

The Calgary Airport Authority

Parallel Runway Project

Volume V – Item 12

Socio-economic Baseline Report

Report

The Calgary Airport Authority

**Parallel Runway Project
Volume V – Item 12
Socio-economic Baseline Report**

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Dear Peter:

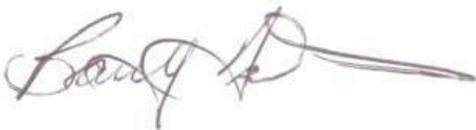
**Re: Baseline Study – Socio-economic
Comprehensive Study Environmental Assessment
Parallel Runway Project 16L-34R - Runway Development Program**

This report presents the results of the baseline study for Socio-economic conducted by AECOM Canada Ltd. for the Parallel Runway Project 16L-34R and connecting taxiways to be constructed at the Calgary International Airport in Alberta.

The report is part of the Comprehensive Study – Environmental Assessment and forms part of Volume V of that study.

If you have any questions concerning this report, please contact the undersigned at (403) 717-3498.

Sincerely,
AECOM Canada Ltd.



Barry Hawkins Project Manager
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TJ:
Encl.
cc: File

Acronyms

Abbreviation	Full Text
the Authority	The Calgary Airport Authority
AME	Aircraft maintenance engineer
AVPA	Airport Vicinity Protection Area
CCSD	Calgary Catholic School District
CEAA	Canadian Environmental Assessment Act
CED	Calgary Economic Development agency
CER	Calgary Economic Region
CHA	Calgary Hotel Association
CNR	Canadian National Railway
CPR	Canadian Pacific Railway
CS	Comprehensive Study
EA	Environmental Assessment
FEC	Field Electric Centre
FTE	Full time equivalent
GDP	Gross Domestic Product
ITS	International Travel Survey
LSA	Local Study Area
PRP	Parallel Runway Project
RSA	Regional Study Area
SSA	Site Study Area
TC	Transport Canada
TSRC	Travel Survey of Residents of Canada
YYC	Calgary International Airport

Symbol	Unit of Measure
ft ²	Square foot
ha	Hectares
kg	Kilograms
km	Kilometres
km ²	Square kilometres
L	Litres
m	Metres
m ²	Square metres
%	Percent

Glossary

Term	Definition
Community Assets	A wide range of community components which determine a community's strengths and weaknesses, and vulnerability to the effects of a project. These components must be created, maintained or enhanced in order to achieve "community well-being" and enable people to support each other in performing all the functions of life and developing their maximum potential.
Community Cohesion	Community cohesion refers to the aspect of togetherness and bonding exhibited by members of a community, the "glue" that holds a community together. This might include features such as a sense of common belonging or cultural similarity.
Community Well-being	A state of Financial/Economic, Physical, Human, Social, and Natural Assets possessed or desired by a community which enables its residents, organizations and institutions to support each other in performing all the functions of life and in developing their maximum potential.
Demographics	Selected population characteristics used in government, marketing or opinion research. Commonly used demographics include age, gender, income, mobility (in terms of travel time to work or number of vehicles available), ethnicity, educational attainment, employment status.
Emergency Preparedness	Actions taken in anticipation of an emergency to facilitate rapid, effective and appropriate response to the situation. The full spectrum of emergency management includes prevention/mitigation, preparedness, response and recovery, and critical infrastructure protection.
Enrolment	The number of persons attending a regular public or private school, college or university.
Financial Assets	The sub-component of Community Assets that considers the opportunities available to people for employment and participation in the economic life of the community, including the monetary or financial resources that people and municipalities use to achieve their economic objectives. Financial Assets are key determinants of a community's overall economic vitality.
Health and Safety Services	Services that include fire services (fire prevention, firefighting and fire investigation), policing, emergency preparedness (see a separate entry) and health care services.
Household	A person or group of persons who occupy the same dwelling.
Human Assets	The sub-component of Community Assets that considers the skills and knowledge inherent in the community(s) and the ability of various organizations and institutions that operate in a community(s) to provide people with opportunities for growth and learning, access to skills and knowledge, and access to essential services that are fundamental in maintaining people's feelings of health, sense of personal safety and their overall satisfaction with community.
Labour Force	The number of people aged 15 and over who are employed (that is, those who currently have jobs) and unemployed (that is, those who do not have jobs, but who are actively looking for work). Individuals who do not fall into either of these groups—such as retired people and discouraged workers—are not included in the calculation of the labour force.
Median Age	A calculated value that divides the age distribution of a population group into two equal parts. One half falls above the middle value (i.e., the population is younger than the median value) and one half falls below (i.e., the population is older than the median value).
Mobility and Migration	A measure used by Statistics Canada to classify the relationship between a person's usual place of residence on Census Day and his or her usual place of residence one or five years earlier. A person is classified as a non-mover if no difference exists. Otherwise, a person is classified as a mover and this categorization is called mobility status (1 or 5 years ago). Within the mover's category, a further distinction is made between non-migrants and migrants; this difference is called migration status. Migrants are those who moved outside the municipality, province or Canada.
Natural Assets	The sub-component of Community Assets that considers the biophysical environment (e.g., atmospheric, surface and groundwater, aquatic, terrestrial, etc.) upon which community well-being depends.
Physical Assets	The sub-component of Community Assets that considers the basic infrastructure that allows a community to function effectively. The availability and quality of such Physical Assets serve to attract and retain people and investment in a community; they influence personal health and satisfaction with community.

Term	Definition
Property Value	The market value of land or buildings.
Social Assets	The sub-component of Community Assets that considers the social and community activities in which people participate and the facilities or amenities that they draw upon in pursuit of their personal and community well-being objectives. This sub-component also considers people's use and enjoyment of their private property for a variety of purposes (i.e., raising a family, leisure, home-based businesses, etc.).
Social Services	Services provided by the government to improve the lives of those who need assistance, such as the poor, unemployed, elderly, disabled, and children. This might include income support, subsidized housing and food, long term care and services for seniors, child care services.
Stakeholder	An individual or group with an interest in the success of an organization in delivering intended results because those individuals or groups can affect or be affected by the organization's actions, objectives, and policies.
Sustainable Livelihoods Framework (SLF)	A framework designed in the early 1990s by the Department for International Development in the United Kingdom as a means for community development internationally. The aim of this framework was to assist communities in strengthening their core assets. This framework utilizes a set of five (5) assets, termed "capitals" (i.e., human, financial, physical, social, and natural capitals).
Taxable Assessment	The assessed value of real property for a specified tax purpose and upon which a municipal tax is levied for a given tax purpose.
Trades People	Skilled workers who are engaged in a recognized professional trade.
Upper Tier Municipality	An Ontario municipality (such as region, district or county) that provides municipal services to an area that includes more than one local municipality.
Visible Minority	Refers to whether or not a person, under criteria established by the Employment Equity Act, is non-Caucasian in race or non-white in colour. Under the Act, an Aboriginal person is not considered to be a Visible Minority.
Work Force	All the people working or available to work within a specified geographic area.

Executive Summary

The Calgary Airport Authority (the Authority) proposes to construct a new parallel runway to meet demand for passenger and cargo services in southern Alberta. The proposed work is referred to as the Parallel Runway Project (PRP). This Socio-economic Baseline Report forms part of the Comprehensive Study (CS) for the proposed PRP at the Calgary International Airport (YYC). The CS is being prepared as part of an environmental assessment (EA) and approval process mounted by the Authority.

This Socio-economic Baseline Report uses the concept of “community well-being” as its overall analytical framework. As there is no single or best definition of “community well-being”, this was defined by AECOM as:

“a state of Economic, Physical, Human, Social and Natural Assets possessed or desired by a community which enables its residents, organizations and institutions to support each other in performing all the functions of life and in developing their maximum potential”.

In accordance with this definition of “community well-being”, this Socio-economic Baseline Report has been organized according to five domains or “Community Assets”:

- The **Human Assets** sub-component considers the following parameters: population and demographics; skills and labour supply; education; health and safety facilities and services; social services; and economic development services.
- The **Economic Assets** sub-component considers the following parameters: employment, business activity, tourism, income, and municipal finance and administration. For the purposes of this Socio-economic Assessment, residential property values are also considered to be an economic asset.
- The **Physical Assets** sub-component considers the basic infrastructure that allows a community to function effectively, including housing, municipal infrastructure and services, and community character. For the purposes of this Socio-economic Assessment, land use and transportation are also considered to be physical assets.
- The **Social Assets** sub-component considers the social and community activities in which people participate and the facilities or amenities that they draw upon in pursuit of their personal and community well-being objectives, including the consideration of community and recreational facilities, resident’s use and enjoyment of private property, and community cohesion. For the purposes of this Socio-economic Assessment, cultural heritage resources are also considered to be social assets.
- The **Natural Assets** sub-component considers the biophysical environment upon which community well-being depends including surface water, groundwater, terrestrial ecosystems, air quality, and noise.

For the purposes of this Socio-economic Baseline Report, three primary study areas were defined, namely the Site Study Area (SSA), Local Study Area (LSA) and Regional Study Area (RSA). To a large extent, the RSA and LSA were defined taking into consideration boundaries defined in the Calgary International Airport Vicinity Protection Area Regulations (AVPA).

Overall, the RSA and LSA communities, including the City of Calgary, City of Airdrie and Rocky View County were characterized as having a reasonably healthy balance of Community Assets that contribute to their well-being.

All municipalities in the RSA are experiencing growth in their populations; however, the largest growth in population has been experienced in the City of Airdrie and Rocky View County. Population in the Calgary Economic Region (CER) is expected to grow from 1.25 million in 2008 to 1.39 million in 2013. This anticipated population growth will drive increased employment, business activity and overall economic development. The RSA municipalities can also be expected to experience increased demand for housing and the full range of municipal services and infrastructure over this time period.

LSA communities vary widely in terms of their social and economic characteristics. The majority of LSA communities can be characterized as being well established urban neighbourhoods, reaching full build-out in many cases. The major exceptions to this are Skyview Ranch, Panorama Hills and Evanston which are the newest residential communities in the LSA, while communities such as Coventry Hills, Taradale and Saddleridge continue to grow and develop. For the most part, the characteristics of these well established communities do not differ widely from the City of Calgary as a whole.

Within this context, both RSA and LSA residents provide high ratings of the feelings of personal health and safety, overall community satisfaction and high levels of confidence in ongoing operations at YYC. The presence of YYC is not considered to be a strong influence on people's feelings of health and safety nor their satisfaction with their community. The majority of Calgarians and Albertans alike view YYC and the work of the Authority in very positive terms. Overall, the most important attributes or features of the RSA and LSA communities that need to be maintained or enhanced to support community well-being in the next decade were related to Social Assets; that is, community parks and green spaces, community centres, facilities and activities, the sense of community, recreational facilities, and programs.

It is very clear that YYC is an important contributor to community well-being in the RSA and LSA. In 2007, YYC was associated with approximately 28,184 jobs or 3.8% of total employment within the CER. The Authority and its tenants generated over \$1 billion in labour income annually within the RSA and beyond. This represents approximately 2% of total income generated in the RSA municipalities in 2007. In addition, it is estimated that spending by non-resident visitors (i.e., visitors, tourists and air carrier cabin crews) arriving by air through YYC generated an additional \$159 M in labour income in the Calgary area. The Authority and its tenants contributed approximately \$2.5 billion to the Gross Domestic Product (GDP) within the RSA and beyond. YYC helped to attract approximately 4.85 million person-visits to the Calgary area by residents of Alberta, other Canadians, visitors from the United States, and overseas. In 2009, the Authority paid approximately \$4.72 million in taxes, which represents 0.5% of the City's budget property tax revenue and approximately 1.2% of the budget non-residential property tax revenue in 2009.

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Appendices

Appendix A	Public Attitude Research Report
Appendix B	Community Character and Cohesion Analysis Data

1. Introduction

1.1 Background

The Calgary Airport Authority (the Authority) proposes to construct a new parallel runway to meet demand for passenger and cargo services in southern Alberta. The proposed work is referred to as the Parallel Runway Project (PRP). Calgary is now a city of more than a million people and the region supports substantially more. Infrastructure development has not kept pace with growth. The Authority is working in conjunction with Transport Canada (TC), the City of Calgary and other stakeholders to meet the infrastructure and transportation needs of the proposed runway in a well-planned and timely manner. This Baseline Report forms part of the Comprehensive Study (CS) for the proposed PRP at the Calgary International Airport (YYC). The CS is being prepared as part of an environmental assessment (EA) and approval process mounted by the Authority.

1.1.1 The Parallel Runway Project (PRP)

The proposed runway will be constructed on airport land between the existing terminal, Barlow Trail and 36 Street NE. This land was acquired and designated for this purpose in the 1970s and has also been a part of airport, city, provincial, and federal planning processes since the 1970s. Due to the airport's growth and to meet demand, the proposed runway is scheduled to be operational by the end of 2014. In 2009, the Authority began the EA and other pre-construction planning activities, with construction scheduled to begin by 2011.

The proposed runway designated 16L/34R is located within the northeast quadrant of the City of Calgary bound to the north by Country Hills Boulevard, to the east by the existing 36 Street alignment and to the west by Barlow Trail. The PRP is located within lands managed by the Authority under long term lease from TC. The proposed runway 16L/34R will be located parallel to the existing north-south runway which would then be designated 16R/34L. The new runway will be long enough to accommodate a variety of future aircraft types capable of long duration international flights. The projected cost of building the runway is estimated at approximately \$500 M (2008 dollars).

The PRP consists of the following components:

- A 4,267 m x 60 m runway (14,000 ft x 200 ft)
- Associated taxiways
- A perimeter road with security fencing
- Grading of workspace to the east of the proposed runway
- Visual navigation aids
- Electronic navigation aids
- A maintenance building
- A field electric centre (FEC)
- Changes to airside/groundside roads necessitated by construction of the runway
- Closure of Barlow Trail between 48 Avenue and Airport Road
- A taxiway underpass (designated Taxiway J Underpass) servicing the airport's cargo area for airport service vehicles to pass under one of the taxiways
- Utility services to the runway including some changes to the airfield storm drainage system
- A taxiway underpass (designated Taxiway F Underpass)

Further details regarding the process and project can be found in Volume II, Chapter 5 of the CS.

This report provides a description of the socio-economic baseline conditions associated with the PRP. A series of baseline studies have been undertaken to describe the biophysical, socio-economic and historical resource baseline conditions. In total, 13 baseline studies have been undertaken:

- Soils and Terrain
- Vegetation
- Surface Water and Aquatic Resources
- Wildlife and Wildlife Habitat
- Groundwater
- Transportation
- Land Use
- Noise
- Climate and Greenhouse Gases
- Air Quality
- Cultural Resources
- Socio-economics
- Human Health

During the CS, the results of each of the baseline studies were documented in stand-alone technical reports such as this one. In each case, a draft was prepared and made available for public, stakeholder and government agency comment. The final baseline conditions will be summarized in each individual assessment chapter (Volume III), with each of the stand-alone technical reports becoming an appendix to the CS.

1.2 Description of the Socio-economic Environmental Component

This Socio-economic Assessment uses the concept of “community well-being” as its overall analytical framework. The concept of community well-being that forms the basis of this framework is one concept that has been applied to sociological, economic and sustainable development planning studies in Canada and internationally. Among other related concepts are community quality of life, individual and community health, community capacity, and the concept of the competent community (Annis 2005, Ribova 2000, Bowles 1981, Health Canada 1999, Lotz 1977).

There are many overlaps and linkages among these various concepts. Therefore, for the purposes of this Socio-economic Assessment, various aspects of these other concepts have been incorporated into the “community well-being” framework, where they are relevant to the assessment of the social and economic effects of the construction and operation of a parallel runway.

There is no single or best definition of “community well-being”. At a very basic level, well-being can be defined based on three interrelated dimensions: social, physical and psychological (Wan et al 1982). According to Wilkinson (Wilkinson 1991 in Ribova 2000), well-being is a concept meant to recognize the social, cultural and psychological needs of people, their family, institutions, and communities. Other definitions focus on the quality of social relationships, the vitality of the economy, the abundance of resources, and quality of the natural environment (City of Calgary 2005). Overall, “community well-being” is considered as the ultimate goal of all the various processes and strategies that endeavour to meet the needs of people living together in communities. It encapsulates the ideals of people living together harmoniously in vibrant and sustainable communities (Kusel and Fortmann 1991 in Ribova 2000).

From these characterizations, the complexity of the concept of community well-being is clear. These characterizations point to the necessity to consider a combination of economic, social and environmental factors that change and evolve over time. Some of these factors are more tangible or have a more direct link to well-being than others. Some examples of those factors include the availability and quality of municipal infrastructure and services (i.e., availability of water, sewage facilities); the availability and quality of community services such as health, education and recreational facilities; opportunities for employment and income generation; and the quality of the natural environment. Other determinants of well-being are less tangible or direct. Some of these may include residential property values, community cohesion and community character. Regardless, when referring to “community well-being”, it is recognized that communities not only want assurances that their well-being is being maintained, but they also want to improve it.

In order to understand the interaction of a project with and its contribution to “community well-being”, it is necessary to consider a wide range of community components which determine its strengths and weaknesses, and vulnerability to the effects of that project. These components can be considered as “Community Assets” that must be created, maintained or enhanced in order to achieve “community well-being” and enable people to support each other in performing all the functions of life and developing their maximum potential (Begin 1993 quoted in Ramsey and Smit 2002).

Based on this discussion and for the purposes of this Socio-economic Assessment, community well-being was defined by AECOM as:

“a state of Economic, Physical, Human, Social and Natural Assets possessed or desired by a community which enables its residents, organizations and institutions to support each other in performing all the functions of life and in developing their maximum potential”.

This definition acknowledges the various scales on which the Socio-economic Environment can be examined (i.e., individuals, organizations/institutions and communities) and the multi-dimensionality of communities and well-being (Ramsey and Smit 2002). In accordance with this definition of “community well-being”, this Socio-economic Assessment has been organized according to five (5) domains or “Community Assets” as defined within the Sustainable Livelihoods Framework (DFID 1998)¹.

First, the organization of the Socio-economic Assessment in this manner reflects the core objective of a Socio-economic Assessment as a means for identifying, predicting, assessing, and managing adverse socio-economic effects (i.e., avoiding effects on a Community’s Assets) and enhancing positive ones (i.e., strengthening a Community’s Assets). Second, this framework supports the notion at the core of the Sustainable Livelihoods Framework (DFID 1998) that if the benefits of economic development are to be sustained over the long term (i.e., long after a period of intense growth or following the decline or closure of a specific facility or industry), then it is critical that a portion of the wealth created during the development activity be invested in “Community Assets” that drive future growth, capabilities and expertise that will sustain the community over time. Third, this framework is sufficiently flexible to address effects at various scales (i.e., the individual, families/households, organizations, institutions, and communities) and the need for the Socio-economic Assessment to consider other environmental disciplines or components as defined for this EA in an integrated fashion. Finally, the “Community Asset” framework has applicability anywhere in the world and in any community. It offers a holistic integrated

1. Only the five (5) domains or “Community Assets” as defined within the Sustainable Livelihoods Framework (DFID 1998) are used in this Socio-economic Assessment. The entire Sustainable Livelihoods Framework is not applied in this Socio-economic Assessment.

approach to addressing factors that affect long term community well-being. It is noteworthy that the use of the Community Asset framework ensures that the scope of the Socio-economic Assessment exceeds the legal requirements of the *Canadian Environmental Assessment Act*.

Although the specific parameters that are addressed within each Asset category are PRP specific, most of them are well accepted as reliable measures of community well-being (Annis 2005, Ramsey and Smit 2002, Ramsey and Beesley 2006). Some parameters have been included to address effects on individuals, families or households, specific businesses or services. Finally, these parameters reflect the overall organization of the EA for the PRP, the types of factors that have been used in previous socio-economic assessments for major development projects in Canada, and the desire of addressing key community concerns regarding the effect of the PRP on community well-being. This general “Community Assets” framework along with its specific parameters are illustrated in Figure 1 and described below.

The **Human Assets** sub-component of the Socio-economic Environment considers the skills and knowledge inherent in the community(s), and the ability of various organizations and institutions that operate in a community(s) to provide people with opportunities for growth and learning, access to skills and knowledge, and access to essential services that are fundamental in maintaining people’s feelings of health, sense of personal safety and their overall satisfaction with community. For the purposes of this Socio-economic Assessment, the parameters that are considered within this sub-component of the framework include:

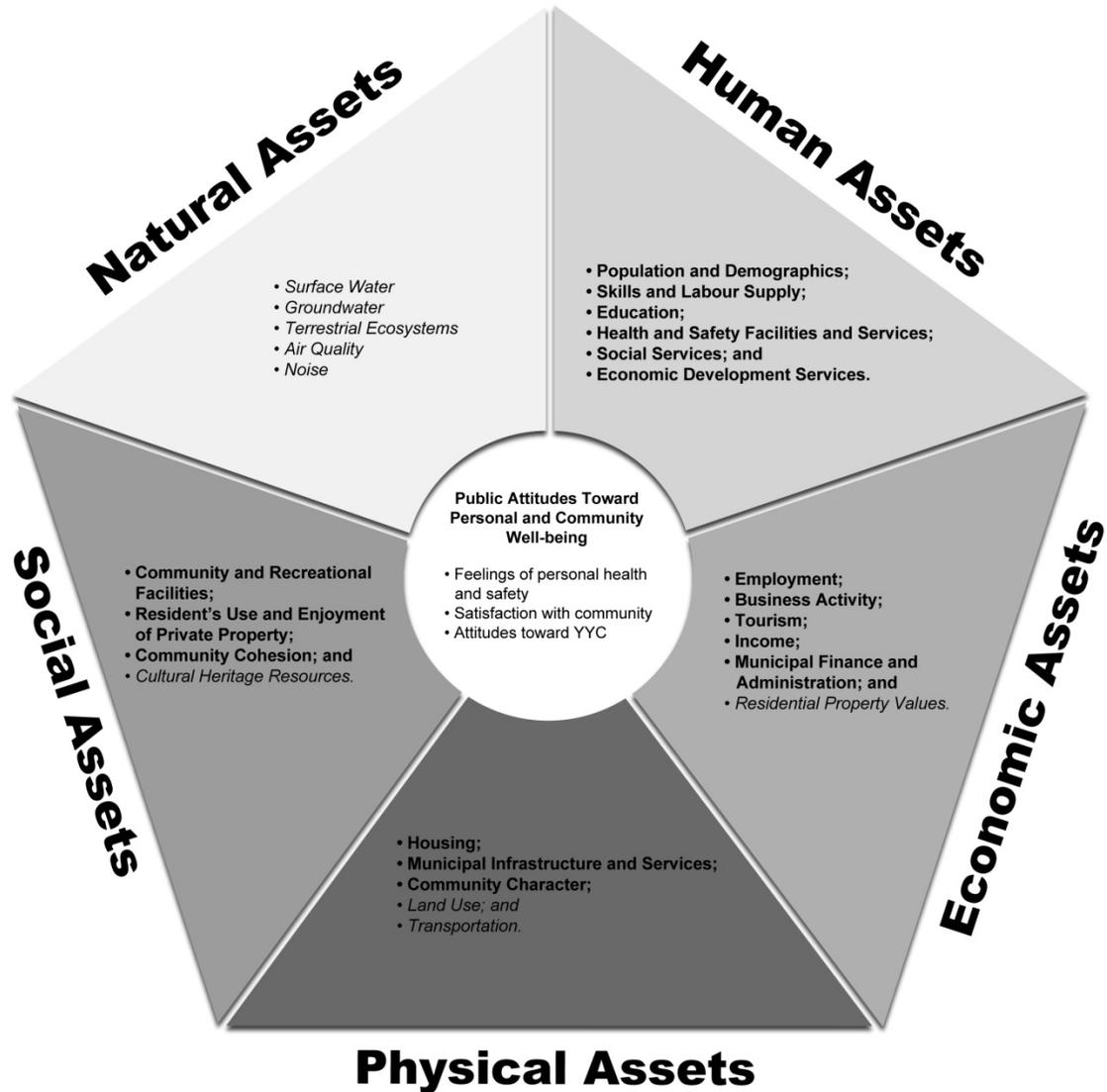
- Population and Demographics;
- Skills and Labour Supply;
- Education;
- Health and Safety Facilities and Services;
- Social Services; and
- Economic Development Services.

The **Economic Assets** sub-component considers the opportunities available to people for employment and participation in the economic life of the community including the monetary or financial resources that people and municipalities use to achieve their economic objectives. Economic Assets are key determinants of a community’s overall economic vitality. For the purposes of this Socio-economic Assessment, this sub-component considers the following parameters:

- Employment;
- Business Activity;
- Tourism;
- Income; and
- Municipal Finance and Administration.

For the purposes of this Socio-economic Assessment, residential property values are also considered to be financial assets. Baseline conditions related to property values are considered in detail in Volume V, Item 7, Land Use Baseline Report. Key considerations related to this Socio-economic Assessment are summarized in this baseline report.

Figure 1 Community Assets Framework



* Note that Assets presented in *italics* are considered in detail in other baseline reports and/or other effects assessment chapters

The **Physical Assets** sub-component of the Socio-economic Environment considers the basic infrastructure that allows a community to function effectively. The availability and quality of such Physical Assets serve to attract and retain people and investment in a community; they influence personal health and satisfaction with community. Overall, these Physical Assets serve to maintain overall community well-being. For the purposes of this Socio-economic Assessment, the parameters that are considered in this sub-component include the following:

- Housing;
- Municipal Infrastructure and Services; and
- Community Character.

For the purposes of this Socio-economic Assessment, land use and transportation are also considered to be physical assets. Baseline conditions related to land use and transportation are considered in detail in Volume V, Item 7, Land Use Baseline Report and Volume V, Item 6, Transportation Baseline Report. Key considerations related to this Socio-economic Assessment are summarized in this baseline report.

The **Social Assets** subcomponent of the Socio-economic Environment considers the social and community activities in which people participate and the facilities or amenities that they draw upon in pursuit of their personal and community well-being objectives. This sub-component also considers people's use and enjoyment of their private property for a variety of purposes (i.e., raising a family, leisure, home-based businesses, etc.). The activities undertaken at people's homes and at community and recreational facilities serve to create networks within the community and among communities, increase connectivity among people, and generate relationships. To this end, the overall cohesiveness of a community is also considered as a Social Asset. For the purposes of this Socio-economic Assessment, the Social Asset sub-component considers the following:

- Community and Recreational Facilities;
- Resident's Use and Enjoyment of Private Property; and
- Community Cohesion.

For the purposes of this Socio-economic Assessment, cultural heritage resources are also considered to be social assets. Baseline conditions related to cultural heritage are considered in detail in Volume V, Item 11, Cultural Resources Baseline Report. Key considerations related to this Socio-economic Assessment are summarized in this baseline report.

The **Natural Assets** sub-component of the Socio-economic Environment considers the biophysical environment upon which community well-being depends. For the purposes of this Socio-economic Assessment, the Natural Assets sub-component is detailed in separate baseline reports. Key considerations related to this Socio-economic Assessment are summarized in this baseline report for the following natural asset categories:

- Surface Water;
- Groundwater;
- Terrestrial Ecosystems;
- Air Quality; and
- Noise.

2. Existing Socio-economic Environment Characterization Program

2.1 Study Areas

For the purposes of this Socio-economic Assessment, three primary study areas were defined, namely the Site Study Area (SSA), Local Study Area (LSA) and Regional Study Area (RSA). To a large extent, the RSA and LSA were defined taking into consideration boundaries defined in YYC Vicinity Protection Area Regulations (AVPA).

In 1979, the provincial government created the AVPA regulations as the primary means for establishing rules for compatible land uses in relationship to airport operations (Alberta Municipal Affairs 1979). The AVPA took into consideration the new parallel runway and operational effects. The foresight of this decision by the province has been instrumental in the smooth progression of development around YYC. Since 1979, the AVPA has been in place to guide compatible land use development under municipal jurisdiction. As area structure plans, outline plans, subdivision plans, and development permits come into the City of Calgary, the City of Airdrie and Rocky View County for approval, development officers are required to assess the proposed development against the AVPA, rejecting any development that does not fit within the AVPA guidelines. Since 1979, Alberta Municipal Affairs has undertaken a review of the AVPA regulation and its amendments have received wide support from all municipalities and the Calgary Airport Authority as well.

2.1.1 Site Study Area

The SSA includes the property under the control of the Authority, including the property on which the PRP and its facilities will be located (i.e., the PRP site) (Figure 2). This property totals approximately 2,137 ha and is comprised of two areas: Airside or the controlled area of the airfield which includes the terminal building, runway and taxiway; and Groundside or the remaining Government of Canada lands outside that of the controlled area. The SSA is located at the core of the AVPA.

2.1.2 Local Study Area

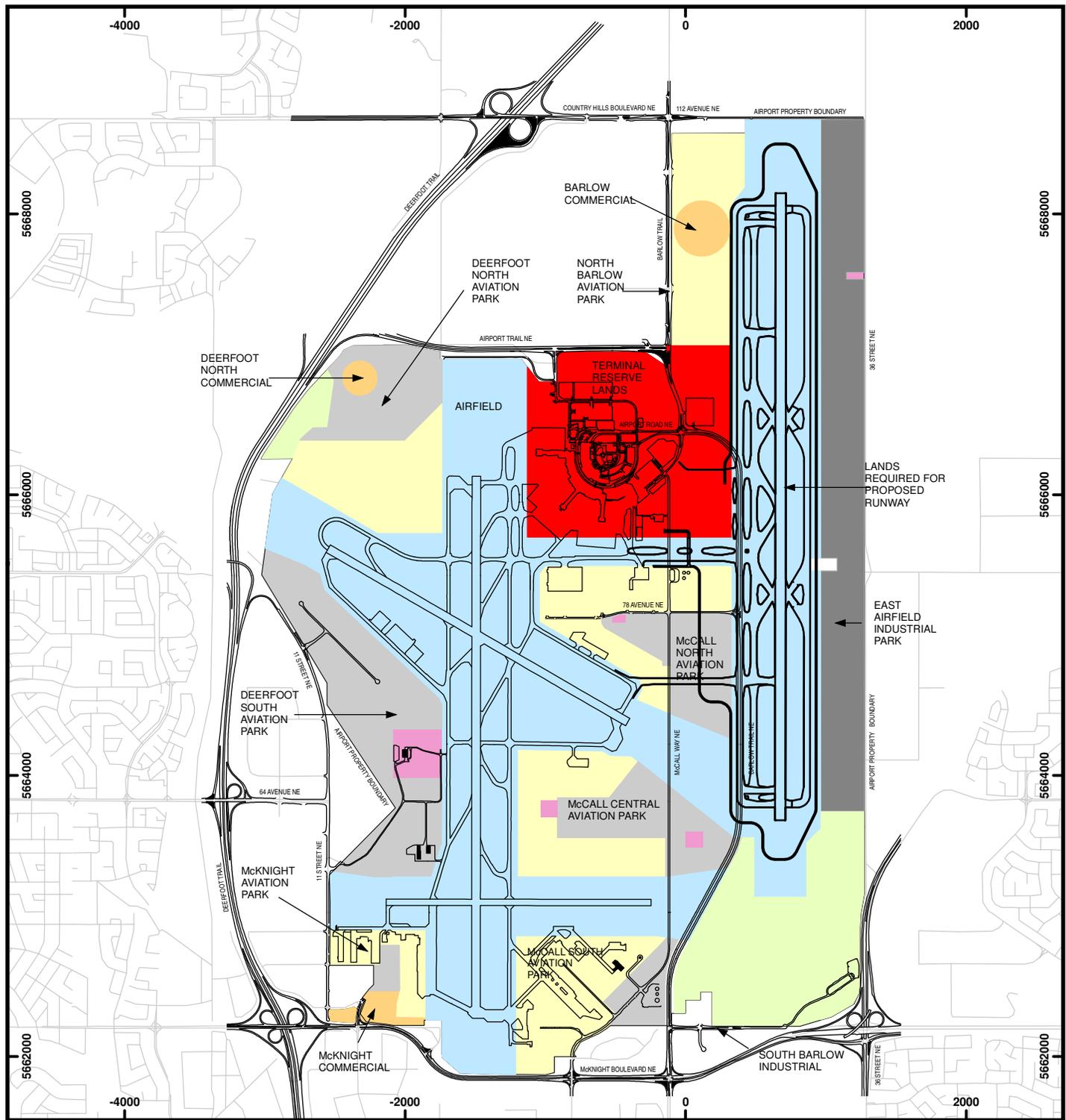
The LSA includes residential communities defined by the City of Calgary that are entirely in the limits of the AVPA, bisected by the selected neighbouring communities that are located outside of the AVPA limit, but whose boundaries remain in close proximity (i.e., generally within 2 km) (Figure 3). Table 1 identifies the residential communities within the City of Calgary included in the LSA. In addition, the LSA also includes the City of Airdrie and those portions of Rocky View County located with the AVPA boundary. Overall, the LSA includes those communities and neighbourhoods that are likely to experience the direct and indirect socio-economic effects related to the PRP to the greatest extent, particularly those indirect effects on the Socio-economic Environment resulting from changes in the biophysical environment (i.e., Natural Assets).

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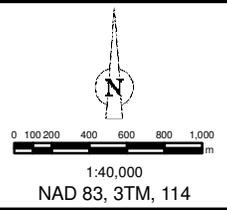
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Base data from NTDB 1:50,000.
 Airport Land Use from Calgary Airport Authority.

- Airfield & Airfield Reserve
- Airport Terminal District
- East Airfield industrial District
- Airport Commercial District
- Operational Services Areas
- Aviation Services District
- Airport Commercial District
- Airport Recreation District



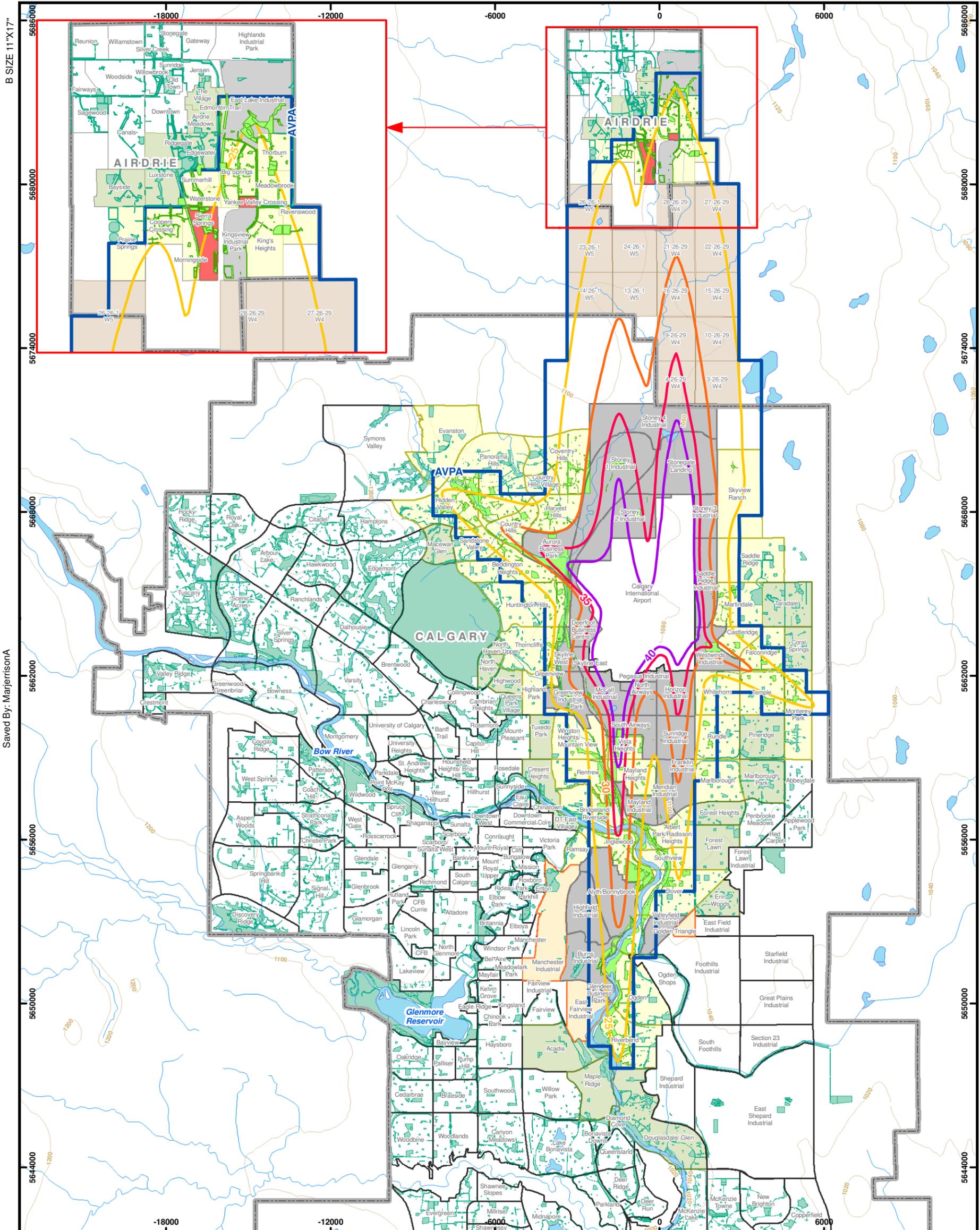
The Calgary Airport Authority
 Runway Development Program
 Parallel Runway Project



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Site Study Area

Figure - 2



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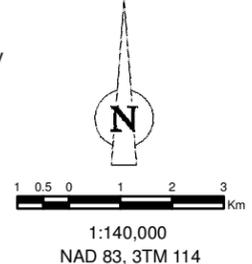
Data Source:
 Base data from NTDB 1:250,000.
 Communities from City of Calgary and City of Airdrie.
 Census boundary file from Geography Division, Statistics Canada, Census Subdivision Boundary Files, 2008, 92-162-XWE/XWF.

