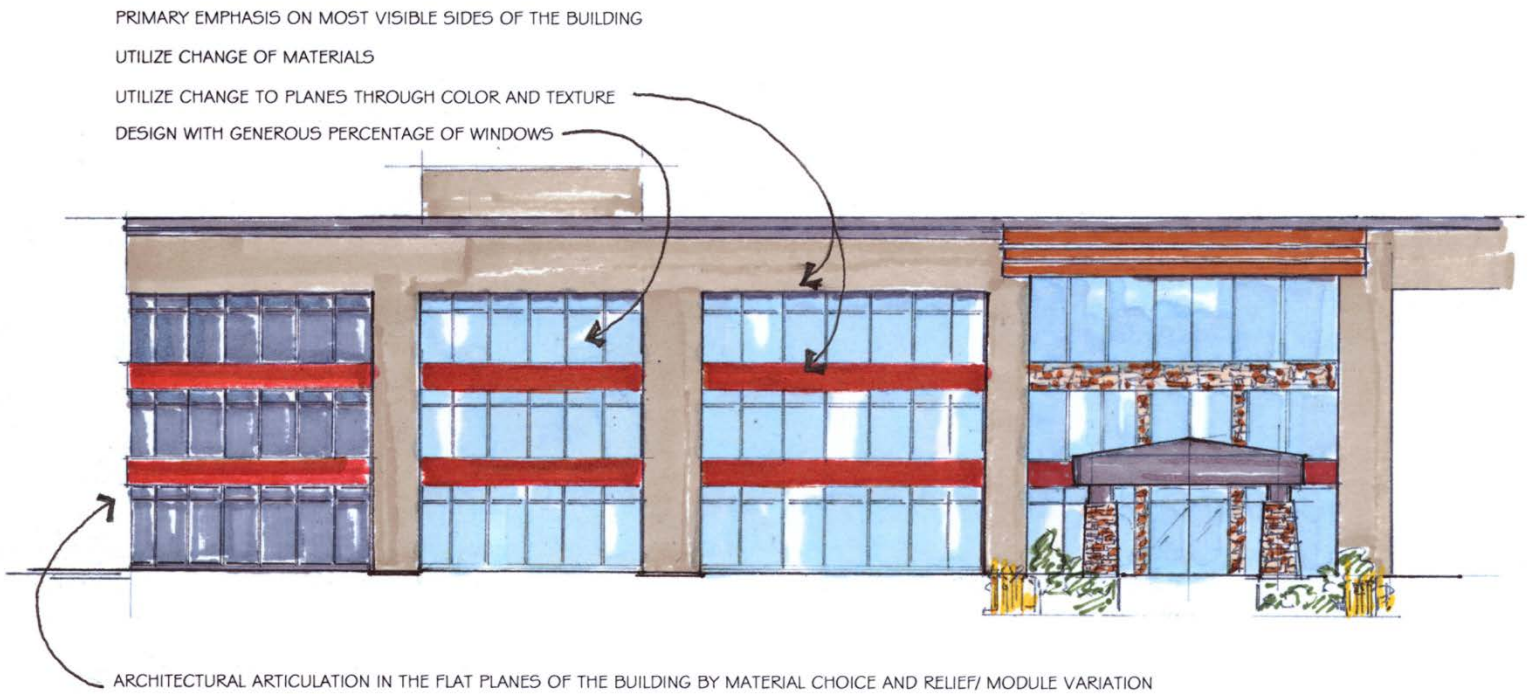

PRIMARY EMPHASIS ON MOST VISIBLE SIDES OF THE BUILDING
UTILIZE CHANGE OF MATERIALS
UTILIZE CHANGE TO PLANES THROUGH COLOR AND TEXTURE
DESIGN WITH GENEROUS PERCENTAGE OF WINDOWS
ARCHITECTURAL ARTICULATION IN THE FLAT PLANES OF THE BUILDING BY MATERIAL CHOICE AND RELIEF/ MODULE VARIATION
INCORPORATE "RANCHLANDS" THEME-INSPIRED MATERIALS AND FINISHES ON BUILDING ELEMENTS THAT ARE VISIBLE TO AND USED BY THE PUBLIC, SUCH AS MAIN ENTRANCES AND FRONT FACADES
LANDSCAPING AT FRONT ENTRANCES

Figure 2

6.4 Colours

The Airport Authority has provided a sample colour palette **(see *Appendix A: Recommended Colour Palette*)** which should be used as a guiding framework in determining the development's final colour scheme.