- NEF Contours (dBA)**
- 25
 - 30
 - 35
 - 40
 - AVPA

- Communities**
- Other
 - AVPA Communities
 - AVPA Adjacent Communities
 - AVPA Industrial
 - AVPA Adjacent Industrial

- RVC - Residential and Ranch/Farm**
- RVC - Residential and Ranch/Farm
 - AVPA Commercial
- Greenspace**
- AVPA Open Spaces
 - AVPA Adjacent Open Spaces

- Municipal Boundary
- Watercourse
- Waterbody
- Elevation (m)



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The Calgary Airport Authority
 Runway Development Program
 Parallel Runway Project



Local Study Area

Figure - 3

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Table 1 Calgary’s Residential Communities within the Local Study Area

Northeast (Residential)	<ul style="list-style-type: none"> • Albert Park/Radisson Heights • Castleridge • Coral Springs • Dover • Erin Woods • Falconridge • Forest Heights • Forest Lawn 	<ul style="list-style-type: none"> • Marlborough • Marlborough Park • Martindale • Mayland Heights • Monterey Park • Pineridge • Rundle 	<ul style="list-style-type: none"> • Saddle Ridge • Southview • Taradale • Temple • Vista Heights • Whitehorn • Skyview Ranch
Southeast (Residential)	<ul style="list-style-type: none"> • Acadia • Douglasdale 	<ul style="list-style-type: none"> • Inglewood • Ogden 	<ul style="list-style-type: none"> • Ramsay • Riverbend
Northwest (Residential)	<ul style="list-style-type: none"> • Beddington Heights • Bridgeland • Country Hills • Coventry Hills • Crescent Heights • Evanston • Greenview 	<ul style="list-style-type: none"> • Harvest Hills • Hidden Valley • Highland Park • Highwood • Huntington Hills • MacEwan Glen • North Haven 	<ul style="list-style-type: none"> • North Haven Upper • Panorama Hills • Renfrew • Sandstone Valley • Thorncliffe • Tuxedo Park • Winston Heights Mountain View
Southwest (Residential)	<ul style="list-style-type: none"> • Downtown East Village 		

2.1.3 Regional Study Area

The RSA includes the entire City of Calgary and the City of Airdrie, plus those portions of Rocky View County that are contained within the AVPA (Figure 4). However, based on existing data availability, the RSA description may be based on City of Calgary, Rocky View County or City of Airdrie data, the Calgary Census Metropolitan Area data and/or the Calgary Economic Region data. This RSA was selected due to the potential for measurable socio-economic effects of the PRP. The RSA includes large urban and non-urban centres that are within approximately a 45-minute commuting distance to the PRP site. The RSA reflects the area within which it is anticipated that the majority of the construction and operation work force are likely to reside and/or commute daily to the PRP site, and within which socio-economic effects are likely to be measurable.

2.2 Temporal Boundaries

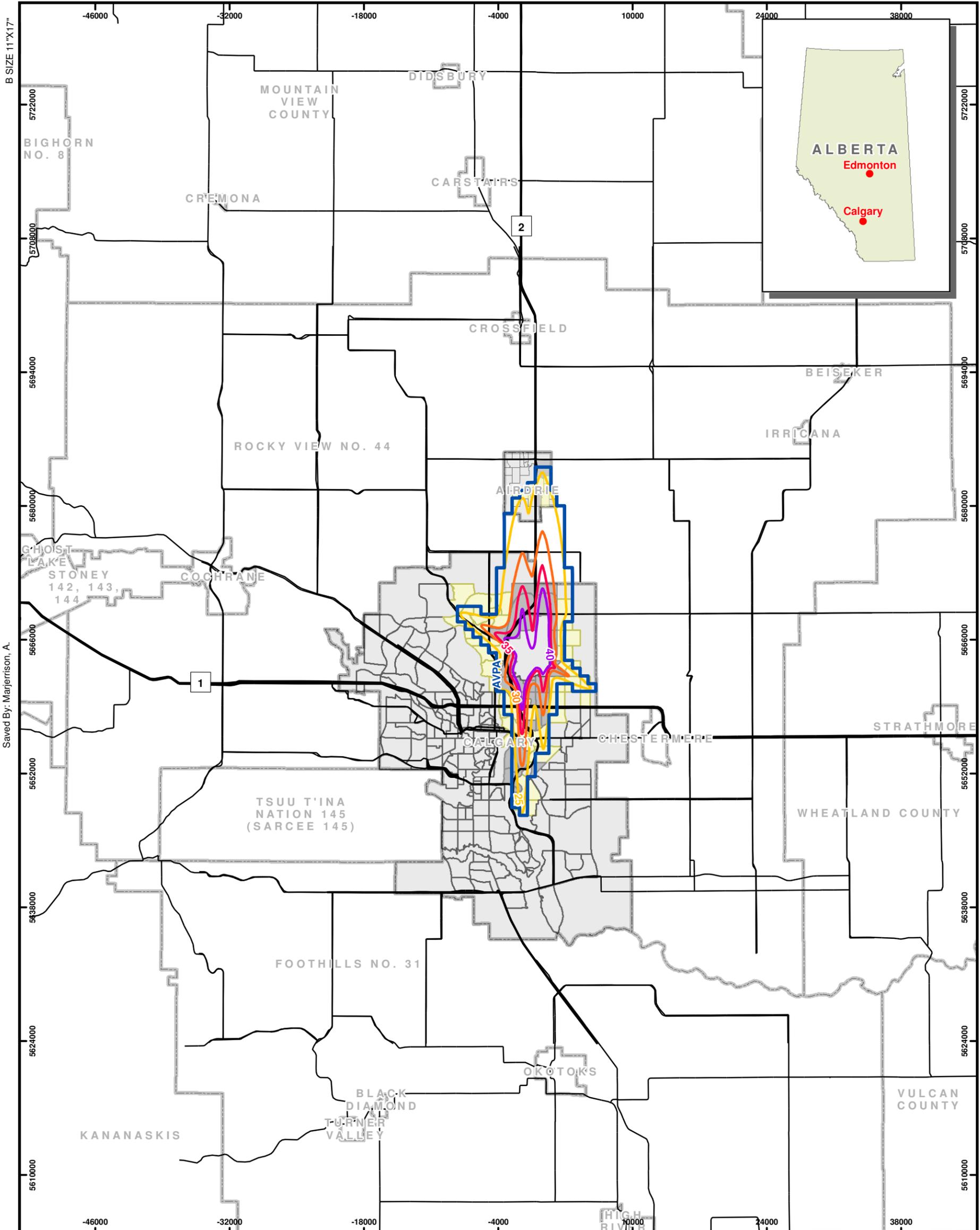
Table 2 provides the anticipated timeframes for the construction and operation phases of the PRP.

Table 2 Temporal Boundaries

Project Phase	Start	Finish
Construction	2011	2014
Operation	2015	Ongoing

2.3 Summary of the Socio-economic Baseline Characterization Program

The Socio-economic baseline characterization program is described in Table 3. This Socio-economic Assessment has attempted to utilize the most recent, reliable, complete, and most consistent data sets and other information available. As such, the baseline data used throughout this assessment varies from 2006 to 2009.

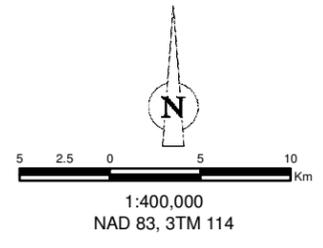


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Data Source:
Communities received from Calgary Airport Authority.
Census boundary file from Geography Division, Statistics, Canada, Cucus subdivision Boundary Files, 2008
92-162-XWE/XWF.

- | | | |
|---------------------------|--------------------|------------------------------|
| NEF Contours (dBA) | Communities | Municipality Boundary |
| 25 | Other | Within Study Area |
| 30 | AVPA Communities | Others |
| 35 | AVPA Industrial | |
| 40 | | |
| AVPA | | |



The Calgary Airport Authority
Runway Development Program
Parallel Runway Project



Regional Study Area

Figure - 4

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Table 3 Baseline Data Collection Methods

Baseline Data Collection Method	Objectives	Methodological Approach
LSA Socio-economic Features Mapping and Field Reconnaissance Visit	<ul style="list-style-type: none"> The objective of the LSA Socio-economic Features Mapping Program was to identify and map the locations of key socio-economic features in the LSA, particularly those nearest YYC, for use in the socio-economic baseline characterization and subsequent effects assessment. 	<ul style="list-style-type: none"> Mapped data was obtained from a variety of sources. However, the primary source of digital mapping was from the City of Calgary. The Authority assisted AECOM in obtaining digital mapping from the City of Calgary. The field reconnaissance was undertaken as a windshield survey with the areas nearest YYC.
Statistics Canada Data Collection Program	<ul style="list-style-type: none"> The objectives of the Statistics Canada Data Collection Program were to obtain the most current population, demographic and economic census data available (i.e., 2006) to establish a baseline for the municipalities within the RSA; and where appropriate, collect previous census data to establish a historic trend over the past several years. 	<ul style="list-style-type: none"> The most current Statistics Canada Census was undertaken in 2006; as such, this data set was used extensively. 2007-2009 data from the annual Labour Market Surveys conducted by Statistics Canada were also used. The raw Statistics Canada data collected were compiled and summarized. The data sets collected within the LSA and/or the RSA included: <ul style="list-style-type: none"> Population Levels; Population by Age; Population Diversity; Family and Household Characteristics; Mobility; Employment; Labour Force by Industry and Occupation; Income; and Housing Characteristics.
Secondary Source Data Collection Program	<ul style="list-style-type: none"> The objective of the Secondary Source Data Collection Program was to identify and collect relevant socio-economic information from a variety of sources external to AECOM and the Authority. This information was contained in published reports, documents and available data sets from the LSA and RSA municipalities, various Federal and Provincial government agencies, and non-governmental organizations. To the extent possible, reliance was placed on municipal data sources, in particular the community profiles developed by the City of Calgary. 	<ul style="list-style-type: none"> Data collection was undertaken primarily through Internet searches and downloading of required information available online, telephone requests for information, and personal requests for information during LSA and RSA stakeholder interviews. A wide variety of secondary source data was collected. This Socio-economic baseline report provides references for key source documents.
Calgary International Airport Site Operations Characterization Program	<ul style="list-style-type: none"> The objectives of the YYC Site Operations Characterization Program were to obtain existing data from the Authority regarding the ongoing operations that were relevant to the description of existing socio-economic conditions in the LSA and RSA. 	<ul style="list-style-type: none"> The scope of the YYC Site Operations Characterization Program (i.e., the types of information required) was determined by AECOM and the program was implemented by the Authority. The following types of data were collected for the most recent year(s) available: <ul style="list-style-type: none"> Taxable assessment and taxes paid; Current employment and employee place of residence; Water consumption and sources; Wastewater management and discharge locations; Waste generation and recycling; Airport tenants; and Economic impacts of existing operations.

Baseline Data Collection Method	Objectives	Methodological Approach
Public Attitude Research	<ul style="list-style-type: none"> The objectives of the Public Attitude Research study were to gain an understanding and establish a baseline of public attitudes held by residents in the LSA and RSA with respect to: <ul style="list-style-type: none"> People's attitudes towards their community including major issues facing their community and various attributes and threats to community well-being; People's personal sense of well-being including levels of satisfaction with living in their community and contributors to satisfaction, feelings of personal health and safety and contributors to it, and contributors to their use and enjoyment of their private property; People's self-assessment of the current impact of YYC on their day-to-day living; People's awareness of plans to build a new runway; People's self-assessment of the effects of the PRP on the community and people's daily life; and Preferences in the way that the Authority can keep people informed and involved in its activities at YYC. 	<ul style="list-style-type: none"> A quantitative research instrument was designed in order to achieve a target level of confidence in the information collected from within the defined study areas. A questionnaire was developed for telephone administration. The survey was conducted among residents residing within both the LSA and RSA. Survey respondents were 18 years of age and older, with a split between men and women. A detailed description of the sample design, sample size and weighting is included in the PAR study report (IntelliPulse 2010). A total of 787 interviews were conducted in the RSA. A sample of this size yields results for Calgary as a whole that are accurate within +3.6%, 19 out of 20 times. A disproportional sample allocation was developed in order to have a sufficient sample size in the LSA and Other Calgary. A total of 402 interviewers were completed in the LSA which results in an accuracy of +5.0%, 19 out of 20 times. A total of 385 interviewers were completed in the rest of Calgary (outside of the LSA), for results that are accurate within +5.1%, 19 out of 20 times. A pre-test was conducted on October 13. Interviewing dates were October 13 to October 17, 2009. AECOM monitored survey implementation throughout this time period. The survey's average duration was 13 minutes.
LSA Stakeholder Interviews	<ul style="list-style-type: none"> The objective of the LSA Stakeholder Interviews was to gain quantitative and qualitative baseline information from key informants knowledgeable about the LSA in order to characterize the various features, facilities, groups or organizations present or operating in the LSA. LSA Stakeholder Interviews also solicited the perspectives of various stakeholders on the Project and its potential socio-economic effects. 	<ul style="list-style-type: none"> A wide variety of community stakeholders were selected for an interview in order to augment the information collected from secondary sources. LSA Stakeholder Interviews were undertaken both in person and via telephone by AECOM. All interviews were undertaken in accordance with a structured interview guide and protocol. AECOM completed 31 individual LSA Stakeholder Interviews from January to March 2010. The LSA stakeholder groups interviewed included: <ul style="list-style-type: none"> Fire Station at YYC and the nearest off-site station in NE Calgary; Calgary Police Service Airport Office and the nearest off-site station in NE Calgary; Peter Lougheed Centre of the Calgary General Hospital; Nearest Schools; Calgary Rotary Challenger Park; YYC Finance Department; Calgary Tourism; Major Tourist Attractions; Calgary Chamber of Commerce; Nearest Hotel / Motel operators; City of Calgary - Community and Neighbourhood Services;

Baseline Data Collection Method	Objectives	Methodological Approach
		<ul style="list-style-type: none"> • Nearest Golf Course Operators; • Federation of Calgary Communities and selected Community Associations; and • City of Calgary – various departments.
Calgary Airport Authority 2010 Community Outreach Program	<ul style="list-style-type: none"> • The objective of the 2010 Community Outreach Program was to provide information regarding the PRP and other plans at the YYC to community stakeholders and solicit their perspectives on these projects and their potential effects. 	<ul style="list-style-type: none"> • A wide variety of community groups, organizations and businesses were contacted by the Calgary Airport Authority for their interest in participating in the outreach program. The Authority conducted informal meetings with interested parties. • The perspectives regarding the PRP and the potential socio-economic effects identified by those participating in the outreach program were provided to AECOM by the Calgary Airport Authority. • The Calgary Airport Authority completed 18 meetings from January to March 2010. • The groups, organizations and businesses participating in the outreach program included: <ul style="list-style-type: none"> • Tourism Calgary Board; • Calgary Economic Development; • Calgary Chamber of Commerce; • Nearest Hotel / Motel operators; • Calgary Community Associations; • Calgary Airport Business Association; • Canadian Business Aircraft Association; and • YYC Retailers.
Previous Economic Impact Assessment	<ul style="list-style-type: none"> • In order to characterize the contribution of YYC on the local and regional economies, this Socio-economic Assessment relied on a recent study of the economic impact of YYC undertaken in 2007 (RP Erickson & Associates Aviation Consultants 2008). 	<ul style="list-style-type: none"> • The economic impact assessment provided a quantitative characterization of the contribution of YYC on: <ul style="list-style-type: none"> • Employment; • Business Activity; and • Income.

3. Existing Socio-economic Environment

There are three primary municipalities that are included in the RSA and the LSA. These are the City of Calgary, Rocky View County and the City of Airdrie. Because the description of the existing socio-economic environment will refer to these municipalities extensively, the following provides a brief overview of the basic geographical context for the RSA, the LSA and the AVPA boundary.

The City of Calgary is the largest city in the Province of Alberta. It is located in the south of the province, in an area of foothills to the Canadian Rockies. Located 300 km south of Edmonton, it forms a part of the “Calgary-Edmonton Corridor.” Calgary is the largest Canadian metropolitan area between Toronto and Vancouver. All of the City of Calgary is included within the RSA and approximately 18% of the City of Calgary is located within the AVPA boundary. YYC is located within the northeastern portion of the RSA, and roughly in the centre of the LSA and AVPA.

The City of Airdrie is located just north of Calgary within the Calgary-Edmonton Corridor. The City of Airdrie is part of Calgary’s Census Metropolitan Area (CMA). The entire City of Airdrie is located within the RSA and LSA. Approximately 46% of Airdrie is located within the AVPA boundary. Airdrie is situated on the Queen Elizabeth II Highway which connects Calgary and Edmonton, thus making it a transportation hub. Airdrie is also served by the small Airdrie Airport that does not provide regular scheduled flights. YYC is located approximately 18 km from downtown Airdrie. Due to its proximity to Calgary, Airdrie’s population has been increasing in recent years. Airdrie was first established as a railway village in 1889 during the construction of the Calgary and Edmonton Railway, named for Airdrie, Scotland. Today, Airdrie is a bedroom community and industrial centre.

Rocky View County is a municipality located outside of the City of Calgary. It surrounds the eastern, northern, and western parts of the City. The County is also part of Calgary’s Census Metropolitan Area. Approximately 1% of Rocky View County is located within the AVPA boundary. In 2009, Council Administration voted to change the region’s name to Rocky View County, from the previous name of Municipal District of Rocky View No. 44. Rocky View is also located on the Calgary-Edmonton Corridor, and is crossed north-south by Highway 2 and east-west by Highway 1. Both the Canadian Pacific Railway (CPR) and Canadian National Railway (CNR) have their main north-south routes from Calgary to Edmonton through the County. In addition, the CPR is routed through Airdrie.

3.1 Human Assets

The **Human Assets** sub-component of the Socio-economic Environment considers the skills and knowledge inherent in the community(s) and the ability of various organizations and institutions that operate in a community(s) to provide people with opportunities for growth and learning; access to skills and knowledge; and access to essential services that are fundamental in maintaining people’s feelings of health, sense of personal safety and their overall satisfaction with community. For the purposes of this Socio-economic Assessment, the parameters that are considered within this sub-component of the framework include:

- Population and Demographics;
- Skills and Labour Supply;
- Education;
- Health and Safety Facilities and Services;
- Social Services; and
- Economic Development Services.

Each of these parameters is defined and discussed in terms of its contribution to community well-being, from the perspective of an individual, family or household, and from the perspective of a community, municipality or region. Existing socio-economic conditions in the RSA and/or the LSA are described for each of these parameters as appropriate.

Public attitude research undertaken as part of this Socio-economic Assessment identified the most important issues facing RSA and LSA communities today. Approximately 46% of RSA respondents and 45% of LSA respondents indicated that issues associated with Human Assets are the most important in their community. These included:

- Policing / crime (24% RSA, 26% LSA);
- Health care (13% RSA, 10% LSA);
- Education (5% RSA, 4% LSA);
- Increased population / development (3% RSA, 2% LSA); and
- Services for seniors (1% LSA and RSA).

3.1.1 Population and Demographics

The population of a community is one of the most important Human Assets and a determinant of community well-being. Any project that involves a large work force has the potential to result in changes in population and the demographic characteristics of communities, and consequently their well-being. Should population levels, including population density and demographic characteristics change substantially as a result of a project, several other Community Assets will be affected either directly or indirectly. For example, population levels determine the availability and quality of other Human Assets in a community (i.e., education, health and safety facilities and services, social services) and the availability and quality of a community's physical and Social Assets (i.e., housing, municipal infrastructure, transportation infrastructure, and community and recreational facilities). Generally, as the population of an area grows, the more infrastructure and services are needed. In some cases, increased population density may result in more efficient use of existing infrastructure and services. Communities with large populations can typically provide a wider range and a higher quality of infrastructure and service because of the larger tax base their populations provide.

An airport and its size is a reflection of the community it serves. To an airport operator, a large population centre provides a large, stable market for an airport. A large population centre can be a transportation hub within a broader region, serving a wide range of visitors, including residents, business travellers and tourists. As such, larger airports are located within or near large population centres, as is YYC. It is noteworthy that Calgarians tend to use their airport to a greater extent than the residents of other major Canadian cities.

Changed population levels and densities may also affect a community's character, cohesion and the ability of people to use and enjoy their property, ultimately affecting a community's well-being, either positively or negatively. The demographic make-up of a community, particularly age and gender are also important characteristics of the Socio-economic Environment which may influence community well-being. In addition to the demographic influence on several other Community Assets as noted above, the demographic characteristics of the population indicate the presence of vulnerable groups in a community (i.e., seniors, ethnic groups) and influence its cohesiveness.

The following sections characterize the existing conditions in the RSA and LSA relevant to population levels and demographics.

3.1.1.1 Population Levels

Regional Study Area

As shown in Table 4, according to the most recent population data available from the Ministry of Alberta Municipal Affairs (2008), the RSA had a population of approximately 1.1 million people in 2008, which accounted for 32% of Alberta's population.

Table 4 Historic and Current Population - Regional Study Area and Alberta, 2004, 2006 and 2008

Year	City of Calgary	City of Airdrie	Rocky View County	Total RSA	Alberta
2004	933,495	25,606	30,418	989,519	3,066,257
2006	991,759	28,927	34,171	1,054,857	3,290,350
2008	1,042,892	34,116	34,597	1,111,605	3,433,145
2004-2006 % Change	6.2	13.0	12.3	6.6	7.3
2006-2008 % Change	5.2	17.9	1.2	5.4	4.3

Source: City of Calgary 2009a; Statistics Canada 2007; Ministry of Alberta Municipal Affairs 2004 and 2008a.

Of the total RSA population, the majority (94%) resided in the City of Calgary, and the remaining were residents of Rocky View County (3%) and the City of Airdrie (3%). In terms of geography, population levels and densities in the RSA tend to decrease eastwards and northwards.

Between 2004 and 2006, all municipalities in the RSA experienced growth in their populations; however, the fastest growth in population was experienced in the City of Airdrie and Rocky View County. The City of Airdrie and Rocky View County grew by 13.0% and 12.3%, respectively, followed by the City of Calgary that had an increase of 6.2%. As a whole, the RSA experienced significantly less growth than the province of Alberta, which experienced a population growth of 7.3% for the same time period. Between 2006 and 2008, the City of Airdrie's population grew even faster than in the preceding three years. The City of Calgary maintained approximately the same population growth trend, while the population of Rocky View County grew by only just over 1%. As a whole, the RSA experienced slightly higher population growth than the province of Alberta, which experienced a population growth of 4.3% for the same time period (Table 4).

Population in the CER is expected to grow 11%, from 1.25 million in 2008 to 1.39 million in 2013. In the RSA, population in the City of Calgary itself is also expected to increase by 6%, from 1.04 million in 2008 to 1.1 million in 2011 (City of Calgary 2008a). Clearly, the City of Calgary is the focus of growth and development within the CER.

Local Study Area

The LSA lies within the boundaries of the City of Calgary, and includes residential communities that surround the YYC site and that are entirely in the limits of the AVPA and those neighbouring communities that are outside of the AVPA limit, but in close proximity to the limits.

In 2008, the total population of the LSA was 375,532 people, which represented approximately 34% of the RSA population. The AVPA communities accounted for 75% of the total LSA population in 2008. The population in the LSA has increased by 20,007 people from 2006 to 2008. Overall, the population in the LSA has grown by 11.4% between 2004 and 2008 (Table 5). Overall, AVPA communities experienced the highest population growth. The LSA also experienced higher population growth than the neighbouring communities.

Table 5 Historic and Current Population- Local Study Area, 2004, 2006 and 2008

Year	AVPA Communities	Neighbouring Communities	Total LSA
2004	251,077	85,942	337,019
2006	266,635	88,890	355,525
2008	283,682	91,850	375,532
2004-2006 % Change	6.2	3.4	5.5
2006-2008 % Change	6.4	3.3	5.6

Source: City of Calgary 2009a; Statistics Canada 2007; Ministry of Alberta Municipal Affairs 2004 and 2008a.

Note: Data does not include Skyview Ranch, Acadia, Douglasdale, North Haven, North Haven Upper.

Within the LSA, several communities have experienced rapid growth since 2004, more than doubling their population. These are Evanston (+450%), Coventry Hills Village (+186%), Saddleridge (166%), and Panorama Hills (+108%). Most of the other communities experienced population growth similar to that of the City of Calgary or slight declines in population levels in the order of 2% to 3%.

3.1.1.2 Age

Regional Study Area

The most recent demographics statistics are available from the Statistics Canada 2006 Census. Age statistics presented in Table 6 indicate that more than half of the RSA population (58.2%) was 25 to 64 years of age in 2006. The next larger age cohort was under 25 years of age (32.4%), followed by the 65 years of age and older cohort (9.4%). This demographic mix is similar to that of Alberta's population.

The median age of the RSA population ranged from 35.7 years for the City of Calgary to 41.2 years for Rocky View County. Differences among the RSA municipalities in the median age of their populations are attributed to the following: (i) a higher percentage of children under the age of 15 in Airdrie and Rocky View County; (ii) a higher percentage of younger adults between the ages of 25 and 44 in the Cities of Calgary and Airdrie; (iii) a higher percentage of adults between the ages of 45 and 64 in Rocky View County; and (iv) a lower percentage of older adults aged 65+ in the City of Airdrie.

Table 6 Population Distribution by Age – Regional Study Area and Alberta, 2006

Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
	Number	%	Number	%	Number	%	Number	%	Number	%
Total Population By Age Group	991,759	100	28,927	100	34,171	100	1,054,857	100	3,290,350	100
0-4	57,709	5.8	2,330	8.1	1,670	4.9	61,709	5.8	202,595	6.2
5-14	119,330	12.0	4,690	16.2	5,500	16.1	129,520	12.3	428,915	13
15-19	65,299	6.6	2,220	7.7	3,005	8.8	70,524	6.7	237,900	7.2
20-24	77,509	7.8	1,805	6.2	1,785	5.2	81,099	7.7	251,380	7.6
25-34	162,997	16.4	4,675	16.2	2,345	6.9	170,017	16.1	474,830	14.4
35-44	174,136	17.6	5,095	17.6	5,350	15.7	184,581	17.5	506,140	15.4
45-54	154,654	15.6	4,425	15.3	7,220	21.1	166,299	15.8	512,200	15.6
55-64	86,266	8.7	2,115	7.3	4,390	12.9	92,771	8.8	322,970	9.8
65-74	52,670	5.3	890	3.1	1,950	5.7	55,510	5.3	189,325	5.8
75+	41,189	4.2	670	2.3	945	2.8	42,804	4.1	164,085	5
Median Age (Years)	35.7	-	32.6	-	41.2	-	-	-	36	-

Source: City of Calgary 2009a; Statistics Canada 2007.

Note: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

Local Study Area

Population distribution by age in the LSA is presented in Table 7. Approximately 58.0% of the LSA population was in the age group of 25 to 64 years in 2006. The large group was comprised of those 25 to 54 years of age. Compared to the RSA, the LSA had a higher percentage of both children under the age of 15, and younger adults between the ages of 25 and 44 years. Conversely, the RSA had a higher proportion of older adults between 45 years and over.

Table 7 Population Distribution by Age – Local Study Area, 2006

Category	LSA		City of Calgary		RSA	
	Number	%	Number	%	Number	%
Total Population By Age Group	355,525	100	991,759	100	1,054,857	100
0-4	23,934	6.7	57,709	5.8	61,709	5.8
5-14	47,798	13.4	119,330	12.0	129,520	12.3
15-19	23,203	6.5	65,299	6.6	70,524	6.7
20-24	26,293	7.4	77,509	7.8	81,099	7.7
25-34	60,746	17.1	162,997	16.4	170,017	16.1
35-44	64,457	18.1	174,136	17.6	184,581	17.5
45-54	52,724	14.8	154,654	15.6	166,299	15.8
55-64	28,282	8.0	86,266	8.7	92,771	8.8
65-74	16,562	4.7	52,670	5.3	55,510	5.3
75+	11,488	3.2	41,189	4.2	42,804	4.1

Source: City of Calgary 2009a; Statistics Canada 2007.

Note: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents. Data does not include Skyview Ranch, Acadia, Douglasdale, North Haven, North Haven Upper.

3.1.1.3 DiversityRegional Study Area

Table 8 presents data on population diversity for the RSA. In 2006, 24.0% of the RSA population was immigrant. Twenty-two percent of the RSA population was considered to be a visible minority. Visible minority refers to whether or not a person is non-Caucasian in race or non-white in colour. Aboriginal people are not considered to be a visible minority. In 2006, only 2.4% of the RSA population was aboriginal, which is lower than the 5.7% of the Alberta population in the same year.

Within the RSA, the City of Calgary had higher percentages of both immigrant and visible minority population in 2006, followed by Rocky View County. The City of Airdrie, on the other hand, had a higher proportion of aboriginal population, but lower percentages of immigrant and visible minority population.

Table 8 Population Diversity – Regional Study Area and Alberta, 2006

Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
	Number	%	Number	%	Number	%	Number	%	Number	%
Aboriginal Population*	24,420	2.5	870	3.0	515	1.5	25,805	2.4	188,365	5.7
Immigrant Population	242,750	24.8	1,970	6.8	4,830	14.1	249,550	24.0	527,030	16
Visible Minority Population	232,460	23.7	885	3.1	2,500	7.3	235,845	22.4	454,200	13.8

Source: City of Calgary 2009a; Statistics Canada 2007.

Note: * Refers to the "Aboriginal Identity" population defined by Statistics Canada as those persons who reported identifying with at least one Aboriginal group (e.g., North American Indian, Métis, or Inuit) and/or those who did not report an Aboriginal identity, but reported themselves as a Registered or Treaty Indian and/or a member of a Band or First Nation.

Local Study Area

Approximately 27% of the LSA population was immigrant in 2006. Thirty-two percent of the LSA population was considered to be a visible minority, as compared to 22.0% for the RSA. The LSA (3.3%) had more aboriginal population than the RSA (2.4%) in the same year.

Table 9 Population Diversity – Local Study Area, 2006

Category	LSA		City of Calgary		RSA	
	Number	%	Number	%	Number	%
Aboriginal Population*	11,625	3.3	24,420	2.5	25,805	2.4
Immigrant Population	96,525	27.6	242,750	24.8	249,550	24.0
Visible Minority Population	111,580	31.9	232,460	23.7	235,845	22.4

Source: City of Calgary 2009a; Statistics Canada 2007. Data does not include Skyview Ranch, Acadia, Douglasdale, North Haven, North Haven Upper.

Note: * Refers to the "Aboriginal Identity" population defined by Statistics Canada as those persons who reported identifying with at least one Aboriginal group (e.g., North American Indian, Métis, or Inuit) and/or those who did not report an Aboriginal identity, but reported themselves as a Registered or Treaty Indian and/or a member of a Band or First Nation.

3.1.1.4 Family / Household Characteristics

Family and household characteristics for the RSA and LSA are presented in the sections below. Family and household characteristics are important considerations in that they influence the number of persons that may be entering or leaving a community, which affects its stability and cohesion.

Regional Study Area

In 2006, the RSA had 406,065 private households. Almost 95.0% of the total private households in the RSA were located in Calgary, followed by Rocky View County (2.7%) and the City of Airdrie (2.6%). The average size of private households for the City of Calgary was 2.5; whereas for the City of Airdrie and Rocky View County, the average private household sizes were 2.9 and 3.0, respectively. Approximately 82.1% of the total private households in the RSA were family persons. Family persons refer to those living in households containing at least one family member, that is, a married couple with or without children, or a couple living common-law with or without children, or a lone parent living with one more children. Only 17.8% of the total private households in the RSA were non-family persons (Statistics Canada 2007) (Table 10).

Table 10 Family and Household Characteristics – Regional Study Area, 2006

Persons in Private Households by Living Arrangements	City of Calgary		City of Airdrie		Rocky View County		Total RSA	
	Number	%	Number	%	Number	%	Number	%
Total Persons in Private Households	977,320	100	29,276	100	33,570	100	1,040,166	100
Total Family Persons*	797,870	81.6	25,296	86.4	31,388	93.5	854,554	82.1
Total Non-Family Persons**	179,450	18.4	3,980	13.5	2,182	6.5	185,612	17.8

Source: City of Calgary 2009a; Statistics Canada 2007.

Notes: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

* Statistics Canada defines "Family Persons" as those living in households containing at least one census family, that is, a married couple with or without children, a couple living common-law with or without children, or a lone parent living with one or more children.

** "Non-Family Persons" are defined as those living in households made up of either one person living alone in a private dwelling or to a group of two or more people who share a private dwelling, but who do not constitute a census family.

Local Study Area

The LSA had 349,731 people living in private households in 2006. Almost 83.0% of the LSA residents living in private households were family persons. Both the RSA and the LSA had similar percentages of family and non-family persons in 2006 (Table 11).

Table 11 Family and Household Characteristics – Local Study Area, 2006

Persons in Private Households by Living Arrangements	LSA		City of Calgary		RSA	
	Number	%	Number	%	Number	%
Total Persons in Private Households	349,731	100	977,320	100	1,040,166	100
Total Family Persons*	289,761	82.9	797,870	81.6	854,554	82.1
Total Non-Family Persons**	59,950	17.1	179,450	18.4	185,612	17.8

Source: City of Calgary 2009a; Statistics Canada 2007.

Notes: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

* Statistics Canada defines "Family Persons" as those living in households containing at least one census family, that is, a married couple with or without children, a couple living common-law with or without children, or a lone parent living with one or more children.

** "Non-Family Persons" are defined as those living in households made up of either one person living alone in a private dwelling or to a group of two or more people who share a private dwelling, but who do not constitute a census family.

There were a total of 104,455 children at home in the LSA in 2006. This number represents 39.4% of the total family persons. As shown in Table 12, approximately 60% of total children at home in the LSA were under 15 years of age. The City of Calgary, on the other hand, had 299,955 children at home in 2006, or 37.5% of the total family persons. Fifty-nine percent of total children at home in the City of Calgary were also under 15 years. The average number of children at home for both the LSA and the City of Calgary was 1.1.

Table 12 Number of Children at Home by Age – Local Study Area and City of Calgary, 2006

Children at Home by Age	LSA		City of Calgary	
	Number	%	Number	%
Total Number of Children at Home	104,455	100	299,955	100
Under 6 years of age	26,045	24.9	71,120	23.7
6 – 14 years	36,890	35.3	105,750	35.3
15 – 17 years	12,415	11.9	38,255	12.8
18 – 24 years	19,045	18.2	59,440	19.8
25 years and over	10,090	9.7	25,385	8.5
Average # of Children at Home	1.1	-	1.1	-

Source: City of Calgary 2009a.

Notes: LSA data does not include City of Airdrie, Skyview Ranch, Acadia, Douglasdale, North Haven, North Haven Upper.

Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

3.1.1.5 Mobility

Mobility of the population within the RSA and LSA are presented in the sections below. Mobility is an important consideration in that it influences the stability of the population residing in the RSA and LSA. Mobility is measured by Statistics Canada in terms of number of 'movers' and 'non-movers' over a given period of time.

Movers are persons who, on Census Day, were living at a different address than the one at which they resided one or five years earlier. Conversely, non-movers are persons who, on Census Day, were living at the same address as the one at which they resided one or five years earlier.

Regional Study Area

Overall, rates of mobility across the RSA are similar to the City of Calgary and Alberta as a whole. The percentage of non-movers is an indication of the stability of the population. Overall, approximately 20% of the RSA population aged 1 year and over moved between 2005 and 2006. This percentage includes the following: (i) people who moved within and outside the same municipality; (ii) people who moved to a different Province or Territory; and (iii) people who moved overseas. While the City of Airdrie had the largest percentage of movers in 2006, Rocky View County had the lowest number of movers (Table 13).

Table 13 Population Mobility - Regional Study Area and Alberta, 2006

Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
	Number	%	Number	%	Number	%	Number	%	Number	%
Total Population Aged 1 and Over	966,840	100	28,260	100	33,850	100	1,028,950	100	3,214,140	100
Persons who Moved, 2005-2006	197,525	20.4	6,000	21.2	4,640	13.7	208,165	20.2	607,565	18.9

Source: City of Calgary 2009a; Statistics Canada 2007.

Local Study Area

The LSA had 70,590 people who moved between 2005 and 2006. This number accounted for 20.5% of the LSA population aged 1 year and over. Compared to the RSA, the LSA had similar percentage of movers (between 2005 and 2006 (Table 14).

Table 14 Population Mobility – Local Study Area, 2006

Category	LSA		City of Calgary		RSA	
	Number	%	Number	%	Number	%
Total Population Aged 1 and Over	344,960	100	966,840	100	1,028,950	100
Persons who Moved, 2005-2006	70,590	20.5	197,525	20.4	208,165	20.2

Source: City of Calgary 2009a; Statistics Canada 2007. Data does not include Skyview Ranch, Acadia, Douglasdale, North Haven, North Haven Upper.

3.1.2 Skills and Labour Supply

The skills and amount of labour available in a community (i.e., labour supply) are considered to be Human Assets and important determinants of community well-being. Skills and labour supply directly affect the Financial Assets of a community as they influence the proportion of the project's and overall community's labour needs that can be met locally, and hence the potential for individuals and households to realize employment and income benefits. The amount of a project's labour requirements that can be met locally determines the potential for in-migration and the amount of commuting that occurs, thereby affecting some of the Physical Assets in a community (i.e., housing, transportation infrastructure). The amount of in-migration will also indirectly influence the availability and quality of other Human Assets in a community (i.e., education, health and safety facilities and services, social services).

To an airport operator, access to a range of skills and a large labour pool ensures that the broad range of services airports wish to provide can be delivered. Specialized skills are required to ensure safe and effective airport operations. Moreover, airports are always changing and developing, requiring access to both a skilled and unskilled construction labour force. The availability of the required labour helps ensure new development projects can be undertaken in a timely and cost effective manner.

For the purposes of the description of existing socio-economic conditions, a greater focus was placed on the skills and labour supply conditions in the construction industry rather than other sectors. This is because the PRP, should it proceed, will need a large construction-related labour force. As such, the availability of construction labour and skills are of primary concern.

Overall, the economic environment facing the construction industry determines both supply and demand for skilled trades and other workers through its impact on investment, employment and the labour force. This environment includes the economic performance of both the provincial economy and that of its trading partners. The construction industry in Alberta includes establishments that construct, repair or renovate residential buildings (i.e., houses, apartment buildings, condominiums); construct, repair or renovate business and commercial buildings (i.e., office towers, shops, malls); construct, repair or renovate industrial buildings (i.e., oil refineries, petrochemical plants, power plants); perform engineering works (i.e., highways, bridges, pipelines); and subdivide and develop land (Government of Alberta 2009).

Alberta's construction sector is comprised of building and trade unions, non-unions or open shops, temporary agencies, management organizations, and trade associations. The key federal government departments involved in the construction industry include Human Resources and Development Canada (Construction Sector Council) and Immigration Canada (foreign workers). The key provincial government ministries are the Ministries of Employment and Immigration, Energy, Environment, Infrastructure and Sustainable Resource Development.

The following sections characterize the skills and labour supply for the RSA, focusing on the labour force by industry, labour force by all occupations, and labour force by selected occupations (i.e., trades, transport and equipment operators and related occupations; and occupations unique to processing, manufacturing and utilities), and specific skilled trades involved in major industrial/engineering construction projects. Data for the LSA has not been collected as skills and labour supply are more of a regional and provincial wide issue than a local one.

In 2001, over 70% of the RSA labour force was employed in the following industries: (i) business services (25.0%); (ii) manufacturing and construction (15.9%); (iii) wholesale and retail trade (15.8%); and (iv) health and education (14.0%). Compared to Alberta, the RSA had a higher share of its labour force employed in business services and finance and real estate, and a lower proportion employed in the industry of agriculture and other resource-based activity and health and education.

In 2006, the RSA labour force distribution by industry was similar to that in 2001 but with a higher proportion employed in agriculture and other resource-based activity. Compared to Alberta, the RSA had more people involved in business services, while Alberta had more people employed in agriculture and other resource based activity (Table 15).

Table 15 Labour Force Distribution by Industry- Regional Study Area and Alberta, 2001 and 2006

Year	Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
		Number	%	Number	%	Number	%	Number	%	Number	%
2001	Total Labour Force 15 years +	521,675	100	11,885	100	18,510	100	552,070	100	1,681,985	100
	Agriculture and Other Resource Based Activity	31,820	6.1	700	5.9	3,420	18.5	35,940	6.5	184,105	10.9
	Manufacturing and Construction	82,385	15.8	2,430	20.4	2,915	15.7	87,730	15.9	264,940	15.8
	Wholesale and Retail Trades	82,910	15.9	2,005	16.9	2,345	12.7	87,260	15.8	258,740	15.4
	Finance and Real Estate	33,605	6.4	625	5.3	995	5.4	35,225	6.4	84,335	5.0
	Health and Education	73,685	14.1	1,405	11.8	2,255	12.2	77,345	14.0	259,050	15.4
	Business Services	131,145	25.1	2,775	23.3	4,260	23.0	138,180	25.0	316,265	18.8
	Other Services	86,125	16.5	1,935	16.3	2,310	12.5	90,370	16.4	314,545	18.7
2006	Total Labour Force 15 years	599,430	100	17,190	100	20,265	100	636,885	100	1,928,635	100
	Agriculture and Other Resource-Based Industries	46,385	7.7	1,140	6.6	3,750	18.5	51,275	8.1	228,515	11.8
	Manufacturing and Construction	92,695	15.5	3,345	19.5	3,105	15.3	99,145	15.6	307,785	16.0
	Wholesale and Retail Trades	92,385	15.4	2,965	17.2	2,450	12.1	97,800	15.4	292,170	15.1
	Finance and Real Estate	36,805	6.1	775	4.5	1,165	5.7	38,745	6.1	97,475	5.1
	Health and Education	86,700	14.5	2,215	12.9	2,620	12.9	91,535	14.4	295,660	15.3
	Business Services	147,205	24.6	3,745	21.8	4,520	22.3	155,470	24.4	354,265	18.4
	Other Services	97,235	16.2	2,990	17.4	2,665	13.2	102,890	16.2	352,760	18.3

Source: Statistics Canada 2002 and 2007.

Note: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

Table 16 presents the main occupational groups of the RSA labour force and provides a comparison to Alberta. The most common occupations found in the RSA for both 2001 and 2006 were business finance and administration; sales and service; trades, transport and equipment related; and management. Compared to Alberta percentages, the labour force in the RSA had proportionately more people in the occupations of business, finance and administration, natural and applied sciences and related, and management. Alberta, on the other hand, had significantly more people in the occupations of trades, transport and equipment-related and unique to primary industry for both 2001 and 2006.

Table 16 Labour Force Distribution by Occupation- Regional Study Area and Alberta, 2001 and 2006

Year	Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
		Number	%	Number	%	Number	%	Number	%	Number	%
2001	Total Labour Force 15 years	521,675	100	11,880	100	18,510	100	552,065	100	1,681,980	100
	Management	61,895	11.9	1,475	12.4	3,245	17.5	66,615	12.1	175,930	10.5
	Business, Finance and Administration	106,005	20.3	2,350	19.8	3,475	18.8	111,830	20.3	290,535	17.3
	Natural and Applied Sciences, and Related	55,360	10.6	990	8.3	1,525	8.2	57,875	10.5	118,015	7.0
	Health	24,035	4.6	485	4.1	820	4.4	25,340	4.6	81,785	4.9
	Social Science, Education, Government Service, and Religion	36,740	7.0	590	5.0	1,155	6.2	38,485	7.0	117,525	7.0
	Art, Culture, Recreation, and Sport	14,610	2.8	145	1.2	475	2.6	15,230	2.8	37,605	2.2
	Sales and Service	122,960	23.6	2,740	23.1	2,705	14.6	128,405	23.3	394,590	23.5
	Trades, Transport and Equipment, and Related	72,360	13.9	2,170	18.3	2,565	13.9	77,095	14.0	283,105	16.8
	Unique to Primary Industry	8,085	1.5	280	2.4	2,135	11.5	10,500	1.9	116,625	6.9
	Unique to Processing, Manufacturing and Utilities	19,640	3.8	655	5.5	405	2.2	20,700	3.7	66,265	3.9
2006	Total Labour Force 15 years +	599,430	100	17,190	100	20,265	100	636,885	100	1,928,635	100
	Management	64,820	10.8	1,910	11.1	3,370	16.6	70,100	11.0	187,240	9.7
	Business, Finance and Administration	121,915	20.3	3,315	19.3	3,915	19.3	129,145	20.3	340,430	17.7
	Natural and Applied Sciences, and Related	67,885	11.3	1,555	9.0	2,070	10.2	71,510	11.2	144,240	7.5
	Health	30,635	5.1	750	4.4	1,045	5.2	32,430	5.1	103,620	5.4
	Social Science, Education, Government Service, and Religion	44,520	7.4	1,070	6.2	1,415	7.0	47,005	7.4	136,610	7.1
	Art, Culture, Recreation, and Sport	18,005	3.0	280	1.6	425	2.1	18,710	2.9	45,160	2.3
	Sales and Service	137,410	22.9	3,785	22.0	3,145	15.5	144,340	22.7	438,105	22.7
	Trades, Transport and Equipment, and Related	86,065	14.4	3,505	20.4	2,705	13.3	92,275	14.5	350,360	18.2
	Unique to Primary Industry	9,810	1.6	390	2.3	1,870	9.2	12,070	1.9	117,500	6.1
	Unique to Processing, Manufacturing and Utilities	18,370	3.1	635	3.7	300	1.5	19,305	3.0	65,365	3.4

Source: Statistics Canada 2002 and 2007.

Note: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

As indicated above, the trades, transport and equipment, and related occupations accounted for 14.5% of the total RSA labour force employed in 2006. Table 17 presents a breakdown of the different categories included in the trades, transport and equipment, and related occupations for the RSA and Alberta in 2006. Overall, the percentages of the labour force employed in the different trades, transport and equipment operators and related occupation categories in the RSA are similar to Alberta as a whole. Both the RSA and Alberta employed a high percentage of the labour force in the H1, H7 and H8 categories. These categories include construction trades, such as plumbers, pipefitters, gas fitters, carpenters and cabinetmakers, masonry and plastering trades, and other construction trades. The transportation

equipment operators and related trades are composed of motor vehicle and transit drivers, train crew operating occupations, other transport equipment operators, and related workers. The trades helpers, construction and transportation labourers and related occupations, on the other hand, are comprised of longshore workers and material handlers, trade helpers and labourers, public works and maintenance labourers, railway, and motor transport labourers.

**Table 17 Labour Force Distribution by Selected Occupation Category-
Regional Study Area and Alberta, 2006**

Category	City of Calgary		City of Airdrie		Rocky View County		Total RSA		Alberta	
	Number	%	Number	%	Number	%	Number	%	Number	%
H Trades, transport and equipment operators, and related occupations	86,065	100	3,505	100	2,705	100	92,275	100	350,360	100
H0 Contractors and supervisors in trades and transportation	5,145	6.0	290	8.3	250	9.2	5,685	6.2	20,970	6.0
H1 Construction trades	19,185	22.3	560	16.0	550	20.3	20,295		64,225	18.3
H2 Stationary engineers, power station operators and electrical trades and telecommunications occupations	6,390	7.4	325	9.3	200	7.4	6,915	7.5	26,310	7.5
H3 Machinists, metal forming, shaping, and erecting occupations	7,195	8.4	415	11.8	190	7.0	7,800	8.5	36,625	10.5
H4 Mechanics	9,840	11.4	540	15.4	345	12.8	10,725	11.6	46,025	13.1
H5 Other trades, n.e.c.*	4,455	5.2	190	5.4	155	5.7	4,800	5.2	15,870	4.5
H6 Heavy equipment and crane operators including drillers	2,825	3.3	120	3.4	150	5.5	3,095	3.4	22,470	6.4
H7 Transportation equipment operators and related workers excluding labourers	16,475	19.1	665	19.0	545	20.1	17,685	19.2	69,775	20.0
H8 Trades helpers, construction and transportation labourers, and related occupations	14,545	16.9	390	11.1	305	11.3	15,240	16.5	48,090	13.7

Source: Statistics Canada 2008.

Note: Numbers may not sum to totals due to a procedure of random rounding to a closest '5' or '10' that Statistics Canada applies to census data to ensure confidentiality of respondents.

The economic environment facing the construction industry determines both supply and demand for construction trades through its impact on investment, employment and labour force. This environment includes the economic performance of both the provincial and that of its trading partners - United States, European Union and Japan. The external environment facing Alberta in the short term is one of a world 'growth' recession. Canada and its major trading partners see declines in economic activity into 2009 and 2010. Commodity prices have fallen sharply and many major investment projects have either been postponed or abandoned. Over the medium term, the economies recover from the recession as governments implement large stimulus packages, but the timing and strength of the recovery are uncertain. Over the long term, world growth returns to potential and commodity prices rise, but at a more moderate pace than that observed over the past few years. The same trend is followed by the Province, whose economic growth is expected to fall to -0.6% in 2009 as exports, residential and business investment decline with the United States falling into a recession and energy prices collapsing. Nevertheless, provincial growth averages 1.2% to 2012 and then picks up to average 2.8% per year thereafter, driven to a large extent by the return of higher oil and gas prices (CSC 2009).

The scenario period with respect to construction labour markets can be broken down into two distinct intervals: 2009-2012 and 2013-2017. Between 2009 and 2012, markets are weaker for all the trades. Declines in both residential and non-residential employment mark first-time declines in many years for employment in Alberta. The construction employment decreases about 10% over the 2009-2012 period, reaching a trough in 2012. The second period, from 2013 to 2017, tracks the recovery in overall construction. Construction employment begins to climb again, first modestly at 2% in 2013 and then more noticeably, around 7% the following year. Generally speaking, construction employment starts to grow steadily from 2013 upwards (CSC 2009).

Table 18 shows the labour supply of selected skilled trades between 2009 and 2015. The skilled trades selected are those that will likely be required for the construction of the PRP. The PRP construction will occur from 2011 to 2014. The selected skills trades include construction estimators; construction managers; construction millwrights and industrial mechanics; contractors and supervisors; drillers and blasters; electricians; heavy equipment operators; trades helpers and labourers; truck drivers; welders and related machine operators, among others. As forecasted, all of the selected skilled trades will have a positive excess supply rate in Alberta between 2009 and 2015. Overall the trend is that labour supply rates reach their peak in 2013, and then show a downward trend in both 2013 and 2015, as both the economy and employment starts to recover and grow. In 2015, it is expected that the construction labour force will reach its 2008 levels and grow steadily to 2017. This means that the excess supply rates will decrease significantly for all of the selected skilled trades, especially for construction managers, drillers and blasters, and construction estimators. It is expected that at the end of the construction of the PRP Project, availability of labour supply will exist, but be more limited as the economy recovers from the economic recession started in 2009 (CSC 2009).

Table 18 Labour Supply of Selected Skilled Trades in Alberta, 2009-2015

Skilled Trade	2009			2011			2013			2015		
	Labour Force	Employment	Excess Supply Rate (%)	Labour Force	Employment	Excess Supply Rate (%)	Labour Force	Employment	Excess Supply Rate (%)	Labour Force	Employment	Excess Supply Rate (%)
Total	72,221	65,459	9.4	68,371	59,223	13.4	64,240	57,274	11.0	69,692	65,033	6.6
Construction Estimators	1,582	1,482	6.3	1,516	1,296	14.5	1,448	1,302	10.1	1,627	1,534	5.7
Construction Managers	7,684	7,449	3.1	7,323	6,352	13.3	7,055	6,443	8.7	8,283	7,998	3.4
Construction Millwrights and Industrial Mechanics	992	889	10.4	934	831	11.0	867	772	11.0	890	821	7.7
Contractors and Supervisors	12,893	11,932	7.5	12,423	10,917	12.1	11,794	10,625	9.9	12,673	11,885	6.2
Drillers and Blasters	186	157	15.4	212	197	7.4	171	136	20.4	214	205	4.3
Electricians	13,865	12,440	10.3	13,126	11,650	11.2	12,375	11,093	10.4	13,063	12,180	6.8
Heavy Equipment Operators	11,340	10,586	6.6	10,974	9,506	13.4	10,089	8,987	10.9	10,383	9,601	7.5
Heavy-duty Equipment Mechanics	1,272	1,177	7.5	1,247	1,072	14.0	1,141	1,000	12.3	1,182	1,078	8.8
Trades Helpers and Labourers	16,814	14,279	15.1	15,207	12,635	16.9	14,370	12,556	12.6	16,191	14,889	8.0
Truck Drivers	3,104	2,857	7.9	2,990	2,604	12.9	2,730	2,427	11.1	2,874	2,682	6.7
Welders and Related Machine Operators	2,489	2,211	11.2	2,419	2,163	10.6	2,200	1,933	12.2	2,312	2,160	6.6

Note: Construction Sector Council 2009.

The calculation of retirement demand estimates the number and proportion of the work force in each trade that is expected to retire and needs to be replaced between 2009 and 2017 to sustain the work force present in 2008.

Table 19 presents the market rankings for selected skills trades in Alberta from 2009 to 2017. The market rankings vary from 1 (excess supply) to 5 (intense competition for qualified workers). Each ranking represents conditions for a construction trade or occupation in the province and is based on four measures: (i) the rate of excess supply at the seasonal peak of activity; (ii) the annual change in employment; (iii) retirement demand as a percentage of the work force; and (iv) industry consultation (CSC 2009).

Overall, the market rankings for the selected skills trades and occupations reflect the two distinct intervals for the construction industry described above (2009-2012 and 2013-2017). As depicted from Table 19, most of the selected skills trades have been ranked either 2 ('qualified workers are available in local, or in adjacent markets') or 3 ('availability of qualified workers may be limited, but established patterns of recruiting and mobility are sufficient to meet job requirements') during the current interval, 2009-2012. On the other hand, the majority of selected skills trades have been ranked 3 during the 2013-2015 period, as the economy and employment start to recover and grow. Nonetheless, trades, such as construction estimators, construction managers, drillers and blasters, trade helpers and labourers, truck drivers, welders, and related machine operators were ranked 4 ('qualified workers are generally not available in local and adjacent markets, thus recruiting may extend beyond traditional sources and practices') for 2015. This responds to the fact that the age profiles of these trades are older than average, as well as entrants need either specialized training and/or experience in construction. Therefore, recruiting these trades would be a challenge in the following years. The rankings between 2015 and 2017 vary from 3 to 4 for most of the selected skills trades.

Table 19 Market Rankings for Selected Skilled Trades in Alberta, 2009–2017

Skilled Trade	2009	2011	2013	2015	2017
Construction Estimators	4	2	3	4	3
Construction Managers	3	2	3	4	3
Construction Millwrights and Industrial Mechanics	3	2	3	3	4
Contractors and Supervisors	3	2	3	3	3
Drillers and Blasters	2	3	2	4	3
Electricians	3	3	3	3	3
Heavy Equipment Operators	4	2	3	3	4
Heavy-duty Equipment Mechanics	4	2	3	3	3
Trades Helpers and Labourers	3	2	3	4	3
Truck Drivers	4	2	3	4	4
Welders and Related Machine Operators	3	2	3	4	4

Notes: CSC 2009.

Ranking 5: Qualified workers are not available in local or adjacent markets. Competition is intense.

Ranking 4: Qualified workers are generally not available in local and adjacent markets. Recruiting may extend beyond traditional sources and practices.

Ranking 3: Qualified workers in the local market may be limited by short term increases in demand. Established patterns of recruiting and mobility are sufficient.

Ranking 2: Qualified workers are available in local, or in adjacent markets.

Ranking 1: Qualified workers are available in the local markets. Excess supply is apparent. Workers may move to other markets.

3.1.3 Education

Education may be defined as the transmission of knowledge by either formal or informal means. Education directly affects a community's well-being by determining the skills and knowledge inherent in the community. To an individual, family or household, education provides the academic or vocational requirements for self-development and potential employment.

The formal education system in Alberta is composed of pre-school, elementary and secondary schools; post secondary education in community colleges, universities, and industrial training and apprenticeship programs. This system determines the ability of the community(s) to provide its residents with opportunities for growth and learning, access to skills and knowledge. The educational system affects a community's Financial Assets as it provides a local source of employment. It serves to attract new residents and business opportunities, thereby affecting its population and economic development. Educational facilities often act as a focus of local community life and activities, thereby influencing a community's Social Assets (i.e., community cohesion).

To an airport operator, access to an educated labour pool helps ensure that the broad range of services airports wish to provide can be delivered. Specialized skills in the aviation sector are required to ensure safe and effective airport operations and attract aviation related business activity. Conversely, the presence of schools in close proximity to an airport can present a constraint to both airport operation and expansion. In the case of YYC, the AVPA has served to ensure that such sensitive uses are located in the most appropriate areas, thereby limiting the potential for adverse effects on school operations, students and teachers.

3.1.3.1 *Elementary and Secondary Schools*

Regional Study Area

The RSA is served by three school boards that operate numerous elementary and secondary schools. The Calgary Board of Education is the public school board in Calgary. The Calgary Catholic School District (CCSD) is the Roman Catholic separate school board in Calgary and also serves several neighbouring communities, including the City of Airdrie. The Rocky View School Division is the public school board that serves Rocky View County and the City of Airdrie.

Local Study Area

Table 20 provides a listing of the elementary and secondary schools, including private schools located nearest to YYC and within the LSA (i.e., generally within 5 km of the airport site boundary). The nearest schools are private schools located approximately 1 km of the airport boundary. Outdoor activities on school property include: outdoor education programs, physical education classes, recess, before and after school programs, a variety of sports teams (soccer, cross country, etc). For the most part, these schools are open to community groups who want to rent out the space in the evenings. Interviews undertaken with representatives of several schools located nearest YYC indicate that the main issue that these schools are facing is the lack of adequate funding from government. Existing airport operations have, for the most part, had no effect on school operation or on provision of services to community, other than the children like to watch the planes.

In one case, the school official indicated that presence of the airport had affected school operations in terms of noise and air quality, and that teachers had to stop teaching due to disruption in the classroom and the smell of airplane fuel on occasion. For the most part, the schools interviewed had no formal or informal links to the Authority, with the exception of occasional field trips to the museum at the airport.

Table 20 Schools Nearest YYC

	School	Type of School	Distance from SSA Boundary (km)
North Airways	Bethel Christian Academy	Private	0.2
	Heritage Christian Academy	Private	0.4
	Joshua Christian School	Private	0.5
South Airways	German Canadian Club-Language School	Private	2.6
	Renfrew Education Services	Private	2.6
Horizon Industrial	International School of Excellence	Private	0.9
	Rundle College Senior High School	Private	1.1
Vista Heights	Vista Heights School	Public	2.1
Belfast	Belfast Elementary School	Public	3.3
Mayland Heights	St. Clement Elementary School	Separate	3.1
	Sir John Franklin Junior School	Public	3.9
	Mayland Heights Elementary School	Public	4.0
Winston Heights/Mountain View	Mountview Elementary School	Public	3.2
	Georges P. Vanier Junior High School	Public	2.2
Martindale	Crossing Park School	Public	1.0
Taradale	Our Lady of Fatima	Separate	3.1
Castleridge	John Paul II Elementary	Separate	1.9
	O.S. Geiger Elementary	Public	1.5
Falconridge	Grant McEwan Elementary	Public	3.3
	Bishop McNally Secondary School	Separate	2.3
	John XXIII Elementary and Junior	Separate	3.0
	Terry Fox Elementary	Public	2.8
	Falconridge Elementary	Public	2.6
Whitehorn	St. Wilfrid Elementary	Separate	1.1
	Chief Justice Milvain Elementary	Public	1.8
	Colonel J. Fred Scott Elementary	Public	1.5
	Annie Gale Jr. High	Public	1.4
Rundle	St. Rupert Elementary	Separate	2.4
	St. Rose of Lima Jr. High	Separate	2.9
	Cecil Swanson Elementary	Public	2.8
	Rundle Elementary	Public	2.9
	Dr. Gordon Higgins Jr. High	Public	2.5
Marlborough	St. Mark Elementary	Separate	3.9
	Marlborough Elementary	Public	4.7
	Chris Akkerman Elementary	Public	4.0
	Bob Edwards Jr. High	Public	4.2
Coventry Hills	St. Clare Elementary	Separate	3.4
	Coventry Hills School	Public	3.8
Country Hills Village	Notre Dame	Separate	4.5
Harvest Hills	Ascension of Our Lord Elementary and Jr. High	Separate	4.1
Beddington Heights	Calgary Chinese Alliance School	Private	2.0
	Phoenix Home Education Foundation	Private	
	Italian School of Calgary	Private	1.4
	St. Bede Elementary	Separate	2.8
	Beddington Heights Elementary	Public	2.6
Huntington Hills	The Chinese Academy	Private	
	Russian Language and Literature Education	Private	
	St. Elena Elementary	Separate	2.6
	St. Henry Elementary	Separate	3.4
	St. Huber Elementary	Separate	1.4
	Alex Munro Elementary	Public	1.4
	Dr. J.K. Mulloy Elementary	Public	2.6

	School	Type of School	Distance from SSA Boundary (km)
	Huntington Hills Elementary	Public	3.3
	John G. Diefenbaker Sr. High	Public	2.8
	Sir John A. Macdonald Jr. High	Public	2.8
	Catherine Nichols Gunn Elementary	Public	1.6
Thornccliffe	Corpus Christi Elementary	Separate	2.2
	Thornccliffe Elementary	Public	2.1
	Colonel Sanders	Public	2.7
Highland Park	Buchanan Elementary	Public	2.2
	James Fowler Sr. High	Public	2.5
Tuxedo	Chinook Private School	Private	2.6
	George P. Vanier Elementary	Separate	2.0
	St. Paul Elementary	Separate	2.9
	Queens Park Elementary	Public	3.4
Crescent Heights	Crescent Heights Secondary	Public	4.4
Mount Pleasant	St. Joseph Elementary	Separate	3.5
Renfrew	St. Alphonsus Elementary	Separate	3.4
	Renfrew Campus	Private	3.5
	Delta West Academy	Private	3.6
	Stanley Jones Elementary	Public	4.1

Note: City of Calgary 2009a

3.1.3.2 Post Secondary Education

Regional and Local Study Areas

The RSA and LSA are served primarily by five major public post-secondary institutions. The University of Calgary is the City's primary large degree-granting facility, and enrolled 28,807 students in 2006. Other post-secondary institutions include Mount Royal University, with 13,000 students, granting degrees in a number of fields, including aviation. The Aviation program at Mount Royal University combines the flight training needed to become a commercial pilot with an academic diploma. The university's training aircraft fleet is located at their hangar at the Springbank Airport (CYBW) just west of Calgary. The RSA is also home to SAIT Polytechnic with over 14,000 students. SAIT provides polytechnic and apprentice education, granting certificates, diplomas and applied degrees. SAIT's main campus is in the northwest quadrant, just north of downtown, but has a training centre at YYC (see below).

Smaller post-secondary institutions include Bow Valley College and Alberta College of Art and Design. There are also several private liberal arts institutions including Ambrose University College, official Canadian university college of the Church of the Nazarene and the Christian and Missionary Alliance and St. Mary's University College. As well, Calgary is home to Columbia College and DeVry Career College's only Canadian campus.

Site Study Area

YYC is home to the Art Smith Aero Centre for Training and Technology (ACTT). The ACTT provides class room education and hands-on training. The facility occupies 17 acres of land at YYC which includes a hangar that can accommodate a 737-70, 13 laboratories, classrooms, open study areas, and a cafeteria. It provides an 110,000 sq. ft. concrete apron (ground side) and an 18,000 sq. ft. ancillary asphalt apron. The centre offers training programs such as the Aircraft Structures Technician program, and the Avionics Technology and Aircraft Maintenance Engineering programs providing knowledge and skills required to enter a career to become an aircraft maintenance engineer (AME).

The Calgary Airport Authority provides a scholarship at Mount Royal College, funds a student award at SAIT and sponsors events at the Haskayne School of Business. In addition, the Authority hires summer students and provides graduate students with funding and co-op opportunities.

3.1.4 Health and Safety Facilities and Services

Health and safety refer to those Community Assets (i.e., facilities and services) that directly affect a community's well-being. The key Health and Safety Assets of a community include its fire services, policing and emergency preparedness and health care services. To an individual, family or household, these services play a crucial role in maintaining people's feelings of health and sense of safety on a daily basis and during crisis situations, thus affecting people's satisfaction with community. Public attitude research conducted for the Project indicated that the availability of policing, health care and a variety of other related services were important attributes that support community well-being; and that lack of policing capability, health care/doctors were seen as threats to community well-being.

To an airport operator, adequate health and safety facilities and services are required to ensure safe and effective airport operations. At a minimum, the Authority, along with others must ensure that fire and policing services are available on-site. The availability of such services off-site is also essential to ensure the safety of the travelling public, the Authority employees and their families.

3.1.4.1 Fire Services

Regional Study Area

The Calgary Fire Department has 38 fire stations, including three residential fire houses. In 2009, the Fire Department was anticipated to employ approximately 1,350 staff (Full Time Equivalents) and is expected to grow to over 1,400 staff by 2011. The department serves the community by reducing or eliminating the threat of fire, environmental spills, accidents, and disasters. The fire suppression division provides the necessary personnel and equipment to carry out emergency firefighting, rescue operations and pre-hospital care support services. The department is a member of the National Fire Protection Association, which have set a response time objective of under 6 minutes per call. With respect to YYC, typical day-to-day job duties of Calgary's fire fighters include:

- Aircraft emergency standby;
- First fire/medical response coverage for airport terminal, parkade and on-site airport tenants;
- Fire standby for welding and cutting jobs near the airport;
- Performing fire inspections in and around the airport (i.e., construction zones);
- Conducting live fire and extinguisher training;
- Training airport personnel on CPR and Automatic External Defibrillator;
- Training airport personnel on Workplace Hazardous Materials Information Systems;
- Training Authority personnel in Transportation of Dangerous Goods;
- Aircraft familiarization;
- Public relations in the airport terminal including fire station tours; and
- Hazardous materials pick up.

Airdrie Emergency Services (AES) is an integrated fire and emergency medical service. Residents from all areas access fire and medical services via 911 dispatched through the Calgary Fire Department and Calgary Emergency Medical Services. AES provides fire protection not only to Airdrie residents, but also rural residents in Rocky View County.

Local Study Area

The LSA is serviced by 13 fire stations operated by the Calgary Fire Department and fire stations the City of Airdrie. An interview was undertaken with a representative of Fire Station 32 (206 Saddleback Road NE), the nearest fire station to YYC. This station serves the communities immediately east of the airport (e.g., Taradale, Falconridge and Saddleridge). Fire Station 32 employs four people per shift with a total of 16 employed staff. The services provided by this station include a full range of emergency services, including medical assistance to the fire station at the airport (see SSA below). This station does not undertake any additional or special training due to its proximity to the airport. It currently meets its response time standard approximately 80% of the time. Because this station is serving an area that is growing in population, there is an increasing demand for its services. Fire Station 32 currently operates from a residential fire house while a new station is constructed. While the station is not regularly called upon to assist the fire services at the airport site, the fire station has mobilized itself in the past in response to aircraft pilot calls to air traffic control.

Site Study Area

Fire protection services at YYC are provided under contract with the Calgary Fire Department through one on-site fire station (Fire Station 13 at 78 Avenue NE). A second station (Fire Station 27 at 320 Aviation Way) on the airport site was recently shut down for safety reasons, with staff and equipment moving to Fire Station 13, which is near the terminal at the north end of the airport (CBC 2009). In addition, the Authority operates a fire training facility that was constructed in 1977 and upgraded in 1985. Training exercises are conducted annually.

Fire Station 13 provides emergency services for on-site structures including medical assistance on-site, as well as at the airport terminal and the on-site industrial/commercial business areas. The station has 22 staff, comprised of 21 trained firefighters and the Airport Fire Coordinator. There are at least 10 firefighters on-site at any one time. Currently, the Authority owns the fire station building and is responsible for its maintenance, while the Calgary Fire Department is responsible for its operation.

The Airport Fire Coordinator indicated that Fire Station 13 operates in accordance with the airport's Emergency Response Preparedness Program and Transport Canada regulations, such as the Canadian Aviation Regulations (CARs) and the Aircraft Emergency Intervention Services (AEIS) Regulation. Among several items, these regulations establish a firm five-minute response time from the time an alarm is sounded to the time a vehicle reaches the mid-point of the furthest runway, for either on-site or off-site aircraft emergency intervention. To this end, fire station staff require specialized training and equipment in order to respond to building and aircraft fires, aircraft crash response, as well as response to medical emergencies, fuel spills, hazardous materials spills, etc. On average, Fire Station 13 responds to approximately 70 calls per month, the majority of which are medical issues. Calls regarding aircraft emergencies vary between two and 15 per month.

3.1.4.2 Policing

Regional Study Area

Policing services are those aimed at protecting the safety of the general public and the security of private property through the maintenance of law and order. Policing in the RSA is carried out by the Calgary Police Service (CPS) and the Royal Canadian Mounted Police (RCMP). The main elements of the policing system include the facilities, vehicles, equipment, and personnel that provide a wide range of programs and services, such as traffic enforcement, criminal and special investigations, crime prevention, offender apprehension, and administrative services.

The City of Calgary is serviced by the Calgary Police Service through its six District Offices and six community stations. Calgary was the first municipal police agency in Canada to have a full-time patrol helicopter program. The HAWC helicopter provides a swift response to life threatening incidents, air support for ground units, and an increased efficiency to detect, prevent, and reduce crime through aerial patrols. The RCMP also operate an office in the City of Calgary. The City of Airdrie and Rocky View County are serviced by several local RCMP detachments.

Local Study Area

The LSA is serviced by the Calgary Police Service through its six District Offices and six community stations. An interview was undertaken with a representative of District 5, the district that immediately surrounds YYC. This District Office (5401 Temple Drive NE) serves the communities immediately east of Deerfoot Trail and north of 16 Avenue (within City limits). This District Office currently employs 130 staff, including 22 staff assigned to YYC (see SSA below). To date, there have not been any incidents or events related to the presence of YYC that has required a mobilized response from the CPS. District 5 has plans to move to a new facility in August 2010, to be located in the community of Saddleridge.

Site Study Area

Policing services at all airports in Canada are federally mandated by TC. Policing services at YYC are provided under contract with the Calgary Police Service through on-site offices at the Corporate Centre and the terminal building. The Calgary Police Service's Airport Unit employs 22 people. An interview with the Airport Unit's representative indicates that the unit's primary functions include airport and building security, foot and mountain bike patrol of the terminal, parkades, parking lots, bike paths and buildings surrounding airport property, baggage pick-up areas, and pre-boarding screening areas, investigating all incidents requiring police response and liaison with airport tenants, businesses, enforcement agencies, and airlines to promote and conduct community policing initiatives. The Airport Unit operates with the objective of meeting a five minute armed response time to a screening point alarm.