Building colour scheme will be assessed on an individual basis, and consideration for existing context will also affect the review and approval process. Colour choice is subjective, but combinations which, in the opinion on the Airport Authority, do not relate to the trade park's design theme, that seem inherently imbalanced, or which contrast objectionably with existing adjacent building colour schemes should be avoided.

6.5 Materials & Finishes

Recognizing that the trade park is primarily an airport industrial and commercial development, a "form follows function" philosophy for building design is not only acknowledged but encouraged. This being said, tenants should consider the use of building materials and finishes that reinforce the *Ranchlands* theme to an extent that is economical and practical. **Primary focus for the incorporation of theme-inspired materials and finishes should be placed on building elements that are visible to and used by the public, such as main entranceways and front facades (see Fig. 3)**.

The use of smooth or textured building materials which express the honest nature of the material will be encouraged. The use of different finish materials should be limited to a maximum of three – one of which will be the predominant exterior material. All buildings shall be finished with materials that are durable, of high quality and low maintenance.

Preferred predominant exterior materials include:

- Stone – natural (such as limestone, sandstone) or cultured (commercial grade).
- Brick and integrally-coloured split-face concrete block.
- Architectural pre-cast panels.
- Pre-finished steel and aluminum panel systems.

To reinforce the *Ranchlands* theme, exterior material colours should be based on the recommended colour palette **(see *Appendix A: Recommended Colour Palette*).**