3.1.4.3 Emergency Management

Regional Study Area

The *Alberta Emergency Management Act* requires that all municipalities prepare emergency management plans. Within the RSA, the Calgary Emergency Management Agency (CEMA) works to prepare for, respond to, and recover from emergencies and disasters, and has developed a Municipal Emergency Plan to address a wide range of natural disasters and man-made disasters. CEMA is constructing a new \$54 million Emergency Operations Centre (EOC). Construction of the centre began in May 2009 with an opening anticipated for early 2012. When completed, it will house about 25 staff daily.

Site Study Area

The Authority has a comprehensive emergency response plan which involves support from the Calgary Fire Department, Calgary Police Service, Calgary Health Region, Calgary Emergency Medical Services, CEMA, and others. In cooperation with airport partners, the Authority regularly conducts simulated and live training exercises to test emergency response and operational contingency plans.

3.1.4.4 Health Care Facilities and Services

Regional Study Area

Health care services in the RSA are those aimed at preventing and/or curing personal health problems among community residents. The main elements of the health care system are its facilities (i.e., hospitals, clinics, homes for the aged), equipment (i.e., ambulances, diagnostic equipment), programs and services (i.e., emergency services, in/out patient care), and personnel (i.e., various health care professionals).

The RSA is served by three major hospitals and one major paediatric acute care site, the Foothills Medical Centre (which is the largest hospital in Alberta), the Peter Lougheed Centre, the Rockyview General Hospital, and the Alberta Children's Hospital, which is the largest hospital in the prairie provinces for sick kids. They are all overseen by Alberta Health Services: Calgary Health Region. Calgary is also home to the Tom Baker Cancer Centre, the leading cancer centre in Alberta (located at the Foothills Medical Centre), the Grace Women's Health Centre, which provides a variety of care, and the Libin Cardiovascular Institute. In addition, the Sheldon M. Chumir Centre (a large 24 hour assessment clinic), and the Richmond Road Diagnostic and Treatment Centre (RRDTC), as well as hundreds of smaller medical and dental clinics operate in Calgary. The University of Calgary Medical Centre also operates in partnership with the Calgary Health Region, by researching cancer, cardiovascular, diabetes, joint injury, arthritis, and genetics. The four largest Calgary hospitals have a combined total of more than 2,100 beds.

Local Study Area

The Peter Lougheed Centre (PLC) is located within the LSA approximately 9.2 km south of YYC. This hospital has a 24 hours Emergency Department, an Intensive Care Unit (ICU) and offers ambulatory care with over 600 beds.

An interview with a representative of the PLC indicated that the centre serves all of the RSA and beyond (e.g., southwest Saskatchewan, southeast British Columbia, and all of southern Alberta). It employs approximately 35,000 people. Currently, access and capacity are the key issues the PLC is dealing with. Patient access into medical services (e.g., emergency, physician, treatment, etc.) and number of beds currently offered are the main issues. Demand is higher than supply. The PLC has its own heliport and does not depend on YYC for aviation services; however, it is alerted whenever airplanes report that they need assistance. The PLC's new East Wing will include 140 inpatient beds, as well as a new intensive care and coronary unit. It was also designed with a new roof-top helipad for emergency services.

3.1.5 Social Services

Social services assist members of the community to achieve a better quality of life through the alleviation of various needs and problems (i.e., unemployment, housing assistance, child care). To an individual, family or household, these services play a crucial role in maintaining people's feelings of health on a daily basis and during crisis situations, thus affecting people's satisfaction with community.

Formal social services are largely provided by the City of Calgary through the Community and Neighbourhood Services (CNS), and are often oriented towards specific segments of society, such as children/youth, families, the aged, handicapped or disabled, unemployed, etc. Informal social services are often provided by community associations and community-based organizations either aimed at specific segments of society or broader issues of concern to society in general (i.e., cancer, poverty, etc.).

3.1.6 Economic Development Services

Economic development refers to the services provided by municipalities and affiliated organizations to its residents and businesses that are aimed at generating wealth through increased employment and business activity, and attracting investment and tourists.

These economic development activities also serve to connect one community to many others, not only through the business generated, but also by the work of people responsible for economic development planning and implementation. For these reasons, economic development services are considered to be a Human Asset. A major project will affect the economic development opportunities in a community and consequently, the role that economic development services play in allowing community residents and

business operators to achieve their financial objectives (Financial Assets). In addition, the economic development activities of a municipality and affiliated organizations often act as a focus for defining a community's shared goals or aspirations, thereby influencing a community's Social Assets (i.e., community cohesion).

The RSA and LSA lay within the Calgary Economic Region (CER). The economies of the RSA and LSA are an integral part of the broader economy of the CER. In the RSA, the Calgary Economic Development agency (CED) provides the bulk of the economic development services. The CED agency was established in October 2002, and since then, it has been providing leadership and a new direction for the Calgary Region's economic development activities. The CED agency is one of four City-funded economic development agencies. The CED agency is focused on consultation and partnership with stakeholders from business, community and government to achieve their objectives. The CED's community partners are local businesses and organizations, such as the Calgary Chamber of Commerce, the Calgary Regional Partnership, the City of Calgary, Calgary Technologies Inc., the Calgary TELUS Convention Centre, the Authority, Tourism Calgary, among others (CED 2010).

In January 2008, the Economic Development Strategy Steering Committee released the Calgary Economic Development Strategy which was approved by City Council on January 21, 2008. The creation of the Calgary Economic Development Strategy was led by a 17-member Steering Team, comprised of individuals from private sector, senior levels of government and the four City-funded economic development agencies. The CED agency managed the process. An extensive public consultation process was undertaken to ensure a broad and diverse range of public opinion and ideas were captured and explored. On the matter of economic development, the ten year strategy (2008-2018) made the following observations and forecasts:

- A new direction for Calgary's economic development is needed. More attention must be given to creating an urban environment that provides high quality of life and quality of place for all residents, and ensures Calgary's ability to attract the best and the brightest people.
- The economic development approach must balance the importance of both business and people. As Calgary is faced with a growing global labour force shortage, the economic development strategy will not only attract business investment, but also the workers essential to business growth and success.
- A key component for the successful implementation of the economic development strategy is Calgary becoming a truly international city. This means a city that will provide the amenities, services, infrastructure and, ultimately, quality of life that will enable Calgary to compete on the global stage (CED 2010). Calgary's internationalization will be achieved by the following:
 - i. creating a greater international awareness of Calgary;
 - ii. delivering the infrastructure that will support increased visitation, and
 - iii. creating the business connections that will support more international business activity (CED 2008).
- Economic development in Calgary will grow around the following key sectors: (i) energy; (ii) financial services; (iii) health and wellness; (iv) transportation and logistics; (v) environmental technologies; (vi) valued added manufacturing; (vii) communication and technology; (viii) creative and cultural industries; and (ix) tourism sectors.

As Calgary is Canada's energy capital, the energy sector and industries associated to oil and gas (e.g., finance, design and construction) will continue to lead economic growth in Calgary. Of particular relevance to YYC is the transportation and logistics sector that will also play a pivotal role in future economic development. Calgary has developed an integrated international transportation and logistics system with a full range of multi-modal services and solutions for business and industry. YYC and

surrounding industrial and commercial lands are being positioned as a global logistics centre for high-value, time-sensitive goods, incorporating supply-chain management and opportunities with multi-modal, including road, air and rail.

Tourism has long been and will continue to be a key component in Calgary's economy, due to its close location to the Canadian Rockies. There has also been an increased interest in the City as a location for high profile convention and trade show events often referred to as the global meetings industry (CED 2008b).

The effective implementation of the strategy will require participation of all partners in economic development, such as the private sector, City departments, other levels of government, regional partnerships, industry associations, community organizations, and public institutions. Central to this strategy will be organizations involved in community-based economic development and organizations involved in the development of transportation infrastructure supporting international travel and transport.

The Calgary Economic Development Strategy and its Implementation Plan (CED 2008a; CED 2008b) are aligned with other plans at the local, regional and provincial levels. At the provincial level, they are reflective of the outcomes, strategies and processes outlined in the Alberta Land Use Framework. The Alberta Land Use Framework provides guidance regarding lands and natural resources management to achieve environmental, economic and social well-being in Alberta. At the regional level, the Calgary Economic Development Strategy is consistent with the Calgary Metropolitan Plan, developed by the Calgary Regional Partnership². The Calgary Metropolitan Plan has set out policies regarding the regional management of the landscape, settlement pattern, and infrastructure and services.

At the local level, the Calgary Economic Development Strategy is also in alignment with the Plan It Calgary, which includes both the Calgary Municipal Development Plan and the Calgary Transportation Plan. Plan It Calgary is another important local policy with regard to economic development goals. Plan It addresses Calgary's land base from commercial, industrial and residential perspectives, and looks at innovative development forms (e.g., transit-oriented development, employment centres, and sustainable development forms) to ensure that Calgary remains an internationally attractive business location (CED 2008a). The PRP is mentioned in the Strategy's implementation plan as an initiative that is aligned with the City's goal to become a truly international centre. The PRP is included as a key initiative in the 2009-2011 time period.

3.2 Economic Assets

The **Economic Assets** sub-component considers the opportunities available to people for employment and participation in the economic life of the community, including the monetary or financial resources that people and municipalities use to achieve their economic objectives. Economic Assets are key determinants of a community's overall economic vitality. For the purposes of this Socio-economic Assessment, this sub-component considers the following parameters:

- Employment;
- Business Activity;
- Tourism;

2. *The Calgary Regional Partnership includes Rocky View County, the City of Airdrie, the Town of Cochrane, the Town of Chestermere, the Town of Okotoks, the Town of High River, and the Municipal District of Foothills. It also includes the Town of Canmore and the Municipal District of Bighorn to the west, and the Town of Strathmore to the east. The Towns of Crossfield and Banff are recent additions to the CRP (Wikipedia 2009 http://en.wikipedia.org/wiki/Calgary_Region).*

- Income;
- Residential Property Values; and
- Municipal Finance and Administration.

Each of these parameters is defined and discussed in terms of its contribution to community well-being, from the perspectives of an individual, family or household, and from the perspective of a community, municipality or region. Existing socio-economic conditions in the RSA and/or the LSA are described for each of these parameters as appropriate.

Public attitude research undertaken as part of this Socio-economic Assessment identified the most important issues facing RSA and LSA communities today. Approximately 27% of RSA and LSA respondents indicated that issues associated with Economic Assets are the most important in their community. These included:

- The general state of the economy (8% RSA, 7% LSA);
- Unemployment (7% RSA, 8% LSA);
- Taxes / Cost of Living (6% RSA, 5% LSA);
- Community recreational facilities, amenities (3% RSA and LSA);
- Government in general (3% RSA, 2% LSA); and
- Poverty / Homelessness (2% RSA and LSA).

3.2.1 Employment

Employment is the most important Financial Asset of any community as it determines the participation of residents in its economic life. As such, employment is a major determinant of overall community well-being. To individuals, families or households, employment provides income that people use to achieve their personal financial objectives, which define their style and quality of life. Employment provides a sense of personal security and has a symbolic value which contributes to a person's own self-image and their status within a community. To the municipality, community or region, employment influences its Human, Physical and Social Assets. For example, employment opportunities influence the way a community, municipality or region is perceived; that is, its attractiveness as a place to live. As such, the availability of employment opportunities ultimately affects population levels (Human Assets), housing, community infrastructure and services (Physical Assets) which are major determinants of community character and cohesion (Social Assets).

Regional Study Area

Table 21 provides data for key employment indicators for the CER. During the period of 2006-2009, the working age population in the CER increased by 10.1% and reached almost 1,050,000 people in 2009. Over the same period, the number of employed persons 15 years of age and over increased by 6.4%, peaking in 2008. These trends in employment were largely influenced by a steady increase in part-time employment (22.6% over the four-year period) and a sharp decrease in full-time employment from 2008 to 2009. As a result, the annual employment rate remained relatively stable at around 74% during the first three years, then dropped to approximately 71% in 2009. Conversely, the number of unemployed increased sharply by 124.2% over the four year period. While the annual unemployment rate remained relatively stable at around 3.2% during the first two years, the unemployment rate increased sharply to approximately 6.6% in 2009.

Table 21 Key Employment Indicators – Calgary Economic Region, 2006-2009

Labour Force Characteristics	2006	2007	2008	2009	2006-2009 % Change
Population 15 years and over ('000)	954.2	995.1	1,021.0	1,050.4	10.1
• In labour force ('000)	728.5	760.4	784.7	802.6	10.8
• Employed ('000)	705.0	736.2	757.9	749.9	6.4
Full-time employment ('000)	601.2	629.2	642.2	622.7	3.6
Part-time employment ('000)	103.8	106.9	115.7	127.3	22.6
• Unemployed ('000)	23.5	24.3	26.8	52.7	124.2
• Not in labour force ('000)	225.7	234.7	236.4	247.8	9.8
Unemployment rate (%)	3.2	3.2	3.4	6.6	-
Participation rate (%)	76.3	76.4	76.9	76.4	-
Employment rate (%)	73.9	74.0	74.2	71.4	-

Source: Statistics Canada 2010.

The economic outlook for the CER reflects a modest economic recovery. The total employment in the CER is estimated to grow to approximately 819,000 by 2011. The unemployment rate is expected to return to 2006-2007 levels, namely between 3% and 4%, up to 2013 (City of Calgary 2008a).

Table 22 provides a listing of the largest employers in the RSA, focussing on employers in the City of Calgary and the City of Airdrie. The City of Calgary has many large employers (i.e., total employees > 2,000) due partially to the fact that it is home to numerous head offices for large resource companies operating in the energy and mining sectors, and large public sector organizations that serve the City and beyond. Over the past several years, Calgary has emerged as Western Canada's head office centre and Canada's most concentrated headquarter location. The absolute number of Calgary head offices increased over the past five years, from 88 in 2004 to 119 in 2008. The City of Airdrie is home to a number of small to medium sized employers, largely in the private retail and government sectors.

Table 22 Largest Employers - Regional Study Area, 2009

	Name	Industry Sector	Total Number of Alberta Employees
City of Calgary	City of Calgary	Public Sector	15,215
	Calgary Board of Education	Education	9,318
	Canada Safeway Limited	Food Services	8,600
	University of Calgary	Education	5,751
	Suncor Energy Inc.	Resources	5,500
	ATCO Ltd.	Utilities	5,500
	EnCana Corporation	Resources	5,285
	Petro-Canada	Resources	4,816
	Calgary Roman Catholic Separate School Board	Education	4,650
	Shaw Communications	Communications	4,260
	TransCanada Corporation	Utilities	3,987
	Calgary Cooperative Association	Retail	3,600
	Canada Natural Resources Ltd.	Resources	3,400
	Precision Drilling Trust	Resources	3,000
	Superior Plus Income	Resources	2,893
	Imperial Oil Limited	Resources	2,760
	SAIT Polytechnic	Education	2,539
	Flint Energy Services Ltd.	Resources	2,400
	Carewest	Health	2,400
	Mount Royal College	Education	2,165
TransAlta Corporation	Utilities	2,110	

	Name	Industry Sector	Total Number of Alberta Employees
City of Airdrie	Propak Systems Ltd.	Manufacturing	800
	Rocky View Schools	Education	700
	Wal-Mart Canada	Retail	400
	City of Airdrie	Government	375
	Fortis Alberta	Utilities	300
	Real Canadian Superstore	Retail	300
	First Student Canada	Transportation	200

Source: Alberta Venture, 2009; City of Airdrie Economic Development, 2009

Site Study Area

YYC is a major employment hub within the RSA. In 2009, the Authority directly employed approximately 185 persons. An analysis of residential postal codes for Airport Authority employees indicates that a large majority of people (78%) resided in the City of Calgary (78%), the City of Airdrie (7%), Rocky View County (8%), and outside of the RSA. Within the City of Calgary, the majority of Airport Authority employees resided in Calgary NW (65%), followed by Calgary SE (15%), and Calgary NE and SW (10% each).

As such, the Authority is not among Calgary's largest employers; however, the business activity undertaken at the airport generates a number of other direct, indirect and induced employment opportunities. The types of employment opportunities are defined below.

1. **Direct employment** refers to the number of jobs, measured in full-time equivalents (FTEs), associated with the Authority and other firms located on the airport site.
2. **Indirect employment** refers to employment (FTEs) generated at supply and service companies off the airport site through expenditures for goods and services by the Airport Authority and other firms located on the airport site.
3. **Induced employment** refers to employment (FTEs) generated as a result of income spending persons gaining direct or indirect jobs generated by the airport.

The employment generated by the airport is associated with six types of businesses or activities undertaken at the airport. These include air carriers and support service companies, airport terminal building concessionaires, general aviation, air cargo and corporate aviation businesses, airport and government operations, other non-aviation businesses, and on-airport construction projects. Based on the results of an economic analysis conducted in 2007, Table 23 provides estimates of the employment (FTEs) generated by each of these businesses or activities.

Table 23 Estimated Employment (FTEs) Generated by YYC, 2007

Type of Business or Activity	Direct Employment (FTEs)	Indirect and Induced Employment (FTEs)	Total Employment (FTEs)	Percent Total (%)
Air Carriers and Support Service Companies	7,797	7,142	14,939	53
Airport Terminal Building Concessionaires	2,215	913	3,128	11
General Aviation, Corporate Aviation and Air Cargo Businesses	3,381	2,463	5,844	19
Airport and Government Operations	1,235	993	2,228	8
Other Non-aviation Businesses	719	578	1,297	5
On-airport Construction Projects	1,027	413	1,440	4
Total	16,374	12,502	28,876	100

Note: RP Erickson & Associates Aviation Consultants, 2008.

In 2007, the airport was associated with approximately 28,184 jobs or 3.8% of total employment within the CER. Air carriers and support service businesses generate the largest number of employment (53%) opportunities both on and off the airport site. In addition, it is estimated that spending by non-resident visitors (i.e., visitors, tourists and air carrier cabin crews) arriving by air through YYC generate an additional 11,748 jobs in the Calgary area.

3.2.2 Business Activity

Business activity is an important Financial Asset of any community. To individuals, families or households, business activity generates the employment opportunities and income that people use to achieve their personal financial objectives, which define their style and quality of life. To the municipality, community or region, the level of business activity also influences Human, Physical Assets and Social Assets. For example, the level of business activity (including the availability of places to conduct business or to go shopping) influences the way a municipality, community or region is perceived, that is, its attractiveness as a place to live or conduct business. For the business community, an airport provides access to regional, national and international markets for goods and services, and facilitates labour mobility.

For the purposes of this Socio-economic Assessment, business activity was considered both qualitatively and quantitatively. In quantitative terms, business activity is considered in terms of the broad economic measure of Gross Domestic Product (GDP). GDP is an estimate of the final value of all goods and services produced in the economy within a specific time period. In essence, it is an indication of the total “value added” (including profits) in an economy resulting from an investment. For example, as raw materials are transformed into final products or services, only the value of new or additional products and services are accounted for. Economists and policy makers generally use GDP as one broad indicator of new wealth creation and business activity because as GDP increases so too does employment, taxes, and employment incomes. For the purposes of this description of baseline conditions, three different measures of GDP are considered:

- GDP generated in the CER;
- GDP generated by the Authority and its tenants; and
- GDP generated by visitors arriving by air through YYC.

In qualitative terms, business activity is described in terms of the areas within the RSA and LSA that are used primarily for commercial and industrial uses.

Regional Study Area

The CER, which includes the RSA, has one of the largest economies in Canada. The business activity occurring within the CER is the result of growth in a number of sectors including energy, tourism, agriculture, and manufacturing. Calgary is the business hub for all business functions for the oil and gas sector in Alberta. It is the head office location of most major energy companies. In addition, transportation, warehousing, advanced technology, and health care are also sectors experiencing growth. The CER is also one of the country’s key business and financial service centres. This diversity has contributed to the City’s relatively steady rate of growth. Nevertheless, the region’s economic performance remains closely tied to demand for and price of crude oil and other commodities, which in recent years have been volatile.

In 2007, the CER's GDP was estimated at \$58.4 billion (RP Erickson & Associates Aviation Consultants 2008) and \$52.4 billion in 2008 (CED 2010). The largest economic sectors were Finance, Insurance, Real Estate, and Leasing (22% contribution to GDP); Forestry, Fishing, Mining, Oil and Gas (14.5% contribution to GDP), and construction (11.5% contribution to GDP). The GDP for the CER is expected to grow by an annual rate of 3.3% during the 2008-2013 period, compared to 4.5% annually during the 2003-2008 period (City of Calgary 2008a).

The majority of business activity in Calgary is conducted in its downtown core located approximately 18 to 20 km from YYC. Calgary's downtown core is also the RSA's primary retail area, comprised of Stephen Avenue (8 Avenue SW) which is a pedestrian mall containing stores, restaurants, cinemas, and drinking establishments, TD Square, the Eaton Centre, and the Scotia Centre. The commercial core also includes an entertainment district, the Olympic Plaza, a cultural district, and a government district.

In 2007, the City of Calgary had 11,975 ha (47 sections) of industrial land within its municipal boundary. Of this total, 8,528 ha (71%) was already developed, leaving 3,447 ha of vacant gross land supply available for future development. Much of this available land is located in Northeast Calgary and within the AVPA boundary (City of Calgary 2007). Since 2007, there has not been substantial new inventory added to the marketplace, but vacancy has risen. Similarly, average rental rates for industrial properties began declining in 2008 and this trend is expected to continue in the near future. Industrial properties outside the City of Calgary (e.g., Airdrie and Rocky View) are beginning to be developed, increasing competition for purchasers and developers.

A key business organization in the RSA is the Calgary Chamber of Commerce which has been active in building the existing innovative and entrepreneurial spirit of Calgary's business community for several decades. The Chamber and its members work towards constructive solutions to critical national and provincial policy issues affecting the local and regional economy. The Chamber also offers numerous value-added programs that serve both small and large business, including networking events, advertising and sponsorship opportunities and professional development. The Chamber is the leading business organization in Calgary. The Authority is a member of the Chamber of Commerce.

Local Study Area

There are thousands of large, medium and small scale business operations located within the LSA. As such, the description of business activity in the LSA has been focussed on the presence of major industrial and commercial areas, and off-site business operations nearest the PRP site.

The LSA contains 31 industrial/commercial parks, including 29 in the City of Calgary and two in the City of Airdrie. Most of these areas are located within the AVPA boundary and surround YYC. While many of these are fully serviced and developed, lands to the north of the airport are only beginning to become serviced and developed. The largest new industrial/commercial areas being developed are the Stoney Industrial Area and Stonegate Landing, both located north of the airport.

- The Stoney Industrial Area is comprised of approximately 932 ha of land that will function as predominantly a business and industrial area. This area is anticipated to attract specialized development projects that serve YYC, the travelling public, the local work force, and the residential communities to the west. It will serve as a "gateway" to the City, due to its location along Stoney Trail NE and Deerfoot Trail NE, and its proximity to YYC (City of Calgary 2009b).
- Stonegate Landing is comprised of approximately 1,100 acres located between Deerfoot Trail to the west, Métis Trail to the east, Stoney Trail to the north, and Country Hills Boulevard to the south. It will function as a major commercial centre, with new retail, office, industrial, entertainment, and hospitality

developments. It will add 10 million square feet of industrial space, about two million square feet of offices, and about 1.5 million square feet of retail to the City. Site development is expected to be completed by 2016 (WAM Development Group 2008).

There are three major retail malls or developments in the LSA:

- Deerfoot Meadows (901 64 Avenue NE) is located west of YYC. This is a major retail development node in the City of Calgary, attracting 60,000 visitors per day and 30 to 40 million visitors per year to its 'big box' stores. There are plans for a new 500,000 square foot development that will include new big box stores, an auto mall and a new hotel.
- Sunridge Mall (2525 36 Street NE) is the largest shopping centre in northeast Calgary and is located southeast of YYC. It offers over 160 stores and services.
- Marlborough Mall (433 Marlborough Way NE) is a large shopping centre located southeast of YYC. It offers over 150 stores and services.

The nearest off-site business operations to the PRP site are located immediately north and east of the SSA. These are all small and medium sized industrial and commercial operations. There are currently four businesses located along 36 Avenue NE (i.e., storage, auto parts, construction/manufacturing); four businesses located along 40 Street NE (i.e., paving/road building, steel construction, auto parts, and mechanical services), and one located on 80 Avenue NE (i.e., drilling supplies). There are three businesses located immediately north of the SSA including two park/fly operations and an energy services company.

Site Study Area

Within the SSA, the Authority has defined a number of development zones within which airport operations, commercial and industrial business operations exist or have the potential to be developed in order to generate business activity and revenues for the Airport Authority. Volume V, Item 7, Land Use Baseline Report describes the current status of each development zone.

Overall, much of the SSA has been developed and occupied by tenants. In 2009, YYC was host to 238 tenants/companies which generated business activity through their direct expenditures on goods and services. These expenditures, plus the labour income associated with their direct employment contributed to the (GDP) in the RSA and beyond. The business activity undertaken at the airport is associated with six types of businesses or activities. These include business activities undertaken by air carriers and support service companies, airport terminal building concessionaires, general aviation, air cargo and corporate aviation businesses, airport and government operations, other non-aviation businesses, and on-airport construction projects.

Based on the results of an economic analysis conducted in 2007, Table 24 provides estimates of the annual expenditures (\$ M) and their direct contribution to the GDP in the RSA and beyond by each of these businesses or activities.

Table 24 Estimated Annual Expenditures and GDP Contribution Generated by YYC, 2007

Type of Business or Activity	Current Number of Airport Authority Tenants (2009)	%of Total	Annual Operating Expenditures (\$M)	%of Total	Direct GDP Contribution (\$M)	% of Total
Air Carriers and Support Service Companies	71	30	\$878	57	\$1,538	61
Airport Terminal Building Concessionaires	54	23	\$149	10	\$213	8
General Aviation, Corporate Aviation and Air Cargo Businesses	17	7	\$270	17	\$421	17
Airport and Government Operations	15	6	\$161	11	\$234	9
Other Non-aviation Businesses	81	34	\$74	5	\$114	5
Total	238	100	\$1,532	100	\$2,520	100

Note: Data provided to AECOM by the Calgary Airport Authority, 2009; RP Erickson & Associates Aviation Consultants, 2008.

Overall, the Authority and its tenants contributed approximately \$2.5 billion to the GDP within the RSA and beyond. Air carriers and support service businesses were responsible for the greatest amount of business activity or GDP contribution (61%) at YYC. General aviation, corporate aviation and air cargo businesses contribute approximately 17% of the total GDP. To this end, the major air carriers and examples of support service companies utilizing the airport are listed in Table 25.

Table 25 Major Air Carriers and Example of Aviation Support Service Businesses

Major Air Carriers	Examples of Aviation Support Service Businesses
WestJet (National Headquarters)	Airport Terminal Services Canadian Company
Air Canada, Air Canada Vacations and Air Canada Jazz	Alberta Products Pipeline Ltd.
Air Transat	Alpine Helicopters Ltd.
American Airlines	Ashe Aircraft Enterprises Ltd.
British Airways	Avmax Group Inc.
Central Mountain Air	Brandon Petroleum Sales Ltd.
Continental Airlines	Cara Operations Limited
KLM Royal Dutch Airlines	Imperial Oil
Lufthansa German Airlines	Shell Canada Products Limited
Northwest /Delta Airlines	Banff Airporter Inc.
Sky Service Airlines	Dave's Oilfield Services Ltd.
Sunwing Airlines	Hopewell Airport (CGY) Developments Inc.
United Airlines	Hurricane One Hangers Ltd.
US Airways	TransCanada Pipelines Limited

In addition, it is estimated that spending by non-resident visitors (i.e., visitors, tourists and air carrier cabin crews) arriving by air through YYC contributed an additional \$381 million in GDP to the Calgary area. Taken together, these direct contributions to GDP represented approximately 5% of the CER's GDP in 2007.

Another important business activity closely associated with YYC is the transportation/logistics industry centred on air cargo businesses. This industry is of critical importance to the RSA's business community, enabling access to regional, national and international markets for goods and services. The main cargo facility for the airport is at apron II, which can handle up to four Boeing 747s. In addition, apron VII is used as a cargo facility mostly for FedEx, Purolator and DHL. FedEx uses the airport as a hub at the apron VII facility, which has been configured to hold two Boeing 727s and three McDonnell-Douglas MD-11s (used at this capacity since November 2004). Purolator also has a cargo facility in the northwest corner of the airfield next to apron VII. November 2007 saw the start of construction at apron VII to give seven new parking pads for air cargo carriers. In addition, UPS has started the construction of a new logistics centre, including an apron, which is directly southeast of the existing FedEx facility.

Finally, the taxi and limousine industry also play an important role both on and off the airport site. Round the clock taxi service is available at YYC. Taxi stands are located on the Arrivals level. The City of Calgary Bylaw 6M2007 sets out the rules, standards, fares, and licensing requirements. A Taxi Limousine Advisory Committee has been established that reports to City Council and provides advice on taxi policy. It is comprised of three citizen representatives, a representative from each of the Authority and Tourism Calgary, and three industry participants representing drivers, brokerages, and licence holders.

Calgary has 1,311 regular taxi licences (plates) and 100 wheelchair accessible taxi licences. There are 10 brokerages (dispatch companies that take calls for taxis). Six taxi companies are licensed to provide service at YYC. Overall, it is estimated that the approximately 1,400 taxi plates generate about \$700,000 weekly cash flow to brokerages, or over \$36 million dollars annually (Voters for Taxis 2009).

With respect to premium transportation service, airport limousines are available on-demand and are located on the Arrivals level adjacent to the taxi stands. Flat rate fares are based on a zone system and are approximately 25% higher than average taxi meter fares. Sedan service is offered throughout Calgary and to destinations beyond the City limits. There are four licensed service providers. The meter rate fares to be charged for the hire of a taxi are as follows:

- Where the trip originates at the main passenger building of YYC, \$6.40 is charged for the first 135 m. This amount includes an airport departure fee of \$3.00; or
- Where the trip originates at a location other than the main passenger building of YYC, \$3.40 is charged for the first 135 m;
- An additional \$0.20 is charged for each additional 135 m; and
- \$30.00 per hour for waiting time or elapsed time.

3.2.3 Income

Income derived from employment, business activity or from tourism is considered a Financial Asset and a major determinant of overall community well-being. To individuals, families or households, people use income to achieve their personal financial objectives, which define their style and quality of life. Income provides a sense of personal security and contributes to a person's own self image and status within a community. Income provides the financial means for residents to undertake a variety of educational, social and community activities that strengthen a community's Human and Social Assets.

Regional Study Area

In 2007, the average income of individuals in the Calgary CMA was \$49,500. Table 26 provides a rounded estimate of total income generated in the RSA municipalities. This estimate was generated by multiplying the average income in the Calgary CMA for 2007 by total population. In 2007, total income across the RSA was estimated to be approximately \$53.8 billion, with the vast majority of this income generated within the City of Calgary.

Table 26 Total Income of Individuals – Regional Study Area, 2007

	City of Calgary	City of Airdrie	Rocky View County	Total RSA
Population (Persons)	1,019,942	31,512	34,597	1,086,051
Total Income (\$Billion)	50.5	1.6	1.7	53.8

Source: Ministry of Alberta Municipal Affairs 2008.

Site Study Area

Based on the results of an economic analysis conducted for the year 2007 (RP Erickson & Associates Aviation Consultants 2008), Table 27 provides estimates of the annual direct labour income generated by YYC.

Table 27 Estimated Direct Labour Income (\$M) Generated by YYC, 2007

Type of Business or Activity	Labour Income (\$ M)	%of Total
Air Carriers and Support Service Companies	660	63
Airport Terminal Building Concessionaires	64	6
General Aviation, Corporate Aviation and Air Cargo Businesses	151	14
Airport and Government Operations	73	7
Other Non-aviation Businesses	41	4
On Airport Construction Projects	67	6
Total	1,056	100

Source: RP Erickson & Associates Aviation Consultants 2008.

Overall, the Authority and its tenants generated over \$1 billion in labour income annually within the RSA and beyond. This represents approximately 2% of total income generated in the RSA municipalities in 2007. Air carriers and support service businesses were responsible for the greatest amount of labour income (63%) generated at the airport. General aviation, corporate aviation and air cargo businesses generated approximately 14% of the total direct labour. In addition, it is estimated that spending by non-resident visitors (i.e., visitors, tourists and air carrier cabin crews) arriving by air through YYC generated an additional \$159 M in labour income in the Calgary area.

3.2.4 Tourism

Tourism is an important Financial Asset of any community. Unlike production endeavours, tourism requires that non-local people use local resources for the purposes of recreation or leisure. Tourism is highly dependent on the character or image of an area in order to attract and retain visitors, and generate tourist spending. To the individuals, families or households, the tourism industry can provide employment and a source of income. To the communities, municipalities in the RSA and LSA, tourism plays a major role in their well-being by providing a source of permanent and seasonal employment, contributing to local and regional business activity and the tax base. Tourism can affect the Social Assets of a community, often being a source of pride for a community, shaping its self-image. The tourism industry also serves to connect one community to many others, not only through the visitation of tourists, but also by the work of people involved in the tourism sector.

To an airport operator, tourists and the travelling public in general are its core clients, without which an economically feasible airport operation cannot exist. An airport plays a major role in the tourism industry, not only as a major point of entry for tourists to the city and province, but also as location for tourist services and accommodation providers to make contact with tourists and other visitors. As such, tourism and the tourism industry are important components of Alberta's economy and the well-being of the RSA and LSA communities.

Regional Study Area

Tourism in the RSA is described in terms of visitation to the Calgary Area, major tourist features and tourist accommodations (e.g., hotels, motels, resorts).

Visitation

In 2007, approximately 4.85 million person-visits were made to destinations in the Calgary area by residents of Alberta, other Canadians, visitors from the United States, and overseas visitors. To better understand the size and characteristics of these visitors, Alberta Tourism, Parks and Recreation commissioned Research Resolutions & Consulting to prepare a special analysis of the 2007 Travel Survey of Residents of Canada (TSRC) and the 2007 International Travel Survey (ITS) that are both conducted by Statistics Canada (Government of Alberta, Tourism Parks and Recreation 2009).

In 2007, the Calgary area received 22% of the total person-visits to Alberta. Of the 4.85 million person-visits, 3.14 million (65%) were by Albertans. Another 1.02 million person-visits (21%) were by residents of other parts of Canada. Of the remaining 688,000 person-visits (14%) to Calgary and Area, 6% (296,000) came from the U.S. and 8% (392,000) arrived from overseas.

Approximately 61% of all visits to the Calgary area included at least one overnight stop, yielding 2.9 million overnight person-visits in 2007. Approximately 42% of the overnight visitors to the Calgary area stated that the main purpose of their trip was to visit friends and relatives. Just over one-third (36%) of the visitors stated pleasure as the main purpose of their trip, another 16% stated business as their main purpose and 6% stated other reasons for the purpose of their trip.

The average length of stay for all visitors to the Calgary area was 3.5 nights. Although Albertans are the biggest market for the Calgary area, they have the shortest average length of stay at 2.4 nights. The longest average length of stay is attributed to visitors from overseas with 6.3 nights on average for each visit.

8.27 million person-nights were spent in the Calgary area. 64% of these person-nights (5.32 million) were spent in homes of relatives and friends. A further 26% was spent in hotels (2.14 million person-nights). Five (5) per cent was spent in other commercial fixed roof properties, 3% was spent in campgrounds and trailer parks, and 2% was spent in motels.

Visitation to the Calgary area is at its highest in July, August and September with 34% of the overnight person-visits occurring at this time. This is followed with 25% visiting during October, November and December; and 23% visiting during the months of April, May and June. Visitation to the Calgary area is at its lowest during the winter months of January, February and March, with 18% of the total overnight person-visits occurring during this time.

Tourist Features

The City of Calgary contains most of the tourist features or attractions within the RSA; much of these are located in Calgary's downtown core. Calgary's downtown features a broad mix of restaurants and bars, cultural venues, shopping centres, and many tourist attractions such as zoos, science parks, museums, urban parks, cultural/performance venues, sports stadiums, and convention centres. Calgary's downtown can easily be recognized by its numerous skyscrapers and unique buildings. Some of these structures, such as the Calgary Tower and the Pengrowth Saddledome, are unique and have become the symbols of Calgary. In total, there are 10 office towers that are at least 150 m (500 ft, usually around 40 floors) or higher. The tallest of these is the Suncor Energy Centre (formerly known as the Petro-Canada Centre), which is the tallest office tower in Canada outside of Toronto. Table 28 below lists some of the key tourist features or attractions in the RSA and their approximate distance from YYC. In general, the key tourist features in the RSA are located between 10 and 30 km from YYC, and the quickest way from the airport is via Airport Trail and Deerfoot Trail.

Table 28 Key Tourists Features or Attractions - Regional Study Area

Name of Feature	Type of Feature	Description	Driving Distance from Airport (km)
Calgary Tower	Tower	Observation tower	19.5
Cantos Foundation	Museum	Music collection	19
Chinese Cultural Centre	Museum	Largest facility of its kind in North America	18.8
City Hall	Building	Municipal building	19.4
Devonian Gardens	Urban Park	Botanical garden with seasonal exhibitions	19.7
EPCOR Centre	Arts Venue	Performing arts, home of Calgary Philharmonic Orchestra	18
Fort Calgary	Museum	Historic site	19.4
Glenbow Museum	Museum	Western Canada's largest museum	19
Millennium Park	Urban Park	Skate park	18.2
Olympic Plaza	Urban Park	Named for the 1988 Winter Olympics, site of open air festivals	18.8
Stephen Avenue	Street	Heritage buildings	18.2
Suncor Energy Centre	Skyscraper	Tallest building in Canada outside of Toronto	18.4
Telus Convention Centre	Building	Convention Centre	18.9
TELUS World of Science - Calgary	Museum	Interactive exhibits, multimedia presentations, educational demonstrations	20.4
Nose Hill Park	Urban Park	Urban park	11.4
McMahon Stadium	Sports Stadium	Canadian Football Stadium	19.8
The Calgary Zoo	Park	Zoological Park	19.2
Stampede Park	Sports Stadium	Horse track, casino and corral	21.2
Olympic Oval	Sports Stadium	Speed Skating Oval	20.1
Canada Olympic Park	Ski Resort	1988 Winter Olympics site, hosts the Canadian Olympic Hall of Fame	26.3
The Military Museums	Museum	Comprises the Naval Museum of Alberta, the Air Force Museum of Alberta, Library and Archives	31
Pengrowth Saddledome	Sports Stadium	Ice hockey arena, home of the Calgary Flames (NHL) and venue for various performing arts	21
Nose Creek Valley Museum (Airdrie)	Museum	Local cultural and natural history, First Nations artefacts, antique automobiles and farm machinery, minerals and fossils	19.1

A key organization is Tourism Calgary, who operates two visitor service centres; one located at YYC and one at the base of the Calgary Tower. An interview with a representative of Tourism Calgary indicated that their focus is to service the City in both business and leisure by promoting the tourist sector and attributes to the area. They have 500 member organizations from accommodations providers to food and beverage establishments to transport to “come and see” businesses. Tourism Calgary is funded by a levy that is charged on hotel rooms (approximately 1%) by the City of Calgary and its own fundraising through partnerships.

Tourist Accommodation

The description of existing conditions regarding tourism accommodations in the RSA is focused on hotel, motel and resort operations. Within Calgary, there are four main geographic clusters where tourism accommodation is available. These are the NE Calgary Airport area, the NW motel village, the downtown core, and MacLeod Trail in the south. The Calgary and Area hotel directory lists 78 facilities in the City of Calgary and five in the City of Airdrie (Discover Calgary 2010). The majority of these are branded operations, with and without conference facilities.

Table 29 provides performance data for hotels and motels across Calgary. In general, Calgary represents 26% of the provincial supply of hotel/motel/resort tourist accommodation. In 2009, the average occupancy rate of 66% declined from a peak of 74% during the 2006-2008 period. Average room rates have also declined in recent years in response to decreased room demand and increased room supply. Clearly, hotel operators are currently experiencing substantial financial difficulties and increased competition.

**Table 29 Tourist Accommodation Performance Indicators –
City of Calgary and Alberta, 2009**

Performance Indicators	City of Calgary	Alberta
Number of Rooms (2009)	8,601	32,877
Average Occupancy Rate (%) (2009)	66	56
Average Room Rate (\$) (2009)	147	126
Change in Room Supply (%) from 2008	+2.8	+2.9
Change in Room Demand (%) from 2008	-7.5	-12.4

Note: Smith Travel Research and HVS 2009.

A key organization in the RSA is the Calgary Hotel Association (CHA). Its mandate is to coordinate the efforts of its members with other tourism industry participants which have similar interests in the development, sustainability and marketing of tourism in Calgary and the surrounding region, and to encourage the cooperative marketing of its members' goods and services. The CHA also plays an advocacy role for its members and helps to market Calgary as a tourism destination.

Local Study Area

Tourism in the LSA is described in terms of major tourist features and tourist accommodations (e.g., hotels, motels, resorts) nearest YYC.

Tourist Features

There are three main tourist features or attractions located within the LSA. These are the Aerospace Museum (see SSA), the Calgary Zoo and the Baitun Nur mosque. Other tourist features in the LSA include private museums and galleries, private recreational parks, etc.

- The Calgary Zoo (1300 Zoo Road NE) is located southwest of YYC. It is Canada's second largest zoological park, keeping over 1,000 animals. The zoo also includes 6 acres of botanical gardens, a prehistoric park and playgrounds. The Calgary Zoo's Centre for Conservation Research conducts innovative scientific research in zoos and in the wild to develop applicable solutions for environmental problems threatening the world's species and ecosystems.
- Baitun Nur is a mosque of the Ahmadiyya Muslim Community in the Castleridge community, east of YYC. It is considered to be the largest mosque in Canada, and serves about 3,000 members of the Ahmadiyya community in Calgary. Construction of the mosque was completed in 2008. The mosque complex is 4,500 m² in size, boasting a 29.6 m tall steel-capped minaret tower and large steel dome which are the most noticeably externally visible features of the mosque.

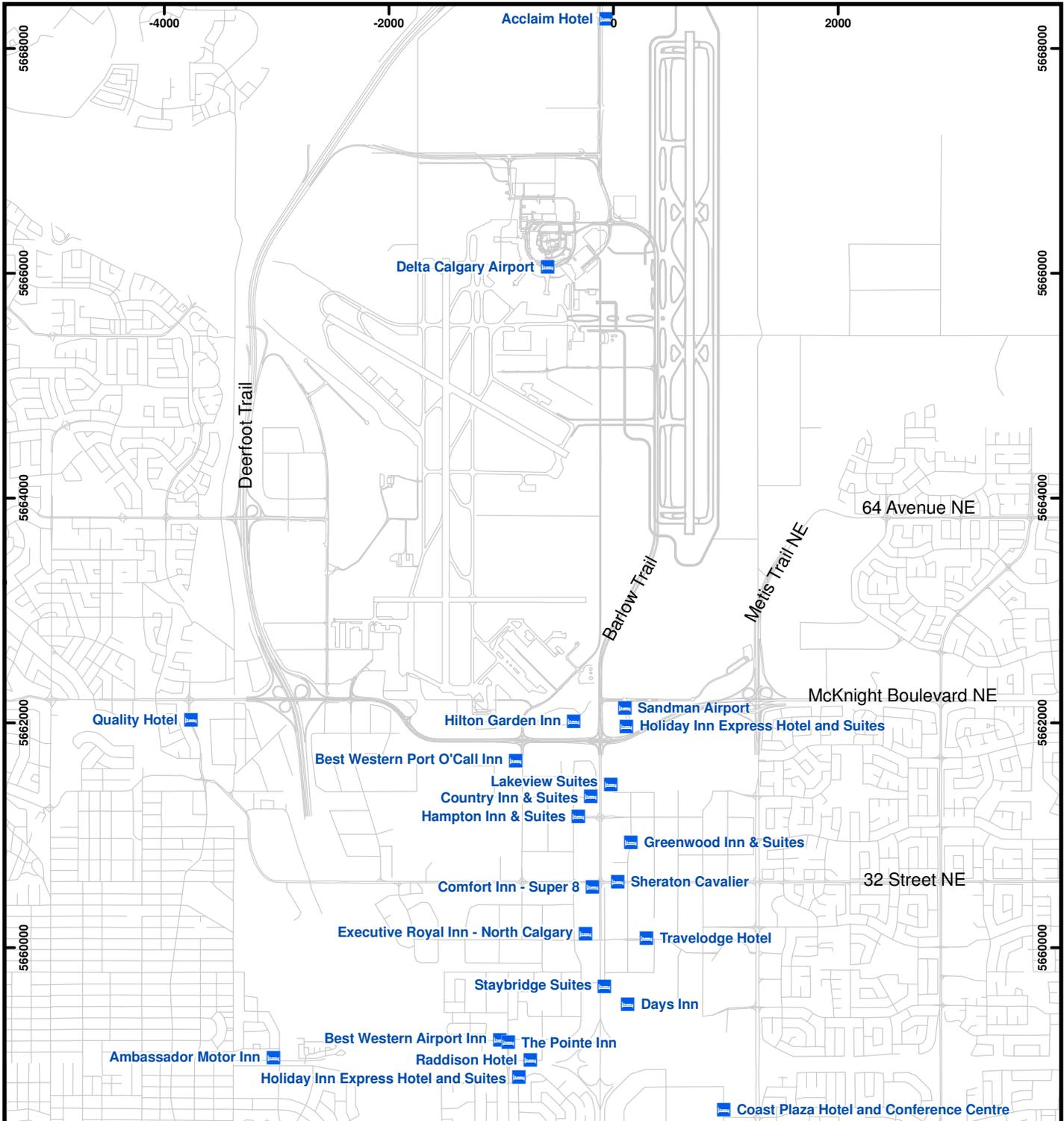
Tourism Accommodation

Tourism accommodation in the LSA is described in terms of tourist accommodations (e.g., hotels, motels, resorts) nearest YYC. At present, there are 26 hotels, motels and resorts located in NE Calgary in close proximity (~ 10 km) from YYC. Most of these are located to the south of the airport and consider themselves to be "airport hotels" in that their primary customer base is the travelling public that uses YYC. These hotels offer a total of 3,440 accommodation units or approximately 40% of the City's total supply. The locations of these hotels are provided in Figure 5.

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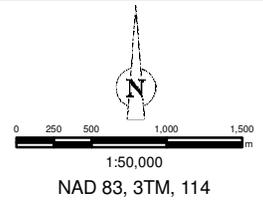
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Legend

Airport Hotels



The Calgary Airport Authority
Runway Development Program
Parallel Runway Project



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Airport Hotels

Figure - 5

Interviews with selected hotel operators and the YYC Community Outreach Program results indicated that there are major renovations ongoing and expansion plans at several existing operations. In addition, Hilton is planning to open an upscale, extended-stay, 120-room hotel north of YYC.

There are two hotels located on airport property within the SSA (Table 30). Interviews with the airport hotel operators indicate that between 75% to 90% of their business activity is linked directly to the presence of the airport. They also advertise or market themselves at the airport and provide shuttle services to/from the airport. Most of the shuttle services rely on either Barlow Trail or McCall Way to access the airport terminal.

Table 30 Calgary Airport Hotels

Name of Facility	Number (#) of Rooms	Driving Distance from Airport (km)	Primary Access Route from Airport	Airport Shuttle Service (yes/no)
Acclaim Hotel	123	3.2	Barlow Trail	Yes
Ambassador Motor Inn	80	13.9	Airport Trail / Deerfoot Trail	No
Best Western Airport Inn	76	9.7	Barlow Trail	Yes
Coast Plaza Hotel and Conference Centre	248	11	Barlow Trail	Yes
Comfort Inn – Super 8	61	7.6	Barlow Trail	Yes
Country Inn & Suites Airport	74	7.1	Barlow Trail	Yes
Days Inn – Calgary Airport	76	8.4	Barlow Trail	Yes
Delta Calgary Airport	296	0	Airport Terminal	No
Executive Royal Inn – North Calgary	200	7.9	Barlow Trail	Yes
Greenwood Inn & Suites	210	7.4	Barlow Trail	Yes
Hampton Inn & Suites	103	6.8	Barlow Trail	Yes
Hilton Garden Inn – Calgary Airport	135	6.2	Barlow Trail	Yes
Holiday Inn – Calgary Airport	168	10	McCall Way	Yes
Holiday Inn Express Hotel and Suites – Calgary Airport	101	5.9	Barlow Trail	Yes
Lakeview Suites	120	6.5	Barlow Trail	Yes
Best Western Port O'Call Inn	201	6	Barlow Trail	Yes
The Pointe Inn	144	9.6	McCall Way	No
Quality Hotel – Calgary Airport	117	9.9	Barlow Trail	Yes
Radisson Hotel – Calgary Airport	185	9.2	Barlow Trail	Yes
Sandman Airport	117	5.8	Barlow Trail	Yes
Sheraton Cavalier	306	7.5	Barlow Trail	Yes
Staybridge Suites	96	8.5	Barlow Trail	Yes
Travelodge Hotel – Calgary Airport	203	8.3	Barlow Trail	Yes

Site Study Area

There is one tourist feature or attraction located within the SSA. The Aerospace Museum (4629 McCall Way NE) is located 5.7 km south of YYC. The museum, founded in 1975, showcases the history of aviation and space technology of Western Canada and is, therefore, closely linked to the presence of the airport. Over 24 aircraft and 58 aeronautical engines are on display along with archives containing documents about aeronautics. The museum offers tours and a variety of educational programs.

YYC plays a major role in the tourism industry, not only as a major point of entry for tourists to the city and province, but also as a location for tourist services and accommodation providers to make contact with tourists and other visitors. An interview with a representative of Tourism Calgary indicated that the presence of the airport has a direct and positive effect on tourism and that much of Calgary's visitation can be attributed to its operations.

The airport terminal building hosts kiosks for Tourism Alberta, Tourism Calgary and several tour operators. A telephone reservation kiosk allows travellers to contact approximately 24 hotels near the airport and across Calgary. Approximately 20 RSA/LSA hotels operate shuttle services from the airport site. Allied Airport Shuttle provides regularly scheduled transportation between designated pick-up points within the City of Calgary and YYC.

There are two hotel operators located on YYC property:

- The Delta Calgary is located immediately adjacent to the existing airport terminal building. The hotel's lobby is connected via skywalk to the airport's departure levels. The hotel is a popular one night stop for business and touring travellers as they fly in to tour the greater Albertan region. Given its proximity to the airport, rooms at the Delta Calgary are soundproofed.
- The Acclaim Hotel is located on the YYC site along Barlow Trail North, approximately 2 km from the airport terminal building and immediately adjacent to the PRP site. The 123 room hotel was opened in the summer of 2009. The hotel caters to business and leisure travellers, and has agreements in place to assist with "distressed passengers" (i.e., those stranded due to flight delays/cancellations). Like other hotel operators in northeast Calgary, the hotel provides a shuttle service to/from the airport. The hotel markets to the airport traveller, emphasizing its convenient location and a "Sky Deck" to view airport operations, the Calgary skyline and the general Rocky Mountain vista. An interview with the hotel operator indicated that approximately 90% of its customers are related to the presence of the airport, while the remainder are likely associated with local commercial and industrial activities in northeast Calgary and beyond. Plans are in place to expand the hotel by an additional 120 rooms.

3.2.5 Municipal Finance and Administration

The municipal finance and administration sub-component encompasses the financial dimensions of all municipal services and the general administrative functions of municipal government. With respect to finances, municipal revenue sources can include general tax revenues from property assessment and business taxes, special taxes and payments in lieu of taxes, and various types of grants, fees and service charges. Municipal expenditures tend to be on purchases of land, and capital and operating and maintenance costs associated with the provision of municipal infrastructure and services. The administration component relates to the administrative structure and organization of government and the services it provides its constituents. Municipalities in Alberta are required under the *Municipal Government Act* (MGA) to balance their operating budgets.

To an individual, family or household, the manner in which the municipality manages their financial and administrative affairs can directly affect their tax burden and consequently their spending power. To the municipalities and communities in the RSA, the ability of governments to gain funding from appropriate sources and manage their financial and administrative affairs directly affects the availability and quality of services they can provide.

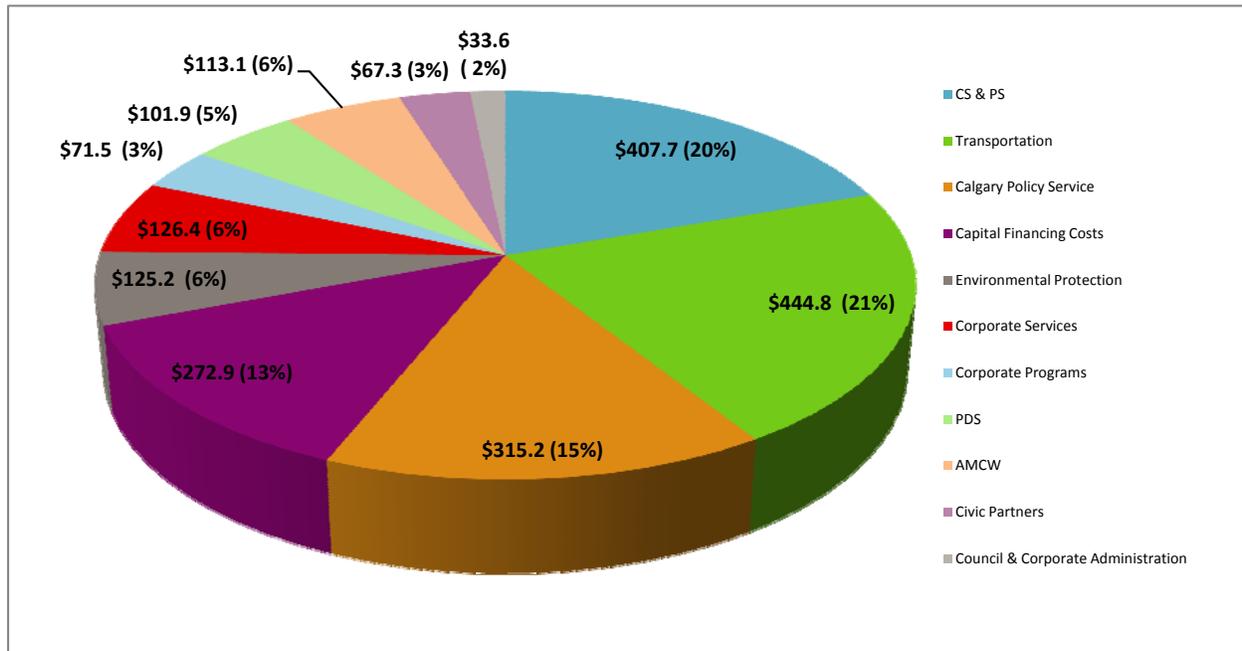
Regional Study Area

For the purposes of this Socio-economic Assessment, the focus of the description of existing conditions is the City of Calgary. This is because of the direct tax contribution of the airport to the City's finances.

In 2009, the City of Calgary's total tax revenues were budgeted at \$1,058 M, including \$182.4 M (17%) from business taxes and \$876 M (83%) from property taxes. Budgeted non-residential property taxes amounted to approximately \$429.5 M or approximately 50% of all total property tax revenues.

The City of Calgary's 2009 budgeted expenditures are provided in Figure 6. These data indicate that the City's largest expenditure categories are for Transportation Services (21%), Community Services and Protective Services (i.e., CS&PS, parks, recreation, EMS, fire, and public safety communication services) (20%), Calgary Police Service (15%), and Capital Financing Costs (13%).

Figure 6 City of Calgary's 2009 Budgeted Expenditures



Site Study Area

As per Alberta's MGA, local airport authorities are required to pay property taxes to their municipalities. Therefore, the Authority pays property taxes to the City of Calgary. The amount paid is based on the assessed value of the Authority's net land and building. The assessed value is based on Fair Market Value. However, per the MGA, not all assets or improvements of a local airport authority are subject to assessment or property taxation. Therefore, the assessed value does not include the value of improvements exempt under the MGA such as runways, taxiways, storm drainage ponds, roads, and other pavings.

Table 31 provides data for the period of 2006 to 2009 regarding the Airport Authority's assessed value, the property taxes paid by the Authority, and the average mill rate applied by the City. These totals do not include any amounts attributable to tenants of the Authority. Overall, the total amount of taxes paid to the City of Calgary has increased by approximately 2.2% since 2006. In 2009, the Authority paid approximately \$4.72 million in taxes, which represents 0.5% of the City's budget property tax revenue and approximately 1.2% of the budget non-residential property tax revenue in 2009.

In addition to the total taxes paid, Table 31 also provides an estimate of the taxes paid per enplaning and disenplaning (E/D) passengers at the airport. Given that future assessments and mill rates cannot be predicted with certainty, this simple metric provides a baseline against which the potential future tax revenues to the City of Calgary can be compared. This metric has been selected because it is currently being used by other Canadian jurisdictions as the basis for taxation of airports (e.g., Ottawa International Airport). Based on actual E/D passenger data from 2006 to 2008 and estimated E/D passenger data from 2009, the average taxes paid per passenger was approximately \$0.38.

Table 31 Taxation of YYC

Item	2006	2007	2008	2009	Average (2006-2009)
Assessed Value (\$M)	251	325	376	413	341
Average Mill Rate (%)	0.01475	0.01208	0.00972	0.01144	0.01199
Taxes Paid (\$M)	4.62	4.62	4.19	4.72	4.54
Total E/D Passengers	11,158,243	11,884,221	12,173,997	12,922,000	12,034,615
Taxes Paid per E/D Passenger	0.41404	0.38875	0.34417	0.36526	0.37806

3.2.6 Other Economic Assets

Residential property values are also considered to be Economic Assets. Property value refers to the market value of land and buildings. The value of residential property determines the ability of a resident to purchase a home. A person's residence is often an individual's largest single personal investment and is, therefore, a key determinant of one's financial status. The value of residential property has a substantial effect on a person's spending power. As such, the value of one's property is often the most important determinant of an individual's use and enjoyment of property and their satisfaction with community. To the municipalities and communities, property values also affect its Physical, Financial and Social Assets. For example, property values can affect an area's character and cohesion. Property values determine, in part, municipal tax revenues and, therefore, a municipality's financial health.

The focus on the residential sector reflects a general concern regarding the potential for property value reductions near major industrial facilities due to potential concerns over health and safety; nuisance effects such as noise, dust, odours, traffic, visual intrusion; and potential for value reductions due to changes in community character or image that would make a neighbourhood or community less attractive to prospective buyers.

Regional Study Area

Median residential property values for single family homes within the RSA in the City of Calgary, the City of Airdrie and the Rocky View County have been outlined in Volume V, Item 7, Land Use Baseline Report, indicating the median property values by community. In general, during the last five years within the RSA, property values peaked during 2007 and then started to decline. This is reflective of the boom period experienced by the Calgary economy leading up to 2007 and the global recession that followed. There is some evidence of recent growth in property values. For example, according to the Rocky View County assessment department, property values have increased approximately 7% within the last year.

In 2009, the median property value for single family homes in Calgary's NW communities was approximately \$400,000. In Calgary's NE communities, median property values were just under \$300,000. In Calgary's SE and SW communities, median property values for single family homes ranged from just under \$400,000 to just over \$400,000. In Airdrie, the median value of a single family residential home was just over \$300,000, while the median value in Rocky View County approached \$800,000.

Local Study Area

Median residential property values for single family homes within the LSA in the City of Calgary and the City of Airdrie have been outlined in Volume V, Item 7, Land Use Baseline Report, indicating the median property values by community. Trends in property values within the LSA reflect those in the RSA, namely, during the last five years, property values peaked during 2007 and then started to decline, with some signs of recovery over the past year.

In 2009, property values for single family homes in Calgary’s NW communities located in the LSA ranged from approximately \$305,000 (Beddington) to approximately \$440,000 (Panorama Hills). In Calgary’s NE communities, property values ranged from approximately \$205,000 (West Dover) to just over \$420,000 (Coral Springs). In Calgary’s SE and SW communities, property values for single family homes ranged from \$280,000 (Ogden, Lynnwood, Millican) to \$440,000 (Douglas Estates). In Airdrie, single family residential homes ranged in value from just over \$200,000 to approximately \$400,000.

3.3 Physical Assets

The **Physical Assets** sub-component of the Socio-economic Environment considers the basic infrastructure that allows a community to function effectively. The availability and quality of such Physical Assets serve to attract and retain people and investment in a community; they influence personal health and satisfaction with community. Overall, these Physical Assets serve to maintain overall community well-being. For the purposes of this Baseline Report, the parameters that are considered in this sub-component would include the following:

- Housing;
- Municipal Infrastructure and Services; and
- Community Character.

Each of these parameters is defined and discussed in terms of its contribution to community well-being, from the perspectives of an individual, family or household, and from the perspectives of a community, municipality or region. Existing socio-economic conditions in the RSA and/or the LSA are described for each of these parameters.

Land Use and Transportation Infrastructure are also considered to be Physical Assets. The descriptions of existing conditions relevant to these parameters are summarized in the following sections with details provided in separate baseline reports.

Public attitude research undertaken as part of this Socio-economic Assessment identified the most important issues facing RSA and LSA communities today. Approximately 36% of RSA respondents and 31% of LSA respondents indicated that issues associated with Physical Assets are the most important in their community. These included:

- City services (19% RSA, 17% LSA);
- Traffic (9% RSA, 8% LSA);
- Public transportation (5% RSA, 3% LSA); and
- Housing (3% RSA, 2% LSA).

3.3.1 Housing

The housing stock in a community, including its quality and diversity, is a fundamental Physical Asset that directly affects a community’s well-being. Housing considered in its broadest form encompasses individual dwellings or residences and their broader neighbourhoods and communities. A dwelling or place of residence provides the basic shelter and sanitary facilities necessary for physical health. Adequate housing provides privacy and security, each having a symbolic value which contributes to psychological health and a sense of personal safety. Housing has a substantial effect on spending power. Housing is often an individual’s largest single personal expenditure and, therefore, its cost or rent is a key determinant of one’s quality of life. Housing is often the most important determinant of an individual’s use and enjoyment of property and their satisfaction with community. To the municipalities and communities, housing affects an area’s character, cohesion and a municipality’s financial health.

Regional Study Area

Table 32 provides data that describe the housing types and tenure for the RSA municipalities. Overall, the City of Calgary has the largest and most diverse housing stock among the RSA municipalities. There is also a large supply of rental housing in the City of Calgary, as compared to the City of Airdrie and Rocky View County, where the rental market accounts for approximately 10% or less of the housing stock.

Currently, the residential market is over supplied with housing units. The total value of building permits in 2008 is estimated to be between \$4 billion and \$5 billion, compared to \$5.62 million in 2007 (CED 2009). Building permits values should trend downwards over time as the supply and demand for space will be brought into closer balance. Regarding housing starts, they are expected to total 10,000 units in 2008 and trend downwards to 9,000 units by 2012.

Table 32 Housing Stock – Regional Study Area, 2006

	City of Calgary	City of Airdrie	Rocky View County	Total RSA	Alberta
Total Private Dwellings	384,740	10,095	11,185	406,020	1,256,200
• Single-detached houses (%)	57.8	72.6	93.6	59.1	63.4
• Semi-detached houses (%)	5.8	6.2	4.3	5.8	4.8
• % Row Houses (%)	9.1	10.0	0.5	8.9	7.0
• % Apartments (%)	4.2	0.4	0.1	4.0	2.6
• % Apartments in buildings with fewer than five storeys (%)	15.8	10.1	0.1	15.2	14.7
• % Apartments in buildings with five or more storeys (%)	6.8	0.0	0.0	6.4	4.4
• % Other (%)	0.6	0.6	1.4	0.6	3.1
Number of Owned Dwellings	280,080	9,025	10,250	299,355	917,905
• % Owned dwellings	72.8	89.4	91.6	73.9	73.1
Number of Rented Dwellings	104,660	1,070	935	106,665	330,275
• % Rented dwellings	27.2	10.6	8.4	26.9	26.3

Source: Statistics Canada 2007

Local Study Area

The majority of these LSA communities can be characterized as being well established urban neighbourhoods, reaching full build-out in many cases. The major exceptions to this are Skyview Ranch, Panorama Hills and Evanston which are the newest residential communities in the Calgary portion of the LSA. With respect to housing type and tenure, the majority of communities are either approximately the same as Calgary or had a greater proportion of owned residential dwellings than Calgary as a whole. Similarly, the majority of communities were either approximately the same as Calgary or had a lower proportion of residential dwellings in need of major repair.

3.3.2 Municipal Infrastructure and Services

Municipal infrastructure and services are the basic Physical Assets or support structure of any municipality, community or region. The key assets are the water supply, sewage and solid waste systems. Their availability and quality directly affect a community's well-being. To an individual, family or household, municipal infrastructure defines the style of quality of life, people's use and enjoyment of property, and satisfaction with community. To the municipalities and communities, such infrastructure represents major expenditures, influencing their Financial Assets. The availability and quality of municipal infrastructure serve to attract new residents and businesses thereby influencing its future economic development and community character.

3.3.2.1 Water Supply

The following description of water supply in the RSA is focused on the City of Calgary because all water supplied to YYC is from the municipal water supply system.

Regional Study Area

Calgary gains its drinking water from surface sources. The Bow River supplies the Bearspaw Water Treatment Plant and the Elbow River which flows into the Glenmore Reservoir, which is the source of water for the Glenmore Water Treatment Plant. The Bearspaw Plant primarily supplies water to the north sector of the City, while the Glenmore plant supplies the south. However, the water supply from the two plants is interconnected through large diameter transmission mains. The City of Calgary Water Services withdraws water from these two river systems according to demand and within parameters set out by Alberta Environment. Almost all of the water that is removed from the Bow and Elbow Rivers for use within Calgary is returned to the Bow River system after treatment in Calgary's wastewater treatment plants.

The City recently completed upgrades to the Bearspaw Water Treatment Plant. These upgrades have increased capacity to 550 million litres per day. Primary upgrades included the construction of a new Pre-Treatment and Residual Treatment Facility that has also enhanced Calgary's water treatment process, water quality and assisted in better protection of the environment. Upgrades are underway at the Glenmore Water Treatment Plant that will also increase capacity and include the construction of a pre-treatment and residual treatment facility (City of Calgary 2008b).

The City of Calgary is implementing a number of initiatives to reduce the per capita demand for water. In 2007, Calgarians consumed 437 litres per capita per day. In 2007, the peak day demand (a measure of Calgary's highest one day water use) was 776,000,000 megalitres (City of Calgary 2008c).

Site Study Area

Potable water is supplied to YYC from the City of Calgary's municipal system. The water is largely provided by the City's Bearspaw Water Treatment Plant located on the Bow River. Based on available data from January 2008 to July 2009, the airport consumed between 20,000,000 and 47,000,000 litres of water per month. In 2008, the total consumption was approximately 320,000,000 litres or approximately 877,000 litres per day. Consumption tended to be the greatest during the summer months of July and August. This daily consumption represents 0.16% of the capacity of the Bearspaw Water Treatment Plant.

3.3.2.2 Sewage

The following description of sewage collection and treatment in the RSA is focused on the City of Calgary because all sewage generated at YYC is discharged to a municipal wastewater collection and treatment system.

Regional Study Area

The City of Calgary collects all the sewage generated in the City in its sanitary sewer system that directs flows through the pipe to the wastewater treatment plants. The City of Calgary has two wastewater treatment facilities: the Bonnybrook Wastewater Treatment Plant and Fish Creek Wastewater Treatment Plant. Together, these treatment plants are capable of treating more than 572,000,000 litres of wastewater and sewage each day (City of Calgary 2008d).

Site Study Area

Sanitary sewage generated at the Calgary International Airport is collected by the Authority and discharged to the City of Calgary's municipal sewage collection system for treatment. Sewage is collected at two specific locations from the terminal building and discharged to the City of Calgary's sewage collection system along 96 Avenue or McKnight Boulevard. The effluent from Lift Station #2 is treated with ferric chloride to prevent the effluent from going septic prior to being delivered to the City mains. The City tests this effluent at regular intervals to ensure compliance. A very conservative estimate of the volumes of sewage discharged to the City mains is approximately the same volume of water that is supplied by the City to the Calgary International Airport (i.e., approximately 320,000,000 litres or approximately 877,000 litres per day). This sewage effluent is treated at the City's Bonnybrook sewage treatment plant. The volume generated by the Airport Authority represents a negligible amount in comparison to the capacity of Calgary's treatment plants.

3.3.2.3 Conventional Waste Management

The following description of conventional waste management in the RSA is focused on the City of Calgary as conventional wastes generated at the Authority are transported to the City's and private sector landfills in the Calgary area, and because the City is undertaking a number of initiatives regarding construction and demolition waste (C&D waste) that are relevant to the PRP.

Regional Study Area

Each year the average Calgarian produces 740 kg of conventional non-hazardous waste per year. Conventional non-hazardous waste, including C&D waste is currently transported and disposed of at six main landfill sites in and around Calgary. The City of Calgary owns and operates three landfill sites (East Calgary, Spyhill, and Shepard), two are privately owned (BFI Canada Inc. and ECCO Waste Systems Limited), and one is owned by the Tsuu T'ina First Nation. Construction and demolition waste makes up about 25% of the material going to landfills. The total estimated amount of C&D waste landfilled at the City, ECCO Waste and BFI sites in 2006 was approximately 260,000 tonnes.

The City is taking steps to help reduce the amount of waste generated and disposed at landfills by diverting more materials to recycling, including efforts to divert construction and demolition waste. The City has set a goal to divert and recycle 80% of the waste currently going into the City's landfills by the year 2020 (called the 80/20 goal). One of the City's more recent efforts was the establishment of a designated material rate that is intended to encourage diversion of specific materials originating from construction, demolition and renovation activities which are recyclable and have established markets. The designated materials rate applies to commercial customers only. Designated materials include concrete, brick and masonry block, asphalt, and metals.

Further, the City's "Diversion Strategy for Construction and Demolition Waste in Calgary" includes measures that would require project developers in the C&D industry to plan for material recovery, to make a written commitment to such a plan, and, following completion of a project, to prove what was achieved against what was planned. It was proposed that the City adopt a Material Recovery Plan and Waste Diversion Statement process as part of building/development permitting. In the 2007 strategy, it was considered reasonable to expect projects to achieve a 50% diversion rate. This was based on there being significant opportunities to recycle. The 50% target also aligns with the provincial C&D diversion target.

Site Study Area

Conventional waste is generated by airport operations. As shown in Table 33, between 1998 and 2008, the Authority generated, on average, 1,221 tonnes of conventional waste per year. In general, 60% of the waste is generated from the terminal building operations, while 40% is from airside operations. Over the past decade, the Authority has steadily increased its waste paper recycling efforts, achieving an average waste diversion rate of 14.2%. In addition to the waste paper recycled each year, the Authority generated nearly 160,000 tonnes of crushed concrete and 40,000 tonnes of recycled asphalt products that were diverted from landfill. In 2008, a total of 12.2 tonnes of metal and approximately 10.9 tonnes of wooden pallets were diverted from the waste stream and recycled. Overall, a conservative estimate of the volume of waste that is sent to an off-site landfill is approximately 1,000 tonnes/year.

Table 33 YYC Conventional Waste Generation and Recycling Volumes (tonnes)

Year	Waste Generated (tonnes)	Waste Paper Recycled (tonnes)	% Recycled (Waste Paper Diverted from Landfill)
1998	1,137	72	6.3
1999	1,247	86	6.9
2000	1,147	100	8.7
2001	966	166	17.2
2002	994	180	18.0
2003	1,062	183	17.2
2004	1,231	196	16.0
2005	1,219	218	17.9
2006	1,368	222	16.2
2007	1,486	245	16.5
2008	1,579	240	15.2
Annual Average	1,221	173	14.2

Note: Data provided to AECOM by the Calgary Airport Authority 2009.