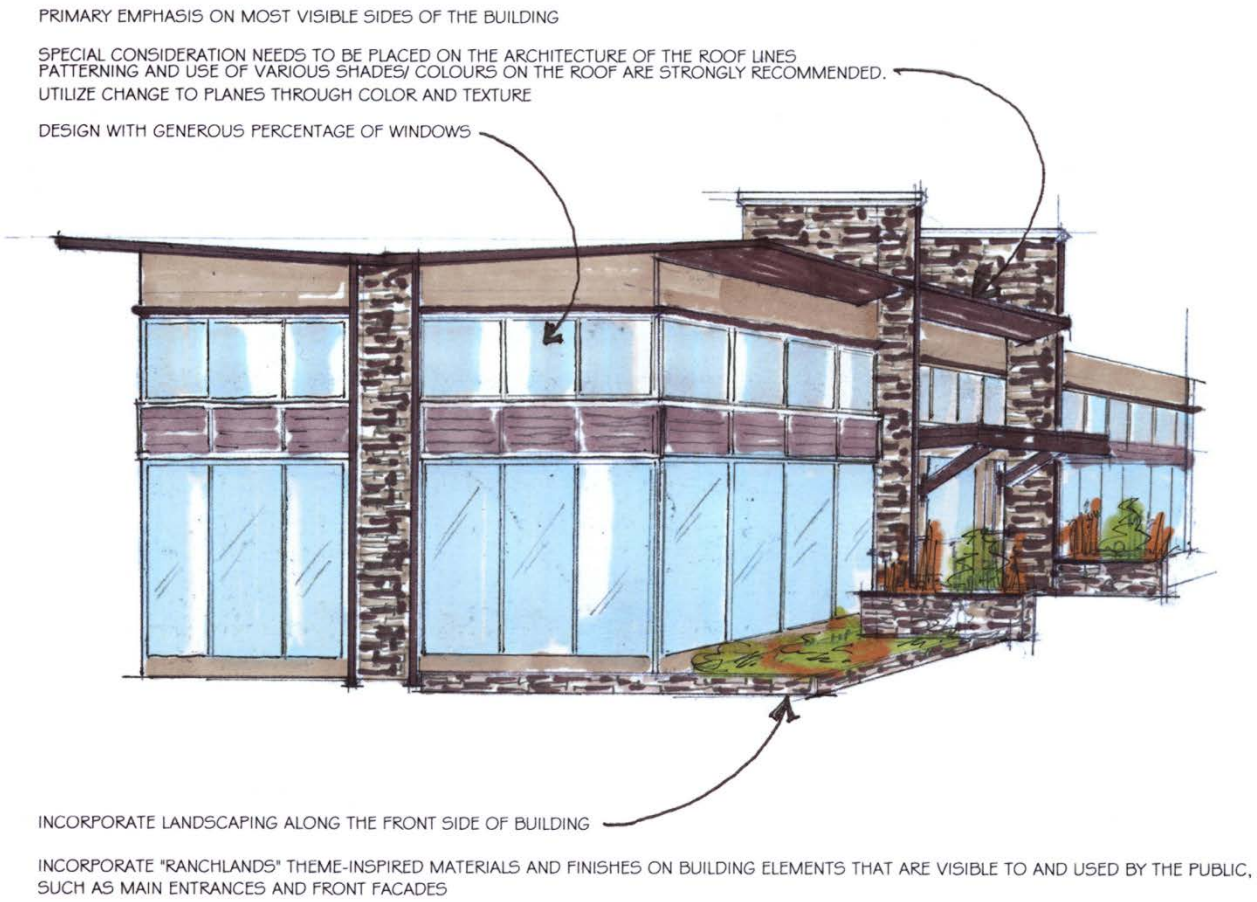

PRIMARY EMPHASIS ON MOST VISIBLE SIDES OF THE BUILDING
SPECIAL CONSIDERATION NEEDS TO BE PLACED ON THE ARCHITECTURE OF THE ROOF LINES
PATTERNING AND USE OF VARIOUS SHADES/ COLOURS ON THE ROOF ARE STRONGLY RECOMMENDED.
UTILIZE CHANGE TO PLANES THROUGH COLOR AND TEXTURE
DESIGN WITH GENEROUS PERCENTAGE OF WINDOWS
INCORPORATE LANDSCAPING ALONG THE FRONT SIDE OF BUILDING
INCORPORATE "RANCHLANDS" THEME-INSPIRED MATERIALS AND FINISHES ON BUILDING ELEMENTS THAT ARE VISIBLE TO AND USED BY THE PUBLIC,
SUCH AS MAIN ENTRANCES AND FRONT FACADES

Figure 3

The preferred predominant exterior material must be used for a minimum of 60% of the net wall surface averaged over all of those elevations which are visible from public thoroughfares. (Net wall surface is defined as the remainder of wall area when doors and windows are excluded).

Predominant exterior materials shall not include painted or stained wood, vinyl siding, adhesive-applied simulated materials, or fabric.

Exterior Insulation and Finish Systems (EIFS) will be accepted, but preferably as only accent and trim to the predominant preferred material, and only if of an aesthetically designed application which is acceptable to the Airport Authority.

The use of glass will be encouraged – particularly in areas where the impact of natural daylight would have most benefit to building occupants – for both the office/public and the warehouse/workshop/manufacturing components of the building(s).

6.6 Corner or Exposure Sites

Buildings on corner sites or fronting or backing onto roads shall be designed to acknowledge the building's visibility from more than one street. This shall be done by ensuring a continuity of design, materials, exterior finish, signage, and landscaping, at least along the facades deemed "front" by virtue of street frontage.

6.7 Articulation, Pattern and Relief

Parapet height variation should not be arbitrary, and all parapet articulation should also be articulated in plan.

No unrelieved flat wall planes shall exist on street frontage facades. Patterning shall be required which is appropriate to the material expression of the wall plane. In general, all wall planes should employ some module variation, plane change, texture difference or some appropriate material/pattern alteration.

6.8 Corporate Identity

Corporate logos or branding by the use of paint colour or building materials will only be permitted within the constraints of permitted building signage.

6.9 Roofs

Minimally-pitched roofs typical of pre-engineered construction are undesirable and, if accepted, should be disguised by end-wall parapets.

Rooftop elements such as exhaust vents, HVAC units, condensers, plumbing vents and stacks, communication equipment, electrical transmission or transformer equipment, etc. should be screened from view with materials compatible in texture, quality, and colour with the exterior walls of the building. Where ever possible, rooftop elements should be grouped together where appropriate to do so.

The Deerfoot North YYC Global Logistics Park is directly adjacent to the runway network and, as such, leads to a large number of incoming passengers being able to view the trade park from an aerial point of view. As a result, special consideration needs to be placed on the architecture of not only the roof lines, but the roofs themselves. Patterning and use of various shades/colours on the roof are strongly encouraged. The patterning should be complementary of the overall theme for the trade park.