3.3.3 Community Character

Community character refers to the unique or distinctive qualities of a community. Community character is considered to be a Physical Asset of a community because it is largely determined by its land uses. A community's character, however, is also influenced by its other Assets (i.e., population, employment, business activity) and its physical features (i.e., geographic/environmental features). Conversely, community character serves to influence the human, Physical and Social Assets that contribute to community well-being. For example, the character of a community influences the way a municipality, community or region is perceived, that is, its attractiveness as a place to live, visit or conduct business.

For the purposes of this Socio-economic Assessment, the characterization of community character focused on the communities located within the City of Calgary portion of the LSA where consistent data for key indicators was available. These indicators are identified in Table 34 and community specific data are presented in Appendix B. These indicators were selected to reflect the nature of the LSA, the majority of which is urbanized.

Table 34 Community Character Indicators

Asset Category	Indicators of Community Character
Human Assets	<ul style="list-style-type: none"> Population density (persons per hectare) Recent population change (% change 2008 – 2009)
Economic Assets	<ul style="list-style-type: none"> Change in household income (% change 2005 – 2008) Labour force participation (% participation)
Physical Assets	<ul style="list-style-type: none"> Housing type (% single detached homes) Housing quality (% dwellings requiring major repair) Recent development activity (total # development permits 2008 and 2009) Transportation Access (direct access to C-Train, Stoney Trail, Deerfoot Trail)
Social Assets	<ul style="list-style-type: none"> Amount of Open Space (total area)

Local Study Area

Appendix B provides detailed data for the analysis of the selected indicators of community character. The analysis focuses on those communities that are either higher, lower or approximately the same as the City of Calgary in terms of the specific measures for each indicator. The table in Appendix B also highlights those communities that are the highest and lowest among all of the LSA communities for the specific measures. The following provides an analysis for each community asset category.

1. The focus of the Human Assets analysis was on population characteristics and the density and trends in population determine a communities character, that is, whether the community is heavily urbanized or not, growing or in decline. For each human asset indicator, less than half of the communities display similar characteristics as the City of Calgary. When compared to the LSA as a whole (average population density of 30.3 persons/ha), more LSA communities tend to have lower population densities. Castleridge has a population density of 50.3 persons/ha and Evanston has a population density of 9.1 persons/ha. More communities have experienced declining populations in the recent past than have experienced growth. Compared to a 2.2% increase in Calgary's population, the community of Ramsey experienced the largest decline (-3.8%) while Evanston experienced the greatest amount of growth (+22.6%).
2. The focus of the Economic Assets analysis was on income and labour force participation, as these are fundamental indicators of the economic status of any community. With respect to income, the majority of communities have experienced a similar change in median household income as Calgary or had declining median household incomes in the recent past. The community of Greenview experienced the largest decline (-16.3%) among the LSA communities. Only six communities had increases in their median household income, greater than that of Calgary as a whole. With respect to labour force participation, the majority of communities had participation rates approximately the same or higher than Calgary as a whole. Among these LSA communities, Coventry Hills had the largest participation rate (88.4%) and the Downtown East Village had the lowest (40%) compared to 75% for Calgary as a whole.
3. The focus of the Physical Assets analysis was on housing and transportation access because they are a fundamental feature of any urban area, affecting the attractiveness of the community as a place to live. With respect to housing type, the majority of communities were either approximately the same as Calgary or had more single detached residential dwellings than Calgary as a whole. Similarly, the majority of communities were either approximately the same as Calgary or had a lower proportion of residential dwellings in need of major repair than Calgary as a whole. Regarding recent development activity, the majority of these LSA communities either had approximately the same number of development permits or fewer than the LSA average. With respect to transportation access, approximate half of the LSA communities have direct access to a major existing or future roadway (e.g., Deerfoot Trail or Stoney Trail) or mass rapid transit (i.e., C-Train), while the other communities are more isolated.

4. The focus of the Social Assets analysis was on the amount of open space. Across the LSA, the average amount of open space, expressed as a ratio of open space to total area, is 13.1%. Most of the communities have percentages of open space that are approximately the same as the LSA average. Douglasdale / Glen has the largest amount (41.5%) of open space while Tuxedo Park has the lowest amount (2.4%) of open space.

Overall, these LSA communities vary widely in terms of their characteristics. The majority of these LSA communities can be characterized as being well established urban neighbourhoods, reaching full build-out in many cases. The major exceptions to this are Skyview Ranch, Panorama Hills and Evanston which are the newest residential communities in the LSA. For the most part, the characteristics of these well established communities do not differ widely from the City of Calgary as a whole. However, more of these LSA communities have experienced declining populations in the recent past than have experienced growth.

3.3.4 Other Physical Assets

Land use and transportation infrastructure are also considered Physical Assets. Baseline conditions related to land use and transportation are considered in detail in Volume V, Item 7, Land Use Baseline Report and Volume V, Item 6, Transportation Baseline Report. Key aspects of the existing environment relevant to the Socio-economic Assessment are summarized below.

Land Use

The land use within the LSA consists of a number of residential communities, industrial parks, commercial areas, and open space or recreational uses. The residential areas are primarily beyond the NEF 30 contour pursuant to the Calgary International Airport Vicinity Protection Area regulation under the *Alberta Municipal Government Act*. Portions of some residential communities in the LSA which were established prior to 1979 and the AVPA lie within the NEF 30 contour. These residential communities include Mayland Heights, Vista Heights, Inglewood, Renfrew, Bridgeland/Riverside, and Winston Heights/Mountainview. There are numerous major non-residential communities in the LSA that lay within the NEF 30 contour.

The land use within the SSA is specific to the operation of an airport. The majority of land within the SSA falls within the industrial and commercial land use types. There is one portion of land within the southeast corner of the site which has a recreation designation. The majority of the airport lands are developed or leased although the opportunity for further development activity exists. The East Airport Industrial area is the main section of land that remains agricultural.

Transportation

Ground transportation in Calgary is accommodated mainly on public roads, public transit, and a pathway system that serves active modes of travel – walking, cycling, etc. All of these systems exist in the vicinity of YYC and serve travel to and from the airport. Calgary is also served by Canadian Pacific and Canadian National Railways, neither of which provide local service in the vicinity of YYC. Most travel in Calgary occurs on the roadway system, which accommodates personal vehicles, goods movement, taxis, public transit and commercial bus travel, and active modes. Active modes of transportation (walking, cycling, etc.) are accommodated within the roadway system and on purpose-built separate pathways. The airport is connected to the City's bikeway system by a pathway along the west side of Barlow Trail. All roads on the YYC site are owned and maintained by the Authority, including a portion of Barlow Trail.

Calgary has an extensive public transit system that includes Light Rail Transit (LRT) and various transit bus services. YYC is served by two transit routes:

- Route 430 operates with 30-minute service during the peak hours and 60-minute service for the late evening hours.
- Route 57 operates on weekdays with 20-minute service during the peak hour and 30-minute service off peak. Route 57 connects to the Light Rail Transit system at Whitehorn Station on 39 Avenue and 36 Street NE.

Currently, there are plans for a rapid bus service to YYC. The rapid bus route is expected to travel along Centre Street to 96 Avenue, which would link to Airport Trail (Calgary Herald 2010).

Table 35 identifies and describes the major roadways that exist in the vicinity of YYC including the key local communities that each serves. Of these roadways, Deerfoot Trail, McKnight Boulevard and Country Hills Boulevard accommodate the greatest traffic volumes. Barlow Trail between Airport Trail and McKnight Boulevard accommodates up to approximately 1,860 vehicles during the AM peak hour and 2,260 vehicles during the PM peak hour.

Table 35 Roadway Characteristics

Road Name	Road Segment	Ownership	Classification	Number of Lanes	Posted Speeds (km/h)	Communities Served
Country Hills Boulevard	E of Barlow	City of Calgary	Rural	2	80	NE Calgary, Saddleridge
	W of Barlow	City of Calgary	Major Arterial	4	70	NE Calgary, Harvest Hills, Coventry Hills
Airport Trail	Barlow to Deerfoot		Expressway	4	90	NE Calgary
36 Street NE	Country Hills to McKnight	City of Calgary	Rural	2	60	NE Calgary, Castleridge, Whitehorn, Rundle
McKnight Boulevard	Métis to Deerfoot	City of Calgary	Expressway	4	70	NE Calgary, Castleridge, Falconridge, Coral Springs, Whitehorn, Temple, Monterey Park
Deerfoot Trail	N of Beddington	Government of Alberta	Expressway	6	110	City of Calgary
	S of Beddington	Government of Alberta	Expressway	6	100	City of Calgary
Barlow Trail	N of Airport Trail	City of Calgary, Airport Authority Land	Major Arterial	4	70	NE Calgary
	S of Airport Trail	City of Calgary, Airport Authority Land	Expressway	4	90	NE Calgary

The City of Calgary designates certain roads or areas for use by trucks. The LSA is an Unrestricted Truck Zone that includes all public roadways as truck routes. Barlow Trail is designated as a Dangerous Goods Route and High Load Corridor, while Deerfoot Trail is designated as a Dangerous Goods Route. This identifies Barlow Trail as a potential route for high load travel, subject to a required permit.

For the purpose of analyzing any future effects caused by changes in the road network on travel times, a person's average travel time between selected points was estimated for both the AM and PM peak hours. These are provided in Table 36. The travel times include six destinations where YYC is the origin and two cross town trips where the airport is not the origin or destination. Taking existing transit from downtown to the airport takes just under 50 minutes each way (Calgary Herald 2010).

Table 36 Selected Travel Times

Origin	Destination	Travel Times in Minutes	
		AM Peak	PM Peak
Airport Terminal	Downtown Calgary	21	20
Airport Terminal	University of Calgary	20	21
Airport Terminal	Max Bell Arena	13	14
Airport Terminal	Peter Lougheed Hospital	10	10
Airport Terminal	Northeast Industrial	11	11
Airport Terminal	Hilton Garden Inn	7	5
McKnight Boulevard @ 36 Street	Deerfoot Trail @ Country Hills Boulevard	14	14
Country Hills Boulevard @ 36 Street	McKnight Boulevard @ Deerfoot Trail	13	12

Apart from YYC, there are several other airports in the RSA and beyond that depend upon or are influenced by the presence of YYC.

Springbank Airport, located within Rocky View County to the west of YYC, is the most significant general aviation airport in the Calgary area. It offers a wide range of services to its users and acts as a base for private and commercial aircraft operations in both the fixed wing and rotary wing categories. Alongside YYC, Springbank Airport is the only other certified aerodrome within the Calgary area. Consequently, the Springbank Airport plays an important role within the area's system of airports. In accordance with the Springbank Airport Master Plan (2009), the operations and development of Springbank Airport will be directed to supporting light aircraft flight activity, including flight training, recreational flying, corporate and air charter activity, and compatible aircraft maintenance, manufacturing, and support operations. Overall, the Springbank Airport is expected to continue to operate, retain, and attract business and activity in keeping with the defined role (Springbank Master Plan 2009).

Several other registered aerodromes provide a base for a variety of general aviation activities within the Calgary area, including entry-level flight training, and recreational and private flying. These are: Olds/ Didsbury, Beiseker, Airdrie, High River, Okotoks Air Ranch, and Strathmore (Murray Airfield).

3.4 Social Assets

The **Social Assets** sub-component of the Socio-economic Environment considers the social and community activities in which people participate and the facilities or amenities that they draw upon in pursuit of their personal and community well-being objectives. These facilities, amenities and activities serve to create networks within the community and among communities; increase connectivity and cohesion, and generate relationships and community pride. For the purposes of this Socio-economic baseline report, the Social Asset sub-component considers the following parameters:

- Community and Recreational Facilities and Programs;
- Use and Enjoyment of Property; and
- Community Cohesion.

Each of these parameters is defined and discussed in terms of its contribution to community well-being, from the perspectives of an individual, family or household, and from the perspectives of a community, municipality or region. Existing socio-economic conditions in the RSA and/or the LSA are described for each of these parameters.

Cultural Resources are also considered to be Social Assets. The description of existing conditions relevant to this parameter is provided in Volume V, Item 11, Cultural Resources Baseline Report.

Public attitude research undertaken as part of this Socio-economic Assessment identified the most important issues facing RSA and LSA communities today. Approximately 2% of RSA and LSA respondents indicated that issues associated with Social Assets are the most important in their community. Here, the emphasis was entirely on the sense of community or its cohesiveness. Nevertheless, the importance of the communities Social Assets was emphasized with respect to their major role in maintaining people’s feelings of health and safety, their satisfaction with community, and their overall contribution to community well-being. Refer to Section 4 for further data.

3.4.1 Community and Recreational Facilities

Community and recreational activities, in their broadest form, encompass any social, cultural or leisure activity pursued for its own sake. These activities can be organized or unorganized, facility based or resource use based. Community and recreational activities are often defined by the presence of specific facilities or amenities and the availability of related programs. They can include indoor or outdoor sports facilities, parks or open space, a variety of community meeting places such as community centres, club facilities and places of worship. As such, these facilities and programs are important assets and major determinants of overall community well-being.

To an individual, family or household, the availability of community and recreational facilities and programs influence people’s feelings of personal health and satisfaction with community. To the municipalities and communities, the presence of such features may serve to attract residents and tourists, thereby influencing a community’s Human and Financial Assets. The establishment, operation and maintenance of these features often constitute major municipal expenditures thereby influencing a community’s Financial Assets. Community and recreational features provide a means for individuals to participate and contribute to community life, thereby influencing the cohesiveness of a community and its Social Assets.

Local Study Area

Table 37 provides a listing of the major recreational and community facilities nearest YYC and within the LSA (i.e., generally within 5 km of the airport site boundary). The nearest facilities are located adjacent to the south airport boundary. The majority of these are outdoor parks and/or community centres with an outdoor component such as a playground, skatepark or pool.

The largest recreational facility is the Nose Hill Natural Environmental Park, located approximately 3.5 km west of the airport boundary. This 11.3 km² municipal park is Calgary’s largest park and one of the largest urban parks found in Canada. This park is a natural grass land that offers outstanding views to the west, south and east. There are several trails throughout the park, nature plaques and a large off leash area. The City of Calgary also maintains a vast pathway system that connects virtually all of the local communities. The pathway system is used extensively for walking, jogging, biking, and rollerblading.

Table 37 Major Community and Recreational Facilities Nearest YYC

	Community and Recreational Facilities	Distance From SSA Boundary (km)
McCall	McCall Lake Golf Course	Adjacent
	Jaycee Slowpitch Park	0.2
	McCall Lake Sports Park	Adjacent
South Airways	Airport Industrial Athletic Park	1.8
Winston Heights/Mountain View	Calgary Elks Lodge and Golf Club	1.8
	Fox Hollow Golf Course	1.8
	Winston Heights / Mountainview Community Centre	2.4

	Community and Recreational Facilities	Distance From SSA Boundary (km)
Mayland Heights	Crossroads Community Centre	4.0
Franklin Industrial	Casino Calgary	3.6
Martindale	Matha's Haven Park	0.8
	Martin Crossing Park	1.1
	Martinview Park	1.6
Saddleridge Industrial	Saddleridge Community Centre	0.5
Castleridge	Prairie Winds Park	0.4
Falconridge	Falconridge / Castleridge Community Centre	2.4
Coral Springs	Don Hartman Northeast Sportsplex	3.3
Whitehorn	Whitfield Park	1.2
	Whitehorn Community Centre	1.5
	Whitlow Park	1.0
Rundle	Rundlelawn Park	3.5
	Rundle Community Centre	3.0
Marlborough	Applewood Village Park / Marlborough Community Centre	4.3
	Marwood Park	4.8
Coventry Hills	Covewood Park	3.5
Country Hills Village	Cardinal Central / Nose Creek Recreation Centre	4.1
	Coventry Park	3.1
	Coverdale Park	3.1
Country Hills	Country Hills Park	4.8
	Country Hills Golf Course	2.0
Harvest Hills	Harvest Hills Golf Course	2.9
	Harvest Hills Park	3.8
Beddington Heights	Confluence Park	0.2
	Beddington Park / Gardens	1.4
	Beddington Heights Community Centre	3.1
	Bertwick Park	3.3
	Beachham Park	3.5
Huntington Hills	Huntington Hills Community Centre	4.0
	Thornhill Pool / Mova Sports Arena	4.0
Thornccliffe	Laycock Park	0.8
	Thornccliffe Park	1.3
	Thornccliffe Community Centre	1.8
Highland Park	Highland Community Centre	2.4
	Highland Golf and Country Club	1.8
Queens Park Village	Queens Park Cemetery	2.8
Tuxedo	Tuxedo Park Community Centre	2.5
Crescent Heights	Crescent Heights Community Centre	4.5
	Calgary Curling Club	4.8
	Rotary Park	4.8
North Haven Upper	Egerts Park	3.3
	North Haven Community Centre	3.3
Highwood	Highway Community Centre	2.3
Renfrew	Renfrew Park / Renfrew Community Centre	4.1
	Renfrew Athletic Park / Pool	3.6
	Henry Viney / Stu Hendry Arenas	3.6

Site Study Area

There are three primary community or recreational features located at YYC:

1. The Airport Path is a 5 km long paved path that leads from Pegasus Road NE to the airport terminal. It can be used year-round. It can be reached from the Whitehorn LRT station by travelling west on

32 Avenue NE to intersect with a path that goes beside McKnight and crosses McKnight Boulevard at Barlow. Another path leads to 48 Avenue where there is a crossing to the start of the airport path on Pegasus Road. The trail is flat and often used for walking, jogging, biking, and rollerblading, and can be used by those who wish to ride or walk to YYC.

2. The Silverwing Golf Course is a public 27-hole championship golf course located on 300 acres of YYC on the northeast corner of Barlow Trail and 48 Avenue. This facility has a pro-shop, a 300 yard driving range, restaurant, and a 300 person capacity event pavilion. An interview with the operator indicated that the course is only in its second season of being open, but is open year-round. In the winter, the facility employs 4-5 staff and 50 staff in the summer. In terms of visitors, in the winter, they host marketing presentations at the facility and in the summer, they host approximately 30,000 rounds (some of those are repeat customers). There are no current plans for expansion. The operator interviewed indicated that the presence of YYC has had some adverse effects on customers who are disrupted by aircraft noise and air traffic. Positive effects come from the increased exposure of the facility to drive-by customers.
3. Calgary Rotary Challenger Park is a barrier free meeting and recreational facility that is accessible to all people regardless of their age or ability. It is located on 23 acres of land in the southeastern portion of the YYC site along 48 Avenue NE. The Park includes two baseball diamonds, a football/ soccer field, a 400 m running track, a barrier-free playground, parking for 250 cars and six buses, and a specialized drop-off area. The Park also includes a vast recreational area, a specialized playground, and tennis and basketball courts. The Jim & Pearl Burns Centre houses Park Administration, Cerebral Palsy in Alberta and Renfrew Educational Services. The Alberta Centennial Centre is home to Special Olympics. The Park's vision is to be recognized as the best barrier-free sports and recreation facility, that is sustainable, fully utilized and supported by the community.

3.4.2 Residents' Use and Enjoyment of Private Property

Private property is considered an important Social Asset because of its role in providing residents with a place to undertake a variety of social activities. The ability to use and enjoy one's property is considered a major determinant of one's satisfaction with community. The use and enjoyment of property provides opportunities for interaction among neighbours.

Regional and Local Study Areas

The Public Attitude Research undertaken as part of this Socio-economic Assessment examined the things or issues that affect people's use and enjoyment of property. The results presented in Table 38 indicate that a wide variety of things or issues have an effect on people's use and enjoyment of property, though no particular issue is dominant in the RSA or LSA. The highest percentages of people name either "no issues" (13%) or state "don't know" (21%). In other words, one-third of the respondents (34% RSA, 36% LSA) can perhaps be described as having no identifiable thing or issue that affects their use and enjoyment of property.

Five topics are named by approximately 10% of respondents – the amount of traffic and the road system (12%), the availability of parks, recreation and schools (11%), the quietness, friendliness of their community (9%), and access to amenities (9%). Fewer than 9% of respondents name other issues, including one individual LSA respondent who named airport traffic and airport expansion.

Table 38 Things that Affect Use and Enjoyment of Property

	RSA		LSA		Other Calgary	
	n	%	n	%	n	%
No issues/satisfied	99	13	51	13	48	12
Amount of traffic/road system	98	12	39	10	53	14
Availability of parks, recreation, schools	90	11	44	11	45	12
Quiet, friendliness of community / neighbours	74	9	27	7	41	11
Accessibility of amenities	70	9	37	9	34	9
Impact of City Services	55	7	23	6	29	8
Property ownership / pride / privacy / cleanliness	39	5	27	7	16	4
Landscape, yard/maintenance	38	5	18	4	19	5
Safety of property	35	4	27	7	13	3
Weather conditions	33	4	15	4	17	4
Population density / development / construction activities	30	4	13	3	16	4
Amount of noise	23	3	8	2	13	3
Safety of community	23	3	10	2	12	3
Garbage in community / neighbourhood / cleanliness	23	3	10	2	12	3
Bylaws: enforcement, impact on activities	17	2	8	2	9	2
Level of taxes, costs of services	17	2	8	2	9	2
Personal health	11	1	6	1	5	1
Homeless people, affordable housing nearby	1	0	2	0	0	0
Airport traffic, expansion	1	0	1	0	0	0
Other	22	3	10	2	11	3
Don't know/refused	166	21	93	23	77	20
Total	965		477		479	

Note: Percentages sum to more than 100% since two responses were accepted. "n" refers to number of responses and "N" refers to number of respondents.

As another indicator of how YYC has affected people's daily life, Public Attitude Research respondents were asked to describe how often in the "day to day living" they think about the fact that they live near YYC. This indicator was considered most relevant, as it links to people's awareness of the airport through such pathways as exposure to aircraft noise and the visibility of flights over their community.

The results indicate that the majority of respondents, including those in the LSA, do not appear to think frequently about living near the airport, suggesting that the airport is a well established and accepted feature in the area that does not dominate most of the people's day-to-day living.

As can be seen from the results presented in Table 39 very few respondents think about the airport "very often" (7% RSA, 12% LSA) and in total, 19% of RSA respondents and 27% of LSA respondents think about living near the airport "very often" or "often". Nevertheless, upon examining the response "very often", there is a significant difference between respondents who are in the LSA (12%) and the rest of Calgary (4%). While a core group of LSA respondents think about living near the airport, the majority (70%) of RSA and LSA respondents indicate that they either "never" or "not very often" think about their proximity to the airport. One-third of RSA respondents "never" think about the fact that they live near YYC.

Self-assessments of how frequently respondents think about living near the airport are broadly based in that there are no differences in responses by the demographic characteristics of respondents. Respondents who live in the LSA think about it more frequently than respondents who live further from the airport. Respondents who themselves or a household member is employed at the airport or is involved in the aviation industry are more likely to think about living near the airport on a daily basis.

Table 39 Think About Living Near the Airport

	RSA		LSA		Other Calgary	
	n	%	n	%	N	%
Very often	283	7	50	12	16	4
Often	94	12	60	15	40	10
Not very often	54	36	166	41	128	33
Never	269	34	118	29	141	37
Do not consider themselves as living near the airport	85	11	7	2	59	15
Total	785		401		384	

Note: Percentages may not sum to 100% due to rounding. Cases may not sum to the total samples since 'no response' is excluded.

Interviews were undertaken with representatives of the two community associations operating nearest the PRP site. A representative of the Martindale community association indicated that the key issues facing their community are its close proximity to YYC and the new runway. Residents in their community are affected by aircraft noise, particularly at night. Local environmental issues include general pollution, effects on wetlands and wildlife, specifically bird species. A positive effect of the airport is that it has created a lot of jobs in the community. A representative of the Falconridge / Castleridge community association indicated the presence of YYC does not have any effect on the community at present.

Site Study Area

At the present time, one parcel of land within the SSA is leased to a tenant as farmland. This is an approximately 4.4 acre parcel on which two residents currently occupy a residential dwelling. These are long-time residents, having occupied their home since the establishment of the airport.

3.4.3 Community Cohesion

Community cohesion refers to people's sense of belonging to a self-defined community and is considered a Social Asset. A cohesive community maintains and generates relationships and community pride, it helps in defining a common vision among its residents that serves to maintain and enhance other Community Assets and overall community well-being. Public attitude research conducted for the project identified a number of community attributes related to community cohesion that supported or threatened their community's well-being. Those supporting features that supported community well-being included a sense of community, the friendliness of neighbours, a sense of caring in the community for others, along with cultural diversity and acceptance. Conversely, increasing immigration and intolerance were attributes seen as a threat to community well-being.

For the purposes of this Socio-economic Assessment, the characterization of community cohesion focused on the communities located within the City of Calgary portion of the LSA where consistent data for key indicators was available. These indicators are identified in Table 40 and community specific data are presented in Appendix B.

Table 40 Community Cohesion Indicators

Asset Category	Indicators of Community Character
Human Assets	<ul style="list-style-type: none"> Length of residency (LSA total) Mobility (2005 – 2008) Average number of children at home Immigrant population (% population)
Physical Assets	<ul style="list-style-type: none"> Housing tenure (% owned)
Social Assets	<ul style="list-style-type: none"> Date established (year of establishment) Social Isolation (% persons living alone)

Local Study Area

Appendix B provides detailed data for the analysis of the selected indicators of community cohesion. The analysis focuses on those communities that are either higher, lower or approximately the same as the City of Calgary in terms of the specific measures for each indicator. The table in Appendix B also highlights those communities that are the highest and lowest among all of the LSA communities for the specific measures. The following provides an analysis for each relevant community asset category:

1. The focus of the Human Assets analysis was on demographic characteristics. For each human asset indicator, less than half of the communities display similar characteristics as the City of Calgary. A greater number of these LSA communities have higher levels of mobility, more children at home, and larger immigrant population than does Calgary as a whole. The length of residency is a useful indicator of community cohesion. Experience indicates that the longer people have lived in their communities, the more likely they are to express satisfaction with their property, homes and community. Data from the public attitude research regarding the length of residency for the LSA as a whole suggest that although the LSA is comprised of well established residential communities, the majority of people (61%) are relatively recent residents at their present address, having lived there for 10 or fewer years. This finding is consistent with the higher levels of mobility in the LSA communities.
2. The focus of the Physical Assets analysis was on housing tenure. The majority of communities were either approximately the same as Calgary or had more owned residential dwellings than Calgary as a whole.
3. The focus of the Social Assets analysis was on the age of the community and degree of social isolation. On average, the communities in the LSA are approximately 48 years old, having been established in the early 1960s. The LSA contains nine of the oldest communities in Calgary, established prior to 1930. In general, these older communities have a higher proportion of their populations living alone than Calgary as a whole.

Overall, these LSA communities vary widely in terms of their characteristics, but for the most part do not differ widely from the City of Calgary as a whole. However, consistent with typical older urban communities, they have higher levels of mobility, and larger immigrant populations than does Calgary as a whole. The majority of these LSA communities can be characterized as being well established, but older urban neighbourhoods attracting newcomers, including immigrants with children. Compared to Calgary as a whole, the higher levels of mobility and the lower length of residency suggest that these LSA communities are perhaps not as cohesive as others elsewhere in Calgary.

It is noteworthy that Calgary fosters the operation of numerous community associations, whose aim is to improve neighbourhood life in Calgary by providing services and programs that create, support and sustain vital and cohesive communities. The Federation of Calgary Communities (FCC) is an umbrella organization for the 143 community associations across Calgary. From a broad perspective, volunteering, recruiting and increased workload are the key issues facing Calgary community associations today. These have an impact on the number and variety of services that community associations are able to offer. Another key issue is that community associations have to stay fresh and respond to their constituent needs. They also have to maintain the 'neighbourhood feeling' in heavily dense communities. Specific issues include transportation and lack of communication about planning. The FCC is a member of the Noise Committee that the Airport chairs.

Site Study Area

The Authority contributes to community cohesion through their support of charitable organizations, events and other initiatives. In 2009, the Authority made cash donations in excess of \$140,000. With respect to community cohesion, the following are considered key organizations, events and initiatives supported by the Authority:

- **The Mustard Seed Street Ministry** – this is a non-profit Christian humanitarian organization that has been caring for Calgary’s homeless for over 24 years. The Mustard Seed also provides a broad range of progressive and innovative education and employment training programs, supported housing, arts and recreation programs, and an integrative health and wellness centre.
- **Aviation Interfaith Ministry** – this is a non profit organization that provides Chaplains at the Airport. YYC Chapel is a faith based chapel intended for prayer, reflection, meditation, and spiritual counselling.
- **The Milestones Project** – a visual exhibit that provides photos of children from around the world. The exhibit shows that despite race, culture or religion, everyone shares common traits and that those traits unite us. The exhibit, opened in 2010, can be seen throughout the Canada Border Services Agency’s international arrivals area at YYC.
- **Challenger Cup Charity Golf Tournament** – The Authority is a sponsor of this event that supports the Calgary Rotary Challenger Park.
- **Imagine Calgary** – is the largest community visioning and consultation process of its kind anywhere in the world aimed at building a sustainable community. The Authority is a “partner” along with other corporations, community agencies and the civic government of Calgary.
- **Alberta Guide Dog Services** – The Authority is a sponsor of this organization that aims to meet the demand for professionally trained Guide Dogs for blind and visually impaired citizens in Alberta.
- **Dream Take Flight** – The Authority provides cash donations and participates in charity events to raise money to take terminally or chronically ill, mentally, physically, socially or emotionally challenged children to Disneyland.
- **Scholarships** – the Authority provides scholarships and student awards at Calgary’s SAIT and Mount Royal University.
- **United Way** – the Authority matches employee donations to support Calgary’s network of community services and the capacity of the community and its not-for-profit social agencies.
- **Health Care Organization** – the Authority has provided cash donations to a variety of health care related charitable organizations as part of their funding drives including the Alzheimer’s Society, the Ride of Cancer, Alberta Cancer Foundation, and Ovarian Cancer Canada.

Calgary is famous for its legendary Western hospitality, and that is due in large part to the City’s commitment to volunteerism. Tourism Calgary relies heavily on volunteers such as the White Hatters at the airport, and assistance with major events. Recognizing the volunteer base in order to ensure future participation is critical.

3.4.4 Other Social Assets

Cultural Resources are also considered to be Social Assets and are described in detail in Volume V, Item 11, Cultural Resources Baseline Report. In summary, the Authority conducted a Historical Resources Impact Assessment (HRIA) of YYC lands in 2001 under the guidelines established under the Alberta Historical Resources Act (1980). This study found that YYC property holds few archaeological sites and that those that were present were not unique historical resources in a regional context. Only a small proportion of the types of sites commonly found were represented. The report found that YYC sites have, for the most part, already been removed or substantially disturbed, or are of low interpretive potential. The report recommended mitigation measures for two of the sites. In 2006, these mitigation measures were implemented under the Authority’s direction.

3.5 Natural Assets

The **Natural Assets** sub-component of the Socio-economic Environment considers the biophysical environment upon which community well-being depends. For the purposes of this Socio-economic Assessment, the Natural Assets sub-component is described in detail in separate Baseline Reports, but summarized in the following sections. The following environmental components are considered:

- Surface Water
- Groundwater
- Terrestrial Ecosystems
- Air Quality
- Noise

Public attitude research undertaken as part of this Socio-economic Assessment identified the most important issues facing RSA and LSA communities today. Approximately 3% of RSA respondents and 2% of LSA respondents indicated that issues associated with Natural Assets are the most important in their community. Here, the emphasis was entirely on general environmental quality rather than any single natural asset.

The Authority has developed an Environmental Management System (EMS) in accordance with the principles of ISO 14001, the internationally recognized standard that outlines the structures of environmental management systems. The EMS provides the framework by which the Authority reviews its environmental policy and establishes procedures to improve its overall environmental performance. Each year, the Authority updates its EMS and annual work plan to drive continual improvement and development of best management practices. As a corporate citizen interested in sustainable development, the Authority also participates in the Nose Creek Partnership, the Parks Foundation Wetland committee and the Calgary Regional Air Zone Committee.

The YYC was the first Canadian airport to be awarded a Go Green® Certification by the Building Owners and Managers Association (BOMA). The certification recognized the airport for its environmental best practices and demonstrated leadership in the indoor environment. BOMA recognized the airport's operations staff for their performance against a national industry environmental standard, as well as the airport's resource conservation and energy efficiency. The certification is based on key criteria including resource consumption, waste reduction and recycling, building materials, interior environment, and tenant awareness.

3.5.1 Surface Water

Surface water is an integral part of the environment and is highly valued by the public. There are no lakes or streams on the PRP site and no residents in the vicinity of the airport rely on surface water as their source of drinking water.

All surface runoff exiting YYC property is discharged either directly or via the City's stormwater system into Nose Creek. Nose Creek exhibits poor water quality as a direct result of the high loading of contaminants such as suspended solids and nutrients from the surrounding basin, particularly in upstream and upslope areas outside of YYC. As such, Nose Creek is considered to be a highly impacted watercourse throughout most of its length.

Within the YYC site, the de-icing compound glycol, a potential surface water contaminant is the most widely handled and managed product. Recovered glycol is either sent to the City of Calgary treatment plant or is stored in a retention pond and treated to the appropriate guideline before release into the stormwater system. Several spills of glycol have occurred in the past, but these were mitigated internally and none were detected to have exited YYC property and entered surface waters.

3.5.2 Groundwater

Groundwater is used as local water supply wells for residences, farms and commercial facilities to the north and east of the PRP site. Studies indicate that there is a low potential for water supply wells to be affected by YYC operations because groundwater flow direction is to the southwest, away from the area that relies on water supply wells. Moreover, these off-site areas are currently being developed with water supplied from municipal sources. Groundwater discharge is also beneficial for maintaining stream flow in Nose Creek during dry periods when there is no surface runoff.

Baseline groundwater quality sampling indicates that the natural groundwater within the surficial clay till and claystone bedrock is mineralized, predominantly by sodium and sulphate ions, with total dissolved solids generally decreasing with depth. Baseline groundwater quality testing found no evidence of contamination with petroleum or other manmade organic chemicals. Elevated levels of nitrate nitrogen and chloride in excess of Canadian Drinking Water Criteria were observed at a few sampling locations. Elevated nitrate nitrogen concentrations are likely due to localized agricultural activities or local organic matter decay. Elevated chloride concentrations in groundwater wells located in close proximity to Barlow Trail may be related to use of de-icing salts on the road.

3.5.3 Terrestrial Ecosystems

YYC is located within the Fescue Grasslands Ecoregion of the Prairie Ecozone. In Alberta, it is classified into the Foothills Fescue Natural Subregion of the Grassland Natural Region. General topography of the area is characterized as having hummocky to rolling uplands, with undulating plains occurring northeast of the subregion. Parent material across this subregion consists mainly of till with considerable lacustrine deposits. Vegetation in its native form is characterized by prairie grasses, with shrublands occurring on north-facing slopes and water receiving areas, and narrow, predominantly deciduous forests along river valleys. Extensive cultivation of the highly productive prairie soils has removed vast areas of native vegetation.

Vegetation communities on the PRP site identified as part of baseline investigations are reflective of a highly modified, agricultural (cultivated)/urban landscape, with extensive areas of existing human disturbance. Here, native vegetation communities are uncommon. Coarse scale vegetation assemblages (landscape units) identified during baseline studies are listed in Table 41 below. This analysis indicates that only 15.4% of the PRP site remains in a natural state, while the remainder is either agricultural, hedgerow or heavily disturbed landscape.

Table 41 Terrestrial Ecosystem Landscape Units

Landscape Unit	Sub-Units	Extent (ha)	Percent of Project Area
Natural Landscape Unit	Semi-Native Prairie	62.02	11.62
	Semi-Native Aspen Stand	3.69	0.68
Wetland Landscape Unit	Temporary Pond (Class II)	12.00	2.2
	Seasonal Pond (Class III)	2.05	0.38
	Semi-Permanent Pond (Class IV)	7.29	1.4

Landscape Unit	Sub-Units	Extent (ha)	Percent of Project Area
Agricultural Landscape Unit	Cultivated	129.62	24.16
	Fallow	61.84	11.52
	Tame Pasture	82.99	15.47
Anthropogenic Landscape Unit	Disturbed	50.16	9.35
	Hedgerow	8.31	1.54
	Infill Wetland	49.35	9.20
	Stripped	66.98	12.48
Total		536.30	100

The removal and fragmentation of natural vegetation, primarily for agricultural and urban development purposes, has reduced wildlife habitat diversity and wildlife utilization in the general area. Due to the fact that the majority of the land proposed for development has already been disturbed from its natural state, the amount of quality wildlife habitat is minimal. Existing wildlife habitat in the project area consists of aspen tree lines, willow shrub, agricultural cropland, pasture, wetlands, irrigation ditches, and drainage canals. Those habitats naturally occurring, such as the wetlands and remnant patches of aspen stands in the north and south field, are the most beneficial types to wildlife. Alternative wildlife habitat is available regionally to most wildlife species documented in the PRP area.