6.10 Sustainability Considerations

Tenants are encouraged to consider and incorporate some of the following suggestions into their building design where ever practical and appropriate:

- Design efficient use of space and air distribution with the goal of minimizing air conditioned areas. This may include providing operable windows for natural cross-ventilation.
- Design building orientation and shading to minimize solar gain and maximize daylight harvesting, reducing the need for artificial light.
- Use recycled and recycled-content building materials.
- Include low VOC and CPC and formaldehyde free materials, finishes, and paints.
- Use of high-efficiency artificial light sources where needed.
- Provide waterless urinals and dual-flush or low-flush toilets.
- Provide rooftop rainwater capture and re-use.
- Provide a heat recovery mechanism on exhaust air.
- Improve the building envelope and incorporate high LTTR-value walls and roofs to reduce energy losses.

6.11 Ancillary Buildings

The incorporation of ancillary buildings in the over-all development proposal must be approved by the Airport Authority. Ancillary building areas (ie. loading, service, outside storage, etc.) shall incorporate design elements which maintain the character of the principal structure(s).

6.12 Temporary Structures

In general, the use of temporary structures within the Deerfoot North YYC Global Logistics Park is not permitted.

6. LANDSCAPING

7.1 General

All sites shall be landscaped only in accordance with the site landscaping plan submitted to and approved by the Airport Authority. All open site areas without parking, storage, circulation, or buildings principally within, but not limited to, the front, side, and rear yard setback areas shall be planted and landscaped according to the appropriate provisions as contained within the Land Use Agreement and these Standards. The use of low-impact development practices focusing on reduction of rainwater run-off is encouraged.

The general intent is for tenants to predominantly use **drought resistant, indigenous species** for all landscape planting to create a simplified yet strong naturalized landscape environment which complements the buildings and streets. A limited planting palette with strategic layout of the plant species will strengthen this intent. Winter appearance should be considered and species chosen appropriately. Where landscaping is used to provide screening, coverage must be retained on a year-round basis.

The character of the landscaping within the trade park should feel informal, although some limited areas of formal planting should be employed for contrast. **Landscape schemes (design and planting materials) should reference the *Ranchlands* theme to ensure consistency and visual continuity throughout the trade park**.

7.2 Sustainability Considerations

Tenants should strive to adopt a strategy of sustainability in landscape planting. Manicured lawns requiring watering, fertilizer, weed control, and continuous cutting and raking are not sustainable landscaping practices and designs which promote these activities will be discouraged. The use of plants that do not require irrigation and which can survive well on available rain water, and the employment of naturalized grass is encouraged. **Throughout the development area, topsoil depth shall be a minimum of eight inches (8") to enhance storm water retention.**

Tenants who express a preference for mowed lawn are encouraged to concentrate the area dedicated for such around specific areas, such as the principal entrance or public/employee outdoor amenity spaces, to minimize the maintenance requirements and to allow the "naturalized" landscaping to have predominance in the overall landscaping scheme.

7.3 Plant Material

The basic planting materials shall be trees and shrubs in group plantings (odd numbers), ground cover, naturalized grasses and lawn (in limited areas). Planting materials should reference the *Ranchlands* theme where ever possible. **Only approved planting materials will be permitted (see *Appendix B: Approved Plant Species List*)**. It is recommended that a tree species ratio of 3:2 (deciduous to coniferous) be used.

Plants should be employed to intentionally hi-light, emphasize, delineate, and screen buildings and specific areas within the development.

7.4 Other Landscaping Materials

The use of additional decorative elements such as sandstone boulders, wood/bark mulch, and river rock should also be incorporated into the landscape design where appropriate. These other landscaping materials should consist of a colour, texture and context that assist in reinforcing the *Ranchlands* theme.

7.5 Landscape Mound Berming & Bio-swales

Where mounding or earth berming and contouring is required, smooth transitions – at a recommended maximum 3:1 slope – to create undulating natural forms are desired. These landscape berms will create the predominant

identifying element within the street frontage and public realm of the trade park. Rainwater capture bio-swale design should be incorporated in all mound berming areas.