During wildlife surveys, 37 bird, 11 mammal, and one amphibian species were observed. Five of the species documented during the surveys, the American badger, bald eagle, lesser scaup, Swainson's hawk, and sora, are listed provincially as *Sensitive*. The long-tailed weasel, documented during the winter tracking survey is listed provincially as *May be at Risk*.

3.5.4 Air Quality

Air quality has intrinsic importance to the health and well-being of humans, wildlife and vegetation. Although there are several industrial sources of emissions to the air, including the YYC, ambient air quality data measured around the PRP site indicates that the local air quality is considered to be within a typical range of emissions for an urban neighbourhood. Monitoring data for carbon monoxide (CO), nitrogen dioxide (NO₂), sulphur dioxide (SO₂), and volatile organic carbons (VOCs) were below Alberta ambient air quality objectives (AAQOs). However, ozone (O₃), particulate matter with a diameter of less than 2.5 micro metres (µm) (PM_{2.5}), and particulate matter with a diameter of equal to or less than 10 µm (PM₁₀) occasionally exceeded the AAQOs. The air quality analysis demonstrates that the existing concentrations for these parameters of concern are generally low in magnitude.

3.5.5 Noise

Noise is considered to be an unwanted sound or sound with a low perceived positive value for a receptor. Noise associated with YYC operations can be attributed to a number of sources or activities including:

- Aircraft departure and arrivals;
- Aircraft over-flights of residential areas;
- Engine run-ups activities;
- Reverse thrust, which is used to slow an aircraft when landing on the runway; and
- General noise from ground service equipment.

For the purposes of this environmental assessment, ambient noise levels were measured at various locations within the communities around the YYC. Results indicate that overall noise levels are considered to be within the typical range found in urban neighbourhoods. The average Day Night Noise

Level (DNL) measured currently varies from 53 to 72 dBA and the average $L_{eq1\text{ hr}}$ noise levels ranged from 47 to 64 dBA. While aircraft noise might be intermittently intrusive, it is not considered the major contributor to overall noise levels. Aircraft noise levels vary depending on the proximity to the airport and its flight paths. Overall, the baseline noise levels in all of the communities monitored can be considered to be “moderately loud” dominated by typical sources of community noise, including road traffic noise which is persistently audible at all monitoring stations. This is typical for urban areas.

The Authority has a comprehensive Noise Management Program that includes the following components:

- Airport Community Noise Consultative Committee (ACNCC) which consists of community and industry stakeholders and provides a forum for the discussion of aircraft noise management issues;
- A Noise Management Plan, including monitoring and abatement procedures; and
- An Aircraft Flight Tracking Environmental Management System (AFTEMS).

In addition, the Authority offers a variety of ways for individuals to register their questions or concerns about airport and aircraft noise. The YYC Noise Concern Hotline (403-735-1408) provides callers with access to an Environmental Services Specialist capable of responding to questions or concerns regarding aircraft operations in the City of Calgary. The Hotline is available to concerned residents 24 hours a day, seven days a week. In 2008, the Authority received 267 noise complaints compared with the 283 received in 2007.

4. Public Attitudes toward Personal and Community Well-Being

As described in Section 2, this Socio-economic Assessment was conducted using the concept of community well-being as its analytical framework. The preceding sections provided a detailed description of the existing Socio-economic Environment in the RSA, LSA and SSA within a framework of “Community Assets” that determine or influence any person’s or community’s well-being. Public attitude research was used to establish a general sense of the well-being of people and their communities within the LSA. Essentially, it was hypothesized that greater community well-being is achieved the more that people feel that they are healthy, safe and satisfied living in their communities. As such, the following two specific indicators of personal well-being were identified:

- people’s feelings of personal health and safety; and
- people’s overall satisfaction with community.

Finally, the fact that the RSA and LSA communities are located in proximity to the YYC site, a second focus of this research was on people’s attitudes toward the YYC site itself. Essentially, it was thought that community well-being would be enhanced, the more confidence people have in the YYC site and its ongoing operations, and the more positive effects it has on people’s daily lives. To this end, people’s attitudes towards the YYC site were also seen as indicators of community well-being in the LSA.

Finally, people’s overall sense of community well-being was examined in terms of the attributes or features of the community that need to be maintained or enhanced to ensure community well-being, and the greatest threats to the well-being of their community. These two broad indicators provide a sense of those assets that are the most important to the future of the community.

4.1 Feelings of Personal Health and Safety

The Public Attitude Research examined people’s feelings of personal health and safety living in their community. Overall, people describe themselves as feeling healthy and safe with the single most important contributor to this feeling being the overall safety of the community from crime. The results presented in Table 42 indicate that the vast majority of respondents (88% RSA, 81% LSA) describe their sense of personal health and safety as either “excellent” or “good”. Notably, LSA respondents compared to other Calgarians (31% versus 44%) are significantly less likely to state “excellent”, although a large majority, that is 81%, provide a rating of “excellent” or “good”. Almost two-in-ten in the LSA (18%) rate themselves as “fair” or “poor”.

Table 42 Rating on Overall Feelings of Personal Health and Safety

	RSA		LSA		Other Calgary	
	n	%	n	%	n	%
Excellent	316	40	126	31	171	44
Good	374	48	200	50	179	46
Not sure	3	0	2	0	1	0
Fair	78	10	62	15	28	7
Poor	16	2	12	3	6	2
N	787		402		385	

Note: Percentages may not sum to 100% due to rounding.

Table 43 presents the issues that were identified by respondents as having the greatest influence on people’s feelings of personal health and safety living in their community. By a wide margin compared to other issues, the most important influence on personal health and safety relate to Human Assets. Approximately 46% of RSA respondents name one of several issues - crime (15%), community safety (13%), policing (8%) and access to health care (7%). This topic area is equally important (46%) in the RSA and LSA and the rest of Calgary. Social Assets (17%) were identified as the next most important influence on people’s feelings of personal health and safety living in their community across the three study areas. Most of the responses related to the general community atmosphere (13-14%) and a few respondents named access to parks and recreation (3%). The presence of YYC is not considered to be a strong influence on people’s feelings of personal health and safety living in their community, with only one individual respondent identifying this airport itself as an influence on their feeling of health and safety.

Table 43 Community Issues that Affect Feelings of Personal Health and Safety

	RSA		LSA		Other Calgary	
	n	%	n	%	N	%
Issues related to Human Assets	363	46	184	46	178	46
• Crime	117	15	64	16	55	14
• Community safety	99	13	50	12	49	13
• Policing	60	8	31	8	29	8
• Access to health care	55	7	28	7	27	7
• Availability of emergency services (EMS, fire, police)	20	2	9	2	10	3
• Socio-economic status	12	2	2	0	8	2
Issues related to Social Assets	136	17	68	17	67	17
• Community atmosphere	109	14	54	13	54	14
• Access to parks and recreation	27	3	14	3	13	3
Issues related to Physical Assets	30	4	12	3	16	4
• Traffic	15	2	7	2	8	2
• Location of the Community	12	1	3	1	7	2
• The driving speed limit	3	0	2	0	1	0
Issues related to Natural Assets	23	3	10	2	12	3
• Pollution/cleanliness	23	3	10	2	12	3
General - Individual and Community Well-being	23	3	8	2	13	3
• Sense of personal well-being	23	3	8	2	13	3
Issues related to Economic Assets	11	2	12	3	2	0
• Poverty	5	1	5	1	1	0
• State of the Economy	6	1	7	2	1	0
Other responses	-	-	-	-	-	-
• Satisfied/Nothing	69	9	35	9	34	9
• Airport	1	0	1	0		
• Other	20	3	12	3	9	2
• Don't know/refused	113	14	60	15	54	14
• N	787		402		385	

Note: Percentages may not sum to 100% due to rounding. 0 indicates less than 0.5%. “n” refers to number of responses and “N” refers to number of respondents. No totals given for “Other Responses” as the range of responses are dissimilar and, therefore, should not be presented in aggregate.

4.2 Satisfaction with Community

The Public Attitude Research examined people’s feelings of satisfaction with living in their community. Overall, the results indicate that people in the RSA and LSA are satisfied with living in their community, with two key contributors to satisfaction being the intangible sense of community and the ease of accessing various amenities. The results presented in Table 44 indicate that almost all respondents (96% RSA, 93% LSA) are satisfied with living in their community. Nevertheless, LSA respondents are significantly less likely to state “very satisfied” (62%) than those in the RSA as a whole (69%) and other Calgarians in particular (72%).

Table 44 Satisfaction with Living in Their Community

Satisfied	RSA		LSA		Other Calgary	
	n	%	n	%	n	%
Very	538	69	248	62	276	72
Somewhat	211	27	123	31	96	25
Not Very	25	3	21	5	8	2
Not At All	11	1	10	2	3	1
n	784		402		383	

Note: Percentages may not sum to 100% due to rounding. Cases may not sum to the total samples since 'no response' is excluded.

Respondents were asked to name the one thing or issue that has the greatest influence on their satisfaction with living in their community. As can be seen in Table 45, two themes are most dominant and named by approximately one-third of the respondents each, namely the community's Social Assets and Human Assets. By way of a summary:

- **Social Assets**

Over one-third of the respondents (38%) name sense of community and community safety as having the greatest influence on their satisfaction with living in the community. This topic is equally important in the RSA and LSA.

- **Human Assets**

One-third of the respondents (33%) name one of several topics related to the human aspects of living in the community. The most prevalent influence on satisfaction is people's access to amenities and services (21%). Fewer than 10% name the quality of amenities or services (6%), policing or crime (3%), the lack of City services (2%), and healthcare services (1%).

The presence of YYC is not considered to be a strong influence on people's satisfaction with their community, with only two individual respondents identifying this airport itself as an influence on their satisfaction. With respect to other issues related to the PRP, approximately 4% of LSA respondents identified traffic congestion/transportation as an influence on their satisfaction, and only one individual respondent specifically identified Barlow Trail.

Table 45 Greatest Influence on Satisfaction with Living in Their Community

	RSA		LSA		Other Calgary	
	n	%	n	%	N	%
Issues related to Social Assets	298	38	151	38	146	38
• Sense of Community / Sense of Safety	298	38	151	38	146	38
Issues related to Human Assets	263	33	126	31	258	34
• Access to amenities/services	166	21	75	19	86	22
• Quality of amenities/services	47	6	20	5	25	6
• Policing / Crime	23	3	18	4	8	2
• Lack of City services	17	2	11	3	7	2
• Availability / quality of health care services	10	1	2	0	6	2
Issues related to Physical Assets	61	8	35	9	28	7
• Location of the community	29	4	13	3	15	4
• Traffic congestion/transportation	25	3	15	4	11	3
• Housing prices, privacy	7	1	7	2	2	1
Issues related to Economic Assets	35	5	15	4	19	5
• Cost of living/taxes	15	2	6	1	8	2
• State of the economy	12	2	2	0	8	2
• Employment opportunities	5	1	4	1	2	1
• Poverty	3	0	3	1	1	0

	RSA		LSA		Other Calgary	
	n	%	n	%	N	%
Issues related to Natural Assets	36	5	17	4	18	5
• Green space	23	3	8	2	13	3
• Cleanliness of the community	13	2	9	2	5	1
General - Individual and Community Well-being	7	1	4	1	3	1
• Everything	7	1	4	1	3	1
Other responses						
• None/nothing	23	3	15	4	10	3
• Airport	1	0	2	0	0	0
• Barlow/Airport Trail	1	0	1	0	0	0
• Construction	2	0	3	1	0	0
• Other	22	3	17	4	8	2
• Don't know/refused	39	5	16	4	21	5
• N	787		402		385	

Note: Percentages may not sum to 100% due to rounding. 0 indicates less than 0.5%. No totals given for "Other Responses" as the range of responses are dissimilar and, therefore, should not be presented in aggregate.

4.3 Attitudes Toward YYC

As noted above, the Public Attitude Research results indicated that YYC is not considered to be an important or 'top-of-mind' issue across the RSA or LSA. It is not considered to be a thing or issue that influences peoples' feelings of health and safety, peoples' use and enjoyment of property, nor their overall satisfaction with living in their community.

To get a more direct rating of people's attitudes toward YYC and the Authority, opinion research aimed at examining their reputation among Calgarians and Albertans was reviewed. Results from their 2007 survey (Framework Partners Inc. 2007) indicate that:

- 93% of respondents rated YYC as either "good" or "very good" in terms of their overall impression of the airport;
- 88% of respondents rated the airport as either "good" or "very good" in terms of the way the airport is run;
- 87% of respondents felt "safe" and 86% felt "secure" while at YYC;
- 79% of respondents rated the airport as either "good" or "very good" in terms of the way the Authority is managing the ongoing expansion of the airport;
- 63% of respondents described the airport as either "better" or "much better" than most other Canadian airports;
- 63% of respondents consider YYC as a "source of pride"; and
- 62% of respondents rated the airport as either "good" or "very good" in terms of the way the Authority fosters economic development in the Calgary region.

Overall, these results indicate that the majority of Calgarians and Albertans alike view YYC and the work of the Authority in very positive terms. When respondents were asked to describe the Authority in one word, the most frequent responses were "efficient" (16%), "progressive" (13%) and "professional" (7%). The vast majority of responses (89%) were positive. Only 2.5% of responses were considered to be a negative characterization of the Authority, with the focus being on the airport and the Authority being "expensive".

4.4 Public Attitudes Towards Community Well-Being

Finally, Public Attitude Research was used to identify those attributes or features of the community that need to be maintained or enhanced to ensure community well-being, and the greatest threats to the well-being of their community. In each case, YYC or the PRP are not named as top-of-mind issues, attributes or threats to community well-being (Table 46).

Overall, the most important attributes or features of the RSA and LSA communities that need to be maintained or enhanced to support community well-being in the next decade were related to Social Assets. Approximately 49% of respondents name one of several attributes: community parks and green spaces (25% RSA, 24% LSA), community centres, facilities and activities (10% RSA, 11% LSA), the sense of community (9% RSA and LSA), and recreational facilities and programs (5% RSA and LSA). The results indicate that the topic area is equally important in the LSA, RSA and the rest of Calgary.

Approximately 29% of RSA respondents and 20% of LSA respondents name one of several attributes related to the Physical Assets of their community, including maintaining the community's infrastructure, public transportation, and reducing traffic.

Approximately 22% of RSA and 25% of LSA respondents name one of several attributes related to Human Assets including education, services and facilities, health care, and police and fire services.

Table 46 Community Attributes to Maintain or Enhance

	RSA		LSA		Other Calgary	
	N	%	n	%	n	%
Issues related to Social Assets	390	49	206	51	187	49
• Quality / Access to community parks and green spaces	197	25	95	24	99	26
• Community centres / facilities / activities	77	10	45	11	35	9
• Sense of community	67	9	38	9	31	8
• Quality / access to recreational facilities and programs	36	5	19	5	17	4
• Community culture	11	1	6	1	5	1
• Churches/church organizations	2	0	3	1	0	0
Issues related to Physical Assets	225	29	80	20	126	33
• Quality / maintenance of infrastructure	86	11	34	8	47	12
• Quality / access to public transportation	39	5	12	3	23	6
• Reducing traffic	35	4	9	2	21	5
• Quality maintenance of homes/private property	21	3	9	2	11	3
• Garbage collection / recycling / cleanliness	24	3	7	2	14	4
• Improvements for snow removal	20	2	9	2	10	3
Issues related to Human Assets	170	22	95	24	80	21
• Quality / access to education/schools	53	7	34	8	23	6
• Quality / access to services/facilities	38	5	17	4	20	5
• Policing to lower crime rates	28	4	16	4	13	3
• Quality / access to health care	24	3	10	2	13	3
• Quality / access to police and fire services	25	3	17	4	10	3
• Quality / access to social services	2	0	1	0	1	0
General - Individual and Community Well-being	34	4	16	4	17	4
• Sense of personal safety/security	34	4	16	4	17	4
Issues related to Economic Assets	18	3	5	0	11	3
• Control government spending/taxes	12	2	2	0	8	2
• Employment opportunities	4	1	2	0	2	1
• Poverty/homelessness	2	0	1	0	1	0
Issues related to Natural Assets	3	0	2	0	1	0
• Noise levels	3	0	2	0	1	0

	RSA		LSA		Other Calgary	
	N	%	n	%	n	%
Other responses	-	-	-	-	-	-
• Satisfied/keep things as they are	61	8	27	7	32	8
• Better urban planning / growth management	57	7	14	3	35	9
• Other	40	5	19	5	20	5
• Don't know/refused	50	6	42	10	17	4
• N	787		402		385	

Note: Percentages sum to more than 100% since two responses were accepted. 0 indicates less than 0.5%. No totals given for "Other Responses" as the range of responses are dissimilar and, therefore, should not be presented in aggregate.

With respect to the greatest threats to their community's well-being in the next decade, the public attitude research indicates that issues related to Human Assets (32% RSA, 34% LSA) and Physical Assets (32% RSA, 28% LSA) were considered to be the most important (Table 47). With respect to the Human Assets, one issue is most dominant, crime, named by 24% of the RSA respondents. Other Human Asset threats are the lack of City services, poor quality health care, and access to services. With respect to Physical Assets that are threatened or considered to be a threat to their community's well-being include growth and development followed by traffic and congestion. Notably, however, 12% in the RSA and LSA state that there is "no threat" and 13% in the RSA and 14% in the LSA could not name a threat. In total, 25% of RSA and 26% of LSA respondents felt there was no threat to their community's well-being.

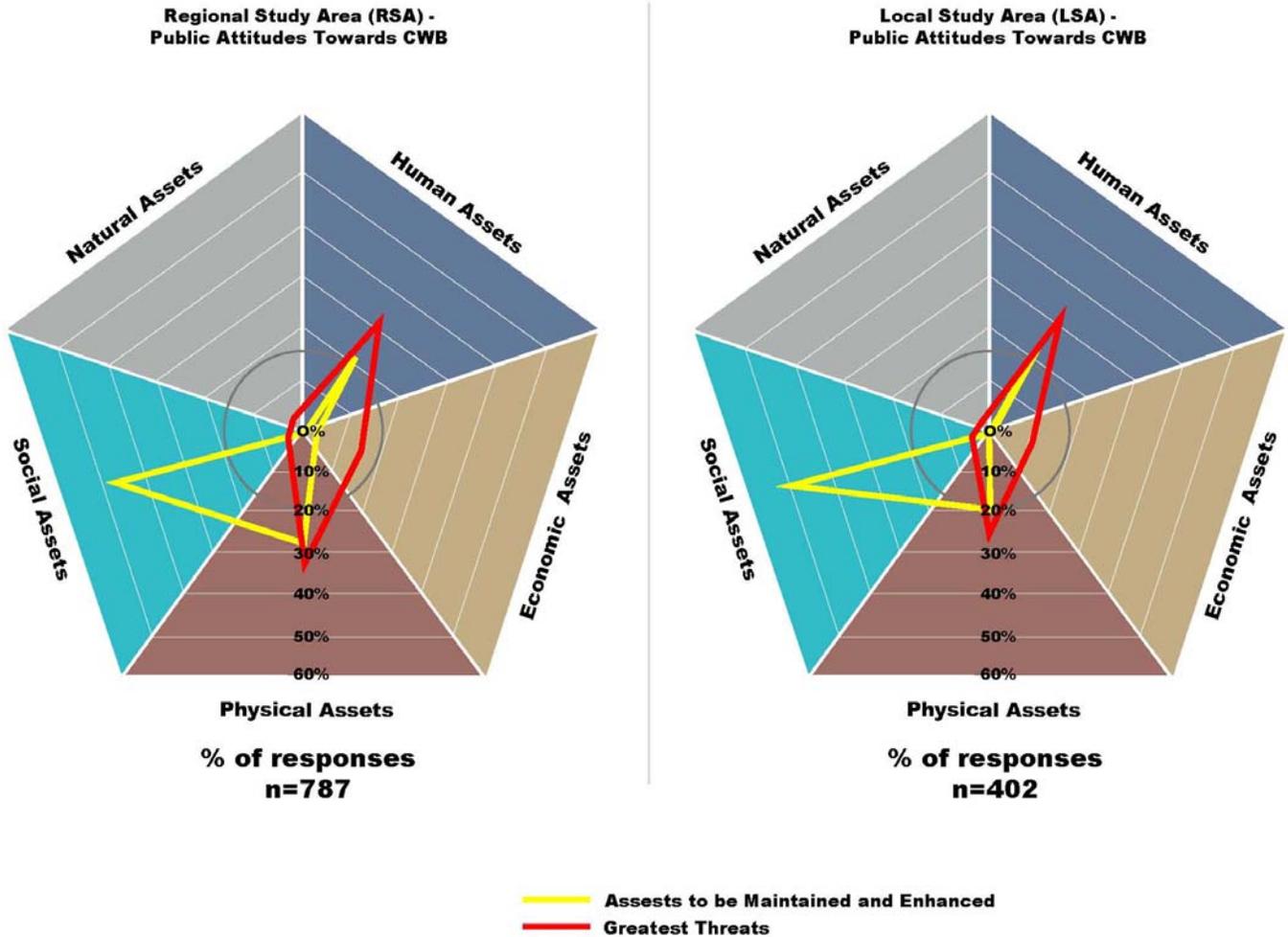
Table 47 Greatest Threats to Community Well-being

	RSA		LSA		Other Calgary	
	n	%	n	%	n	%
Issues related to Human Assets	250	32	138	34	118	31
• Crime	189	24	113	28	85	22
• Lack of City services	42	5	17	4	23	6
• Poor quality health care	14	2	5	1	8	2
• Access to services	5	1	3	1	2	1
Issues related to Physical Assets	249	32	112	28	129	33
• Growth/developments/expansions	136	17	62	15	70	18
• Traffic and construction	76	10	27	7	43	11
• Housing: rundown, low income, more high rises	37	5	23	6	16	4
Issues related to Economic Assets	129	16	44	11	73	19
• State of the economy	33	4	15	4	17	4
• Government/leadership	31	4	5	1	20	5
• Transportation issues	25	3	4	1	16	4
• Rising prices/cost of living	15	2	7	2	8	2
• Taxes	14	2	5	1	8	2
• Poverty/homelessness	11	1	8	2	4	1
Issues related to Natural Assets	34	4	12	3	19	5
• Lack of green space	14	2	5	1	8	2
• Environment	20	2	7	2	11	3
Issues related to Social Assets	18	2	17	4	5	1
• Lack of respect for people / community	18	2	17	4	5	1
General - Individual and Community Well-being	16	2	6	1	9	2
• Lack of feelings of personal safety	16	2	6	1	9	2
Other responses	-	-	-	-	-	-
• Nothing/no threat	91	12	50	12	43	11
• School closing	0	0	0	0	0	0
• Other	28	4	20	5	11	3
• Don't know/refused	98	13	57	14	45	12
• N	787		402		385	

Note: Percentages sum to more than 100% since two responses were accepted. 0 indicates less than 0.5%. No totals given for "Other Responses" as the range of responses are dissimilar and, therefore, should not be presented in aggregate.

Figure 7 illustrates these Public Attitude Research results by depicting those attributes or features of the community that need to be maintained or enhanced to ensure community well-being, and the greatest threats to the well-being of their community on the Community Assets pentagon. In each case, the YYC or the PRP are not named as top-of-mind issues, attributes or threats to community well-being.

Figure 7 Public Attitudes Towards Community Well-Being



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Appendix A

Public Attitude Research Report



Calgary Airport Authority
Public Attitude Research - Parallel
Runway Project Environmental
Assessment

January 2010

Prepared for:
AECOM Canada

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1 RESEARCH OVERVIEW AND KEY FINDINGS

1.1 RESEARCH OBJECTIVES

The Calgary Airport Authority has retained AECOM Canada Limited to undertake an environmental assessment (EA) of the potential impact of the planning, design, and construction of new parallel runway (referred to as the Parallel Runway Project, or PRP) at the Calgary International Airport. As part of the EA being undertaken by the Calgary Airport Authority, AECOM contracted with IntelliPulse Inc. to undertake public attitude research. This research was undertaken as part of a socio-economic assessment for the PRP.

The objectives of this research were to examine:

- People’s attitudes towards their community including: major issues facing their community, and various attributes and threats to community well-being;
- People’s personal sense of well-being including: levels of satisfaction with living in their community and contributors to satisfaction, feelings of personal health and safety and contributors to it, and contributors to their use and enjoyment of their private property;
- People’s self-assessment of the current impact of the Calgary International Airport on their day-to-day living;
- People’s awareness of plans to build a new runway;
- People’s self-assessment of the effects of the PRP on the community and people’s daily life; and
- Preferences in the way that the Calgary Airport Authority can keep people informed and involved in its activities at the Calgary International Airport.

The socio-economic assessment of the PRP uses the concept of “community well-being” as its overall analytical framework. As such, the public attitude research results are presented according to five (5) “community assets” that comprise the community well-being framework. The framework consists of the following:

- Human Assets (i.e., issues relating to population and demographics; skills and labour supply; education; health and safety; social services; and economic development services);
- Economic Assets (i.e., issues relating to employment; business activity; tourism; income; residential property values; and municipal finance and administration);

- Physical Assets (i.e., issues relating to housing; municipal infrastructure and services; community character, land use; and traffic and transportation);
- Social Assets (i.e., issues relating to community and recreational facilities and programs; use and enjoyment of property; and community cohesion); and
- Natural Assets (i.e., issues relating to air quality, noise, water quality and other biophysical components of the natural environment, including litter and general community cleanliness).

IntelliPulse is pleased to present the results of this survey of public attitudes towards the PRP and the Calgary International Airport in general.

1.2 STUDY AREAS AND APPROACH

In order to fulfill the research objectives a questionnaire was developed for telephone administration, a copy of which is included in the Technical Appendix Section 5.4. IntelliPulse Inc. developed a sample design based on the study areas defined by AECOM Canada. For the purposes of this public attitude research study, results are reported according to two primary study areas.

1. **Local Study Area (LSA):** The Local Study Area includes residential communities defined by the City of Calgary that are entirely in the limits of the AVPA or largely bisected by the AVPA boundary, plus selected neighbouring communities that are located outside of the AVAP limit, but whose boundaries remain close in proximity (i.e., generally within 2 km). These communities are located largely to the east of the Calgary International Airport site where the PRP is to be located. The LSA includes those communities and neighbourhoods that are likely to experience the direct and indirect socio-economic effects related to the PRP Project to the greatest extent.
2. **Regional Study Area (RSA):** The Regional Study Area includes the entire City of Calgary, the LSA portions of the Town of Airdrie and the LSA portions of the M.D. of Rocky View No. 44. These municipalities were selected due to the potential for measurable economic effects of the PRP. The RSA includes large urban and non-urban centres that are within approximately 45-minute commuting distance to the PRP site. The RSA reflects the area within which it is anticipated that the majority of the construction and operation workforce are likely to reside and/or commute daily to the PRP site, and within which economic effects are likely to be measurable.

In addition to these two primary study areas for socio-economic assessment purposes, the results presented in this report provide data for "Other Calgary", which is the area outside of the LSA within the City of Calgary. This area was selected to allow general comparisons to be made between the public attitudes within areas nearest the airport (i.e., the LSA) and those further away.

The findings provided in this report are based on a random sample of Calgary residents, 18 years of age or older who reside at the telephone number called. The sample was split between men and women.

A total of 787 interviews were conducted in the RSA. A sample of this size yields results for Calgary as a whole that are accurate within $\pm 3.6\%$, 19 out of 20 times. A disproportional sample allocation was developed in order to have a sufficient sample size in the LSA and Other Calgary. A total of 402 interviews were completed in the LSA which results in an accuracy of $\pm 5.0\%$, 19 out of 20 times. A total of 385 interviews were completed in the rest of Calgary (outside of the LSA), for results that are accurate within $\pm 5.1\%$, 19 out of 20 times. Technical Appendix Section 5.1 provides additional information on the sample and weighting procedures.

The telephone survey was administered by The Logit Group Inc. under the direct supervision of IntelliPulse Inc. and AECOM. A pre-test was conducted on October 13. Interviewing dates were October 13 to October 17, 2009. AECOM monitored survey implementation throughout this time period. The survey's average duration was 13 minutes.

1.3 KEY FINDINGS

- Almost all respondents (93% LSA, 96% RSA) are satisfied with living in their community.
- A vast majority (81% LSA, 88% RSA) rate their feeling of personal health and safety as "excellent" or "good".
- The Calgary International Airport and its operations are not issues on the public's agenda, including residents of the LSA. Crime, policing and their influence on the public's sense of safety in the community are the primary issues volunteered among other responses as the main issues facing the community (26% LSA, 24% RSA), as the greatest influence of satisfaction with living in the community (38% LSA and RSA), as the primary influence on feelings of personal health and safety (36% LSA and RSA), and as the greatest threat to their community's well-being (28% LSA, 24% RSA).
- People value a number community assets that need to be maintained or enhanced to support community-well-being. These include: community parks and green spaces (24% LSA, 25% RSA), community centres, facilities and activities (11% LSA, 10% RSA), the quality/maintenance of infrastructure (8% LSA, 11% RSA), and the sense of community (9% LSA and RSA).
- Very few respondents think about the fact that they live near the Calgary International Airport "very often" (12% LSA, 7% RSA). In total, 27% of the LSA respondents think about living near the airport at least "often" versus 19% in the RSA.

- The majority of respondents, whether in the LSA or RSA, do not anticipate changes in their community, behaviour or attitudes due to the PRP.
 - Over half (57% LSA, 65% RSA) do not anticipate that a new runway at the Calgary International Airport will result in a change in the overall well-being of their community. Among those who anticipate that the PRP will result in a change in community well-being, most anticipate changes in their community's physical and economic assets. The primary benefits are improved airport operations and economic growth. The primary adverse effects are increased traffic and noise.
 - The vast majority of respondents (83% LSA, 86% RSA) do not anticipate any change to their outdoor recreational activities as a result of the PRP.
 - The vast majority of respondents (86% LSA, 92% RSA) do not anticipate any changes to their use and enjoyment of property as a result of the PRP.
 - A large majority of respondents (76% LSA, 86% RSA) do not anticipate that the PRP, including the closure of Barlow Trail would affect their daily travel patterns. Of the approximately one-quarter of LSA respondents who anticipate that the project would change their travel patterns, 40% anticipate having to find an alternate route to their destinations and 35% expect to experience more traffic on the routes they travel.
 - Attitudinally, a large majority of respondents do not anticipate that the PRP would affect their satisfaction with living in their community (71% LSA, 82% RSA), how often they think about living near the Calgary International Airport (71% LSA, 82% RSA), or their feeling of personal health and safety (85% LSA, 89% RSA). At most 3% of the LSA respondents anticipate that their attitudes will be adversely affected "a great deal".
 - 83% of LSA respondents and 91% of RSA respondents do not anticipate that the PRP will have any affect on their decision to live in the community. Nonetheless, 13% in the LSA stated their intention to move because of the anticipated project effects on noise, traffic and other changes in their community.
- Study findings indicate a preference for a variety of ways respondents would like to be kept informed and involved in activities at the Calgary International Airport. The most frequently named is television or radio advertising, newspaper articles or advertising and newsletters.
- Although results vary from question to question, in general LSA responses are considered to differ (i.e., statistically significant differences of more than 5%) from those in the rest of Calgary.

2 REVIEW OF COMMUNITY ISSUES

2.1 COMMUNITY-WIDE ISSUES

Prior to any discussion on the Calgary International Airport and plans for the development of a new parallel runway, it was important to establish what the respondents think about their community and to identify the importance of the airport as an issue within the community. Generally speaking the airport is not an issue in the community at large or the Local Study Area. While it is not the only issue a re-occurring theme is the impact of crime as an issue facing the community and as an issue that affects people's satisfaction and feeling of personal safety with living in the community.

At the outset of the survey respondents were asked to name the most important issues facing their community; they were allowed to provide up to two responses. As can be seen in Table 2.1-1, a variety of volunteered responses were obtained. For simplicity the issues are grouped into five main categories corresponding to the Community Well-being Framework. Several findings emerge from an examination of Table 2.1-1¹:

- Human Assets – Almost half of the respondents (46%) mention an issue related to human assets of the community. The most prevalent response relates to policing, crime, drugs and safety (24%), followed by healthcare (13%), education (5%), population increases and construction activities (3%), and services for seniors (1%).
 - Human assets are equally important to LSA and RSA respondents. Notably, the LSA respondents are more likely than respondents in the RSA or Other Calgary to name policing, crime, drugs and safety, as are women².
- Physical Assets – One-third of respondents (36%) name some aspect of the physical attributes of Calgary. The highest percentage (19%) name services provided by the city such as snow removal. Other responses include traffic (9%), public transportation (5%) and housing (3%).
 - Respondents in Other Calgary (39%) are more likely than those in the LSA (31%) to name Physical Assets as a group, although they are no different on the individual mentions.

¹ All tables include three respondent segments – Local Study Area (LSA) respondents are those who live in the immediate area of the Calgary International Airport, Regional Study Area (RSA) respondents who live in the LSA and the remainder of the City of Calgary; and Other Calgary, who are respondents who reside outside of the LSA but in the remainder of the City of Calgary.

² For the most part there are too few respondents in each of the open-ended response categories to draw meaningful comparisons between sub-groups of respondents. Where there is a sufficient sample and there are differences in responses these differences are noted.

Table 2.1-1: Most Important Issues Facing the Community

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Issues related to Human Assets:	46		45		47	
Policing / Crime/drugs/safety	24	186	26	106	22	86
Healthcare	13	102	10	42	14	55
Education	5	39	4	18	5	20
Increase in population/development, construction	3	25	2	9	4	14
Services for seniors	1	10	1	5	1	5
Issues related to Physical Assets:	36		31		39	
City Services	19	152	17	70	20	78
Traffic	9	72	8	31	10	38
Public Transportation	5	39	3	13	6	22
Housing	3	22	2	10	3	11
Issues related to Economic Assets:	27		27		27	
Economy	8	63	7	27	9	33
Unemployment	7	51	8	33	6	22
Taxes/Cost of living/Property taxes	6	44	5	19	6	23
Community recreational facilities, amenities	3	20	3	12	2	9
Government	3	20	2	8	3	11
Poverty/homeless	2	15	2	10	2	6
Issues related to Natural Assets:						
Environment	3	20	2	8	3	11
Issues related to Social Assets:						
Sense of Community	2	16	2	10	2	7
Other responses:						
None/No issues	9	74	10	41	9	35
Property maintenance	1	8	1	4	1	4
Parking	0	3	0	1	1	2
Airport	0	1	0	1	0	0
Barlow/airport Trail	0	1	0	1	0	0
Other	2	15	2	10	2	6
Don't know/Refused	9	74	11	45	9	33
<i>N</i>		787		402		385

Note: Percentages sum to more than 100% since two responses were accepted. 0% indicates less than .5%. Q1

- Economic Assets - One-quarter of the respondents (27%) overall name an economic issue or asset as the most important to their community. Fewer than one-in-ten name each issue – the economy in general (8%), unemployment (7%), taxes (6%), community recreational facilities (3%), government (3%) and poverty (2%).

- Fewer than 10% of the respondents name any other issues. Notably only 2 individual respondents in the LSA named either the airport or the status of Barlow Trail as an issue. Clearly the airport and the related issue of the closure of Barlow Trail is not a wide-spread or top-of-mind issue of concern in the community, include by residents who live in the LSA.

2.2 SATISFACTION WITH THEIR COMMUNITY

The research examined people’s feelings of satisfaction with living in their community before the survey turned to questions about the Calgary International Airport and the PRP. Overall, the results indicate that people in Calgary and beyond are satisfied with living in their community; two key contributors to satisfaction are the intangible sense of community and the ease of accessing various amenities.