7.6 Landscaping within Parking Areas

Where parking islands and peninsulas are planned, one major shade tree shall be planted in each peninsula, and a minimum of two shade trees shall be planted in each island. No parking stall row shall end without an island or peninsula of landscaping.

When parking lots are visible from public rights-of-way, they will be partially screened by a combination of mound berming, shrubs and trees.

7. SERVICE AREAS

8.1 Loading and Receiving Areas

Loading and receiving areas should typically be located to the rear of sites, particularly for developments located in Airport Commercial areas, and should not have the dock or the dock doors directly facing any street within the trade park. If this is not possible for any reason, then front yard setback mound berming with landscaping shall be strategically located to screen the dock doors.

8.2 Outside Storage

Garbage storage facilities shall be compatible with and/or finished with the same predominant exterior materials as the principal building(s). Preferably, garbage storage facilities shall be screened such that they are not visible from any street, adjacent lot, or building entrance.

8. SIGNAGE

9.1 General

Only those signs complying with the requirements of *Section 7 - Sign Guidelines* of the Land Use Agreement and these Standards will be allowed by the Airport Authority. No sign shall be erected until location, plan, elevations, section and details, with specifications have been reviewed and approved by the Airport Authority.

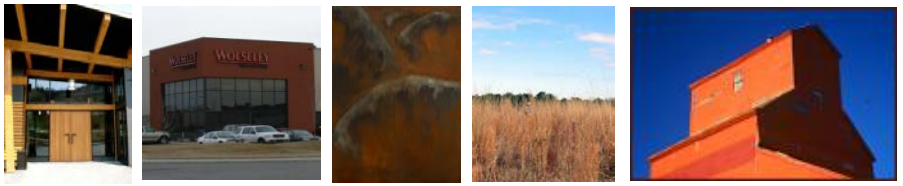
The only signs that shall be permitted on any building site are those indicating the name, address, and type of businesses which are located and operating on the site. No billboard or other advertising device or sign shall be permitted within the trade park without approval from the Airport Authority.

9.2 Business Identification Sign Pedestals

The Airport Authority has developed a standard business identification sign pedestal design **(see *Appendix C: Business Identification Sign Pedestal Design*)** which is to be used as the sole approved free-standing business identification sign design for all leasehold parcels in the trade park. It is the responsibility of the tenant to construct the business identification sign to the specifications as provided and to maintain the unit in a manner that is consistent with the tenant's other assets.

The business identification sign pedestal shall be placed in unobstructed view, perpendicular to the public thoroughfare at the principal site access point no more than 6m removed from the edge of the lease line at the main public roadway access point. Where a development site has sufficient frontage to warrant two or more separate and distinct main public access points, then additional signs complying with the requirements of this section will be allowed, where appropriate, in the ratio of one sign per main roadway access point.

Appendix A: Recommended Colour Palette

Colour Sample	Colour Family	Examples of colour palette in structure, texture and environment
	Greens	
	Blues	
	Reds / Oranges	
	Neutrals	
	Grays	

Appendix B: Approved Plant Species List

Trees

Acceptable Trees		**Unacceptable Trees**		
Common Name	Latin Name	Common Name	Latin Name	Reason
Amur Maple	*Acer ginnala*	American Elm	*Ulmus americana*	Provides Nesting/Too tall
Manitoba Maple	*Acer negundo*	Paper Birch	*Betula papyrifera*	Provides Nesting/Too tall
Weeping Birch	*Betula pendula*	Western White Birch	*Betula commutata*	Provides Nesting/Too tall
Green Ash	*Fraxinus pennsylvanica*	Hawthorn	*Crataegus Sp.*	Fruit bearing
Manchurian Ash	*Fraxinus mandshurica*	Sea Buckthorn	*Hippophae rhamnoides*	Fruit bearing
Black Ash	*Fraxinus nigra*	Flowering Crabapple	*Malus X Rosybloom*	Fruit bearing
Butternut	*Juglans cinerea*	Siberain Flowering Crabapple	*Malus sibirica*	Fruit bearing
Bur Oak	*Quercus macrocarpa*	Amur Cherry	*Prunus maackii*	Fruit bearing
Japanese Tree Lilac	*Syringa reticulata*	Schubert Chokecherry	*Prunus virginiana*	Fruit bearing
Linden	*Tilia cordata*	Bird Cherry	*Prunus padus*	Fruit bearing
Balsam Fir	*Abies balsamea*	Poplar	*Populus Sp.*	Provides Nesting/Too tall
Alpine Fir	*Abies lasiocarpa*	Ussurian Pear	*Pyrus ussuriensis*	Fruit bearing
Alpine Larch	*Larix lyallii*	American Mountain Ash	*Sorbus americana*	Fruit bearing
Bristlecone Pine	*Pinus aristata*	Showy Mountain Ash	*Sorbus decora*	Fruit bearing
Swiss Stone Pine	*Pinus cembra*	European Mountain Ash	*Sorbus aucuparia*	Fruit bearing
Mugo Pine	*Pinus mugo rostrata*	Wayfaring Tree	*Viburnum lantana*	Fruit bearing
Limber Pine	*Pinus flexilis*	Nannyberry	*Viburnum lentago*	Fruit bearing
Scots Pine	*Pinus sylvestris*	Norway Spruce	*Picea abies*	Provides Nesting/Too tall
White Spruce	*Picea glauca*	Douglas Fir	*Pseudotsuga menziessii*	Provides Nesting/Too tall
Blue Spruce	*Picea pungens*	Lodgepole Pine	*Pinus contorta latifolia*	Provides Nesting/Too tall
Colorado Spruce	*Picea pungens glauca*	Ponderosa Pine	*Pinus ponderosa*	Provides Nesting/Too tall
		White Cedar	*Thuja occidentalis*	Provides Nesting/Too tall

Shrubs

Acceptable Shrubs		Unacceptable Shrubs		
Common Name	Latin Name	Common Name	Latin Name	Reason
Dwarf Balsam Fir	*Abies balsamea 'Nana'*	Weeping Caragana	*Caragana aborescens*	Nesting/Seeds
Hydrangea	*Hydrangea Sp.*	Tidy Caragana	*Caragana microphylla*	Nesting/Seeds
Mock Orange	*Philadelphus coronarius*	Dwarf Japanese Yew	*Taxus cuspidata 'Nana'*	Fruit bearing
Golden Ninebark	*Physocarpus opulifolius*	Dogwood	*Cornus Sp.*	Fruit bearing
Blue Fox Willow	*Salix brachycarpa 'Blue Fox'*	Cotoneaster	*Cotoneaster Sp.*	Fruit bearing
Dwarf Arctic Willow	*Salix purpurea 'Nana'*	Burning Bush	*Euonymus nanus 'Turkestanicus'*	Fruit bearing
Purry Willow	*Salix discolor*	Albol Currant	*Ribes aureum 'Albol'*	Fruit bearing
False Spirea	*Sorbaria sorbifolia*	American Elderberry	*Sambucus canadensis*	Fruit bearing
Siberian Salt Tree	*Halimodendron halodendron*	Blue Elderberry	*Sambucus caerulea*	Fruit bearing
Indigo	*Amorpha Sp.*	Redman Elderberry	*Sambucus racemosa 'Redman'*	Fruit bearing
Spirea	*Spirea Sp.*	Highbush Cranberry	*Viburnum trilobum*	Fruit bearing
Potentilla	*Potentilla Sp.*	Juniper	*Juniperus Sp.*	Fruit bearing
Rose	*Rosa Sp.*	Broom	*Cytisus Sp.*	Fruit bearing
Lilac	*Syringa Sp.*	Silverberry	*Elaeagnus commutata*	Fruit bearing
Montgomery Blue Spruce	*Picea pungens 'Montgomery'*	Russian Olive	*Elaeagnus angustifolia*	Fruit bearing
		Honeysuckle	*Lonicera Sp.*	Fruit bearing
		Birds Nest Spruce	*Picea abies 'Nidiformis'*	Provides Nesting
		Cherry Prinsepia	*Prinsepia sinensis*	Fruit bearing
		Russian Almond	*Cherry Prinsepia*	Fruit bearing
		Nanking Cherry	*Prunus tomentosa*	Fruit bearing
		Buffaloberry	*Shepherdia Sp.*	Fruit bearing

Appendix C: Business Identification Sign Pedestal Design

Conceptual Design

(A complete sign construction package is available from the Airport Authority)