As can be seen in Figure 2.2 and detailed in Table 2.2-1, almost all respondents (96%) are satisfied with living in their community. Summarizing the key findings:

- 69% of RSA respondents are “very satisfied.”
 - Notably, LSA respondents are significantly less likely to state “very satisfied” (62%) than Other Calgary (72%), although satisfaction levels remain very high, that is, 93% are satisfied overall.

Figure 2.2: Satisfaction with Living in Their Community

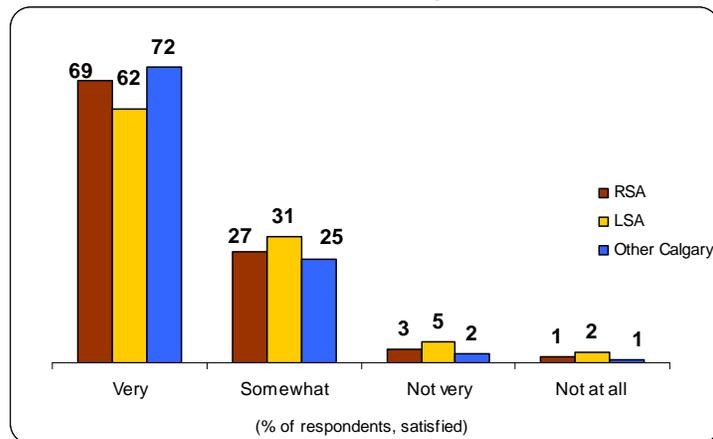


Table 2.2-1: Satisfaction with Living in Their Community

Satisfied:	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Very	69	538	62	248	72	276
Somewhat	27	211	31	123	25	96
Not very	3	25	5	21	2	8
Not at all	1	11	2	10	1	3
<i>n</i>		784		402		383

Note: Percentages may not sum to 100% due to rounding. Cases may not sum to the total samples since 'no response' is excluded. Q2

Respondents were asked to name the one thing or issue that has the greatest influence on their satisfaction with living in their community. As can be seen in Table 2.2-2, two themes are most dominant and named by approximately one-third of the respondents each, namely the community's Social Assets and Human Assets. By way of a summary:

- Social Assets – Over one-third of the respondents (38%) name the sense of community and community safety as having the greatest influence on their satisfaction with living in the community.
 - This topic is equally important in the LSA, RSA and the rest of Calgary. Women are more likely than men to mention a sense of community and safety.
- Human Assets – One-third of the respondents (33%) name one of several topics related to the human aspects of living in the community. The most prevalent influence on satisfaction is people's access to amenities and services (21%). Fewer than 10% name the quality of amenities or services (6%), policing or crime (3%), the lack of city services (2%) and healthcare services (1%).
- Physical Assets – Fewer than one-in-ten respondents (8%) name one of three attributes related to a Physical Asset that has an influence on their satisfaction - the location of their community (4%), traffic (3%), and housing prices (1%).
 - Men are more likely than women to mention the location of the community.
- Fewer than one-in-ten respondents name any other things or issues that influence their satisfaction with living in their community.

Table 2.2-2: Greatest Influence on Satisfaction with Living in Their Community

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Issues related to Social Assets:	38		38		38	
Sense of Community / Sense of Safety	38	298	38	151	38	146
Issues related to Human Assets:	33		31		34	
Access to amenities/services	21	166	19	75	22	86
Quality of amenities/services	6	47	5	20	6	25
Policing / Crime	3	23	4	18	2	8
Lack of city services	2	17	3	11	2	7
Availability / Quality of Healthcare Services	1	10	0	2	2	6
Issues related to Physical Assets:	8		9		7	
Location of the Community	4	29	3	13	4	15
Traffic congestion/transportation	3	25	4	15	3	11
Housing prices, privacy	1	7	2	7	1	2
Issues related to Economic Assets:	5		4		5	
Cost of living/taxes	2	15	1	6	2	8
State of the Economy	2	12	0	2	2	8
Employment Opportunities	1	5	1	4	1	2
Poverty	0	3	1	3	0	1
Issues related to Natural Assets:	5		4		5	
Green space	3	23	2	8	3	13
Cleanliness of the Community	2	13	2	9	1	5
General - Individual and Community Well-being	1		1		1	
Everything	1	7	1	4	1	3
Other responses:						
None/nothing	3	23	4	15	3	10
Airport	0	1	0	2		
Barlow/airport Trail	0	1	0	1		
Construction	0	2	1	3		
Other	3	22	4	17	2	8
Don't know/refused	5	39	4	16	5	21
<i>n</i>		787		402		385

Note: Percentages may not sum to 100% due to rounding. 0% indicates less than .5%. Q3

2.3 PERSONAL HEALTH AND SAFETY

The research also examined people’s feelings of personal health and safety living in their community. As with overall satisfaction with living in the community, people describe themselves as feeling healthy and safe with the single most important contributor to this feeling being the overall safety of the community from crime.

As can be seen in Figure 2.3 and the details in Table 2.3-1, the vast majority of respondents (88%) describe their sense of personal health and safety as either “excellent” or “good”. Summarizing the key findings:

- 40% of RSA respondents rate their sense of personal health and safety as “excellent”.
- Notably, LSA respondents compared to Other Calgary (31% vs. 44%) are significantly less likely to state “excellent”, although a large majority, that is 81%, provide a rating of “excellent” or “good”. Almost two-in-ten in the LSA (18%) rate themselves as “fair” or “poor”.

Figure 2.3: Rating on Overall Feelings of Personal Health and Safety

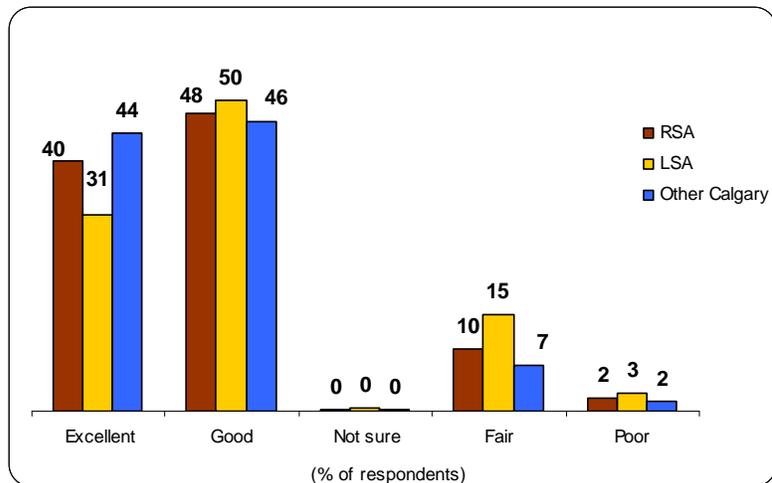


Table 2.3-1: Rating on Overall Feelings of Personal Health and Safety

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Excellent	40	316	31	126	44	171
Good	48	374	50	200	46	179
Not sure	0	3	0	2	0	1
Fair	10	78	15	62	7	28
Poor	2	16	3	12	2	6
<i>N</i>		787		402		385

Note: Percentages may not sum to 100% due to rounding. Q4

Table 2.3-2 presents the issues that have the greatest influence on people’s feelings of personal health and safety living in their community. By way of summarizing the key findings:

- Human Assets – By a wide margin compared to other issues, the most important influence on personal health and safety relate to human aspects. 46% of respondents name one of several issues - crime (15%), community safety (13%), policing (8%) and access to health care (7%).
 - This topic area is equally important (46%) in the LSA, RSA and the rest of Calgary. Notably, younger respondents are more likely than older respondents to mention crime in particular.

Table 2.3-2: Community Issues that Affect Feelings of Personal Health and Safety

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Issues related to Human Assets:	46		46		46	
Crime	15	117	16	64	14	55
Community safety	13	99	12	50	13	49
Policing	8	60	8	31	8	29
Access to healthcare	7	55	7	28	7	27
Availability of emergency services (EMS, fire, police)	2	20	2	9	3	10
Socioeconomic Status	2	12	0	2	2	8
Issues related to Social Assets:	17		17		17	
Community atmosphere	14	109	13	54	14	54
Access to parks and recreation	3	27	3	14	3	13
Issues related to Physical Assets:	4		3		4	
Traffic	2	15	2	7	2	8
Location of the Community	1	12	1	3	2	7
The driving speed limit	0	3	0	2	0	1
Issues related to Natural Assets:	3		2		3	
Pollution/cleanliness	3	23	2	10	3	12
General - Individual and Community Well-being	3		2		3	
Sense of personal well-being	3	23	2	8	3	13
Issues related to Economic Assets:	2		3		0	
Poverty	1	5	1	5	0	1
State of the Economy	1	6	2	7	0	1
Other responses:						
Satisfied/Nothing	9	69	9	35	9	34
Airport	0	1	0	1		
Other	3	20	3	12	2	9
Don't know/refused	14	113	15	60	14	54
<i>N</i>		787		402		385

Note: Percentages may not sum to 100% due to rounding. 0 indicates less than .5%. Q5

- Social Assets – Significantly fewer respondents name the next issue area encompassing Social Assets (17%). Most of the responses related to the community atmosphere (14%) and a few respondents name access to parks and recreation (3%) as the issues that influences their feelings of personal health and safety to most.
- Fewer than 5% of the respondents name any other influences on their feelings of personal health and safety living in their community.
- Notably 9% state “nothing” and 14% state “don’t know” suggesting that 23% of respondents have no particular issues affecting their feelings of personal health and safety.

2.4 MAINTAINING OR ENHANCING COMMUNITY WELL-BEING

Respondents were asked three questions about their overall community well-being – issues that affect people’s use and enjoyment of property, attributes or features of the community that need to be maintained or enhanced, and the greatest threats to the well-being of their community.

In each case, the Calgary International Airport or the PRP are not named as top-of-mind issues, attributes or threats to community well-being.

The first question in the series asked what things or issues in their community affect their use and enjoyment of their property. As can be seen in Table 2.4-1 on the next page:

- A variety of things or issues have an effect on people’s use and enjoyment of property, and no particular issue is dominant in the LSA, RSA or the rest of Calgary.
- The highest percentages of people name either “no issues” (13%) or state “don’t know” (21%). In other words, one-third of the respondents (34% RSA, 36% LSA, 32% Other Calgary) can perhaps be described as having no identifiable thing or issue that affects their use and enjoyment of property.
- Five topics are named by approximately 10% of respondents – the amount of traffic and the road system (12%), the availability of parks, recreation and schools (11%), the quietness, friendliness of their community (9%), and access to amenities (9%).
- Fewer than 9% of respondents name other issues, including one individual LSA respondent who named the PRP.

Table 2.4-1: Things that Affect Use and Enjoyment of Property

	RSA		LSA		Other Calgary	
	%	n	%	n	%	n
No issues/satisfied	13	99	13	51	12	48
Amount of traffic/road system	12	98	10	39	14	53
Availability of parks, recreation, schools	11	90	11	44	12	45
Quiet, friendliness of community / neighbours	9	74	7	27	11	41
Accessibility of amenities	9	70	9	37	9	34
Impact of f City Services	7	55	6	23	8	29
Property ownership / pride / privacy / cleanliness	5	39	7	27	4	16
Landscape, yard/maintenance	5	38	4	18	5	19
Safety of property	4	35	7	27	3	13
Weather conditions	4	33	4	15	4	17
Population density / development / construction activities	4	30	3	13	4	16
Amount of noise"	3	23	2	8	3	13
Safety of community	3	23	2	10	3	12
Garbage in community / neighborhood/ cleanliness	3	23	2	10	3	12
By- laws: enforcement, impact on activities	2	17	2	8	2	9
Level of taxes, costs of services	2	17	2	8	2	9
Personal health	1	11	1	6	1	5
Homeless people, affordable housing nearby	0	1	0	2	0	0
Airport traffic, expansion	0	1	0	1	0	0
Other	3	22	2	10	3	11
Don't know/refused	21	166	23	93	20	77
N		787		402		385

Note: Percentages sum to more than 100% since two responses were accepted. Q6

The second question in the series asked what people feel is the most important attribute or feature of their community that needs to be maintained or enhanced to support community well-being in the next decade. As can be seen in Table 2.4-2:

- A variety of things or issues are volunteered, indicating the wide spectrum of interest people have in what they value.
- Social Assets – By a wide margin compared to other attributes, the public wants to maintain or enhance the Social Assets of their community. Approximately 49% of respondents name one of several attributes - community parks and green spaces (25%), community centres, facilities and activities (10%), the sense of community (9%), recreational facilities and programs (5%), and community culture (1%).
 - This topic area is equally important in the LSA, RSA and the rest of Calgary. Notably, women are more likely than men to mention access to community parks and green space.

Table 2.4-2: Community Attributes to Maintain or Enhance

	RSA		LSA		Other Calgary	
	%	n	%	n	%	n
Issues related to Social Assets:	49		51		49	
Quality / Access to community parks and green spaces	25	197	24	95	26	99
Community centers / facilities / activities	10	77	11	45	9	35
Sense of community	9	67	9	38	8	31
Quality / Access to recreational facilities and programs	5	36	5	19	4	17
Community culture	1	11	1	6	1	5
Churches/church organizations	0	2	1	3	0	0
Issues related to Physical Assets:	29		20		33	
Quality / maintenance of infrastructure	11	86	8	34	12	47
Quality / access to public transportation	5	39	3	12	6	23
Reducing traffic	4	35	2	9	5	21
Quality maintenance of homes/private property	3	21	2	9	3	11
Garbage collection / recycling / cleanliness	3	24	2	7	4	14
Improvements for snow removal	2	20	2	9	3	10
Issues related to Human Assets:	22		24		21	
Quality / Access to education/schools	7	53	8	34	6	23
Quality / access to services/facilities	5	38	4	17	5	20
Policing to lower crime rates	4	28	4	16	3	13
Quality / Access to healthcare	3	24	2	10	3	13
Quality / Access to police and fire services	3	25	4	17	3	10
Quality / access to social services	0	2	0	1	0	1
General - Individual and Community Well-being	4		4		4	
Sense of personal safety/security	4	34	4	16	4	17
Issues related to Economic Assets:	3		0		3	
Control government spending/taxes	2	12	0	2	2	8
Employment Opportunities	1	4	0	2	1	2
Poverty/homelessness	0	2	0	1	0	1
Issues related to Natural Assets:	0		0		0	
Noise levels	0	3	0	2	0	1
Other responses:						
Satisfied/keep things as they are	8	61	7	27	8	32
Better urban planning / growth management	7	57	3	14	9	35
Other	5	40	5	19	5	20
Don't know/refused	6	50	10	42	4	17
<i>N</i>		787		402		385

Note: Percentages sum to more than 100% since two responses were accepted. 0 indicates less than .5%.Q7

- Physical Assets – 29% of respondents name one of several attributes related to the Physical Assets of their community, including - maintaining the community's infrastructure (11%), public transportation (5%), reducing traffic (4%), the quality of the housing stock (3%), waste collection (3%), and snow removal (2%).
 - A higher proportion of respondents in Other Calgary (33%) than the LSA (20%) name attributes related to Physical Assets. They are more likely to name each of the individual elements of this asset.
- Human Assets – 22% of respondents name one of several attributes related to Human Assets, including - education (7%), services and facilities (5%), policing (4%), healthcare (3%), and police and fire services (3%).
- Fewer than 5% of the respondents name other attributes or features of their community that needs to be maintained or enhanced to support community well-being for the next decade. 14% in total state they are satisfied with things as they are or "don't know".

The last question in the series asked what people feel is the greatest threat to their community's well-being in the next decade. As can be seen in Table 2.4-3:

- Human Assets – 32% of respondents name one of several attributes related to the human assets of the community. One issue is most dominant, crime, named by 24% of the respondents. Other human asset threats are the lack of city services (5%), poor quality healthcare (2%), and access to services (1%).
 - While a similar proportion of the LSA, RSA and Other Calgary respondents name Human Assets, respondents in the LSA are more likely to name crime.
- Physical Assets – 32% of respondents name a Physical Assets item that is threatened or a threat to their community's well-being. The dominant response is growth and development followed by traffic and congestion. A few respondents name housing issues.
 - A higher proportion of respondents in Other Calgary (33%) than the LSA (28%) name attributes related to Physical Assets, in particular traffic and congestion.
- Economic Assets – Approximately 16% of respondents name an economic issue as a threat to their community's well-being. No one specific issue is dominant – 4% each name the state of the economy or government leadership, 3% mention transportation issues, 2% each name price increases or taxation, and 1% name poverty as a threat.

- A higher proportion of Other Calgary respondents (19%) than LSA respondents (11%) name economic issues.

Table 2.4-3: Greatest Threats to Community Well-being

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Issues related to Human Assets:	32		34		31	
Crime	24	189	28	113	22	85
Lack of city services	5	42	4	17	6	23
Poor quality healthcare	2	14	1	5	2	8
Access to services	1	5	1	3	1	2
Issues related to Physical Assets:	32		28		33	
Growth/developments/expansions	17	136	15	62	18	70
Traffic and construction	10	76	7	27	11	43
Housing: rundown, low income, more high rises	5	37	6	23	4	16
Issues related to Economic Assets:	16		11		19	
State of the Economy	4	33	4	15	4	17
Government/leadership	4	31	1	5	5	20
Transportation issues	3	25	1	4	4	16
Rising prices/cost of living	2	15	2	7	2	8
Taxes	2	14	1	5	2	8
Poverty/homelessness	1	11	2	8	1	4
Issues related to Natural Assets:	4		3		5	
Lack of Green space	2	14	1	5	2	8
Environment	2	20	2	7	3	11
Issues related to Social Assets:	2		4		1	
Lack of respect for people / community	2	18	4	17	1	5
General - Individual and Community Well-being	2		1		2	
Lack of feelings of personal safety	2	16	1	6	2	9
Other responses:						
Nothing/no threat	12	91	12	50	11	43
School closing	0	0	0	0	0	0
Other	4	28	5	20	3	11
Don't know/refused	13	98	14	57	12	45
<i>n</i>		787		402		385

Note: Percentages sum to more than 100% since two responses were accepted. 0% indicates less than .5%. Q8

- Fewer than 5% of respondents name any other threats to their community's well-being. Notably however, 12% state that there is "no threat" and 13% could not name a threat. In total, 25% of respondents felt there was no threat to their community's well-being.

3 THE CALGARY INTERNATIONAL AIRPORT

3.1 CURRENT SITUATION

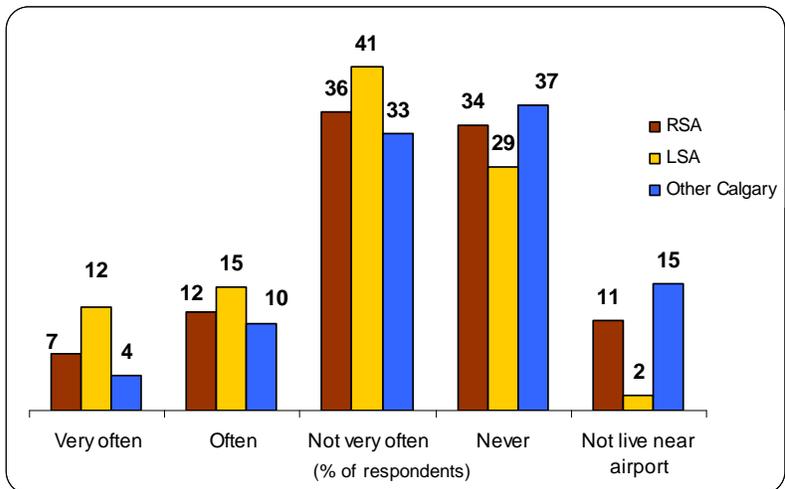
Respondents were asked how often in their “day-to-day living” they “think about the fact that (they) live near the Calgary International Airport”. At this point in the survey the issue of the PRP had not been raised through the survey instrument.

The results indicate that not only does the airport not arise as a volunteered issue, but the majority of respondents, including those in the LSA, do not appear to think frequently about living near the airport, suggesting that the airport is a well established and accepted feature in the area that does not dominate most of the people’s day-to-day living

As can be seen in Figure 3.1 and detailed in Table 3.1, very few respondents think about the airport “very often” (7%), and in total 19% think about living near the airport “very often” or “often”. Key findings are:

- Examining the response “very often”, there is a significant difference between respondents who are in the LSA (12%) and Other Calgary (4%). In total, 27% of the LSA respondents think about living near the airport at least “often” versus 14% in the RSA.

Figure 3.1: Think About Living Near the Airport



- While a core group of respondents think about living near the airport, the majority of respondents, including those in the LSA (70% “not very often” and “never”) do not think about the proximity of the airport. One-third of RSA respondents “never” think about the fact that they live near the Calgary International Airport.

Table 3.1: Think About Living Near the Airport

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Very often	7	283	12	50	4	16
Often	12	94	15	60	10	40
Not very often	36	54	41	166	33	128
Never	34	269	29	118	37	141
Not live near airport	11	85	2	7	15	59
<i>n</i>		785		401		384

Note: Percentages may not sum to 100% due to rounding. Cases may not sum to the total samples since 'no response' is excluded. Q9Q9

Self-assessments of how frequently respondents think about living near the airport are broadly based in that there are no differences in responses by the demographic characteristics of respondents. Respondents who live in LSA think about it more frequently than respondents who live further from the airport. Respondents who themselves or a household member is employed at the airport or is involved in the aviation industry are more likely to think about living near the airport on a daily basis.

3.2 FAMILIARITY WITH PLANS FOR A NEW AIRPORT RUNWAY

At this point in the survey instrument respondents were read the following:

The Calgary International Airport frequently exceeds its current runway capacity, which means aircraft are often waiting to arrive and depart Calgary International Airport, resulting in frequent airline delays and increased emissions from idling aircraft. In response, the Calgary Airport Authority is moving forward with the development of a new runway at the Calgary International Airport. The new runway will require a \$500 million investment by The Calgary Airport Authority. In anticipation of a new runway, a land use regulation was put in place in 1979 that restricted development in areas that could be affected by aircraft noise. The Airport Vicinity Protection Area or AVPA Regulation has provided noise protection for surround neighbourhoods for decades, and will continue to protect existing communities for years to come. The regulation also allows new development to proceed in a manner that is compatible with airport operations now and in the future.

The new Runway Project itself will involve typical construction activity on the airport site and modifications to the road network both on and off the airport site, including the closure of Barlow Trail between 48 Avenue NE and Airport Road. Once in operation, the Calgary International Airport will be able to handle more aircraft, more effectively than today.

Respondents were asked to assess how much they have heard about plans to build a new runway. As can be seen in Figure 3.2 and in the detailed Table 3.2-1:

- There is fairly high awareness of the PRP at this stage of planning. Approximately 57% of respondents have heard at least “a little” about plans to build a new runway. A higher proportion has heard “a little” than “very much”. Notably, 30% have heard “nothing at all”.
 - The Calgary averages however are skewed by area responses. Local Study Area respondents (33%) are significantly more likely to have heard “very much” than Other Calgary (18%). In total, 63% in the Local Study Area and 53% in Other Calgary have heard something about the Project.

Figure 3.2: Heard about Plans to Build a New Runway

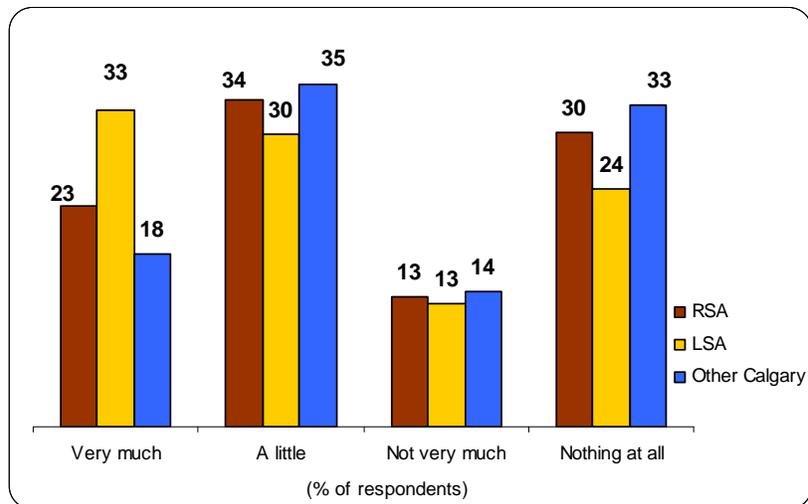


Table 3.2: Heard about Plans to Build a New Runway

Heard:	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Very much	23	178	33	131	18	68
A little	34	263	30	121	35	135
Not very much	13	106	13	51	14	53
Nothing at all	30	237	24	98	33	127
<i>n</i>		784		401		383

Note: Percentages may not sum to 100% due to rounding. Cases may not sum to the total samples since ‘no response’ is excluded. Q10

3.3 POTENTIAL FOR CHANGES IN OVERALL COMMUNITY WELL-BEING

A small minority of respondents anticipates any sort of positive or negative change in the overall well-being of their community that would result from the PRP at the Calgary International Airport. As can be seen from Table 3.3 on the next page:

- 30% of the respondents anticipate a change in the overall well-being of their community, while 65% do not anticipate any sort of change.
 - LSA respondents (38%) are more likely to anticipate a change than respondents in the RSA (30%) and those living in the remainder of Calgary (26%).
- Physical Assets - When it comes to enquiring among these respondents what changes to their community's overall well-being they anticipate as a result of the PRP, 73% of them anticipate that the project will change in the Physical Assets of their community.
 - LSA respondents (87%) are more likely to volunteer a change to the Physical Assets of the city than respondents in the RSA (73%) or those living in the remainder of Calgary (64%).

Across the RSA, the volunteered Physical Asset responses are evenly split between positive effects (37%) or negative effects (37%). The top benefit that is anticipated from the PRP is improvement to airport operations and more efficiency for the traveller (16%), followed by improved access to the airport (7%); 4% each mention reduced traffic or convenient transportation option, and 3% improved infrastructure.

The primary adverse effects on Physical Assets that are anticipated are increased traffic (19%), followed by the disruption to traffic patterns (5%), the closing of the Barlow Trail (5%), decreased access to the airport (4%) and a desire for a new tunnel to the airport (3%) to facilitate access following the closure of Barlow Trail.

- Across the LSA, respondents (61%) are much more likely to identify an adverse Physical Asset change than in the RSA (37%) and Other Calgary (20%),
- Overall, the pattern of responses as to the benefits or adverse effect is, however, similar in both areas. That is improvements to the airport operations are the primary benefit, and increased traffic the primary adverse effect.

Table 3.3: Potential Effects on Community Well-being

	RSA		LSA		Other Calgary	
	%	n	%	n	%	n
No	65	513	57	228	69	267
Not sure	5	36	5	22	4	16
Yes	30	238	38	152	26	102
<i>N</i>		787		402		385
Yes, Change:						
Issues related to Physical Assets:	73		87		64	
<i>Beneficial Effect</i>	37		26		44	
Improved airport operations / more efficient travel	16	38	13	19	19	19
Improved access to the airport	7	17	5	7	9	9
Reduced traffic levels	4	9	3	5	4	4
Convenient transportation options	4	10	1	2	6	6
Improved infrastructure - General	3	7	1	2	4	4
Positive effect - LRT/train access	2	4	1	2	2	2
Improved airport - General	1	3	1	2	1	1
<i>Adverse Effect</i>	37		61		20	
Increased traffic levels	19	46	29	44	13	13
Disruption to traffic patterns / finding alternative routes	5	12	11	16	1	1
Closure of the Barlow Trail	5	13	11	16	2	2
Decreased to access the airport	4	9	7	10	2	2
They should provide a tunnel	3	7	5	7	2	2
Issues related to Economic Assets:	24		20		27	
<i>Beneficial Effect</i>	23		20		25	
Enhanced economic growth	18	42	18	27	18	18
Increased tourism	5	12	2	3	7	7
<i>Adverse Effect</i>	2		0		3	
Increased taxes	2	4	0	0	3	3
Issues related to Natural Assets:	24		29		21	
<i>Beneficial Effect</i>	7		5		8	
Better for environment/lower gas emissions	5	12	2	3	7	7
Reduce noise levels	2	5	3	5	1	1
<i>Adverse Effect</i>	17		24		13	
Increased noise	17	41	24	36	13	13
General - Individual and Community Well-being	9		7		10	
Beneficial Effect - General	6	14	3	4	8	8
Adverse Effect - General	3	7	5	7	2	2
Issues related to Human Assets:	2		2		2	
Increased pollution	2	5	2	3	2	2
Other responses:						
No effect	4	10	1	2	6	6
Other	4	9	6	9	2	2
Don't know/refused	5	11	5	7	5	5
<i>N</i>		238		152		102

Note: Percentages to Q12 sum to more than 100% since two responses were accepted. Category percentages may not sum to their individual responses due to rounding. 0% indicates less than .5%. Q11,12

- Economic Assets – 24% of respondents anticipate that the PRP will result in a change in the Economic Assets of their community with almost all of these respondents citing the financial benefits (23%) of the project, which is related to the anticipated enhanced economic growth (18%).
- Natural Assets – 24% of respondents anticipate that the PRP will result in a change in the Natural Assets of their community, although more of the responses relate to an adverse effect (17%) than a beneficial effect (7%). Even though the questionnaire introduction to the issue cited noise protection for the surrounding neighbourhoods, increase noise (17%) is seen as the primary adverse change anticipated as a result of the PRP. Volunteered benefits are that it will be better for the environment with lower gas emissions from fewer aircraft waiting to arrive and depart (5%).
- Local Study Area respondents (29%) are more likely to volunteer a change to the Natural Assets of the city than respondents elsewhere, and more specifically they are more likely to cite increased noise (24% LSA vs 17% RSA and 13% Other Calgary).
- Ten percent or fewer respondents name other positive or negative changes in their community's overall well-being as a result of the PRP. Those that are named are fairly general in nature.

3.4 POTENTIAL FOR CHANGES IN RESIDENT'S ATTITUDES

Respondents were also asked whether they anticipated that the PRP was likely to change their attitudes on several topics. If they responded in the affirmative, they were asked to indicate the degree to which they anticipated a change in their attitudes. These results are provided in Table 3.4-1. Column one is the percentage of respondents who do not anticipate any change their attitudes as a result of the PRP; column two indicates those who are unsure whether they would change their attitudes or could not state how their attitudes would change; and columns three and four are the percentages who anticipate either a positive or adverse change in their attitudes as a result of the PRP.

Overall the vast majority of respondents do not anticipate changing their attitudes, although LSA respondents are more likely to anticipate some changes in the attitudes towards their personal well-being.

The noteworthy points from Table 3.4-1 are:

- **Satisfaction with living in their community** - The PRP is not anticipated to change people's satisfaction with living in their community for 82% of the RSA respondents. Among the 15% who anticipate a change in their satisfaction with the community, 6% anticipate that their satisfaction will decrease, and 9% anticipate that their satisfaction will increase. Very few (2%) anticipate "a great deal" of change.

- Approximately 71% of LSA respondents do not anticipate any change in their satisfaction with living in their community. Among those who anticipate a change, 11% believe their satisfaction will decline and a similar percentage, 10%, anticipates that it will increase. Taken together, approximately 81% of the LSA public do not anticipate an adverse effect on their satisfaction with living in their community because they say they will not change their satisfaction or their satisfaction will improve. Only 3% in the LSA respondents anticipate their satisfaction will decline “a great deal”.

Table 3.4-1: Potential Effects on Attitudes

	No change	Not sure	Change Attitudes:			
			Go down		Go up	
			Great deal	Some	Some	Great deal
			%	%	%	%
Satisfaction with living in your community						
RSA	82	4	2	4	8	1
<i>N</i>	647	33	13	28	61	5
LSA	71	7	3	8	9	1
<i>N</i>	286	27	14	33	36	6
Other Calgary	88	3	1	1	7	0
<i>N</i>	337	11	3	5	28	1
Feeling of personal health and safety						
RSA	89	3	1	2	3	1
<i>N</i>	702	21	10	16	28	10
LSA	85	3	1	5	4	2
<i>N</i>	343	12	5	20	15	7
Other Calgary	91	3	1	1	3	1
<i>N</i>	351	10	5	2	13	4
Think about living near the Calgary International Airport site						
RSA	82	4	2*	2*	7 [!]	2 [!]
<i>N</i>	649	33	13	17	57	18
LSA	71	5	3	4	13	3
<i>N</i>	285	19	14	16	54	14
Other Calgary	88	4	1	1	4	2
<i>N</i>	339	15	3	5	16	7

Note: Percentages may not sum across to 100% due to rounding. Q16, 17, 20 * “less than today”. ! “more than today”.

- Feeling of personal health and safety** - 89% of the RSA respondents do not anticipate any change in their feelings of personal health and safety as a result of the PRP. Among the 7% who anticipate a change, 4% anticipate that their feeling of personal health and safety will increase, and 3% anticipate a decline. Only 1% anticipates “a great deal” of adverse change.
- While the clear majority of LSA respondents do not anticipate a change in their feelings of personal health and safety, the percentage who state “not” is significantly lower than for Other Calgarians (85% vs. 91).

Approximately 12% in the LSA anticipate a change (versus 6% in the remainder of Calgary). Very few people in the LSA anticipate that their feeling of personal safety will go down (6%, of whom 1% state “a great deal”), supporting previous results indicating that airport operations are not major influences on people’s feelings of health and safety.

- **How often they think about living near the Calgary International Airport site** - 82% of the RSA respondents do not anticipate any change in their frequency of thinking about living near the Calgary International Airport as a result of the PRP. In the RSA, approximately 13% anticipate a change from today. This proportion of the population is consistent with and similar to those anticipating a change in their satisfaction with community. Only 2% of respondents anticipates “a great deal” of adverse change, indicating that the presence of the airport and its operations are not a top-of-mind issue amongst RSA respondents
- While people living in the LSA tend to think about the fact that they live near the airport more frequently on a day to day basis, a large proportion of the population (71%) in the LSA do not anticipate any change in how frequently they think about living near the airport. These results suggest that the airport is a well established land use in the LSA to which most people have grown accustomed. Nevertheless, approximately 23% in the LSA anticipate that the PRP will result in a greater awareness of the airport and its operations, largely due to changes in noise, air traffic patterns and road traffic. About 16% state that they are likely to think about living near the airport more frequently than today, although only 3% state “a great deal” more frequently.

3.5 POTENTIAL CHANGES IN BEHAVIOUR/ ACTIVITIES

After giving some consideration to the implications of the PRP to personal and community well-being, respondents were asked whether they anticipate that the PRP would result in any changes to their own attitudes and behaviours that may be a result of the PRP, and if they responded in the affirmative, they were asked to indicate the degree to which they anticipate a change in their attitudes and behaviours.

As a general conclusion, the results indicate that the majority of respondents do not anticipate many changes as a result of the PRP, which strongly suggests that socio-economic effects resulting from changed attitudes and behaviours are likely to be minimal, if measureable at all.

Table 3.5-1 provides the detailed responses to a question on whether people anticipate a change to their use of outdoor recreational areas such as bikeways, golf courses and community parks nearest the Calgary International Airport site. Column one is the percentage of respondents who do not anticipate any change their behaviour as a result of the PRP; column two indicates those who are unsure whether they would change their behaviour or could not state how their behaviour would change; and columns three and four are the percentages who anticipate either a positive or adverse change in their behaviour as a result of the PRP.

Several points that relate to Table 3.5-1 are notable:

- The vast majority of RSA respondents (86%) do not anticipate any change in their outdoor recreational activities. The small proportion of respondents who state “not sure” (9%) suggests that people are firm in their behavioural intentions. The remainder of 6% anticipate a change in their outdoor activities; they are split between increased or decreased use. The percentage of people who are most likely to change their behaviour (increase or decrease their use “a great deal”) is minimal, with only 1% anticipating a decrease in their use of these outdoor recreational areas. Given that people do not always act on their stated behaviour intentions, these results indicate that across the RSA, changes to people’s outdoor recreational activities are not likely to be measureable once the PRP has been completed.
- The vast majority of LSA respondents (83%) do not anticipate any change in their outdoor recreational activities. The small proportion of respondents who state “not sure” (8%) suggests that LSA respondents are also firm in their behaviour intentions. The remainder of 9% anticipate a change in their outdoor activities; they are split between increased or decreased use. The percentage of people who are most likely to change their behaviour (increase or decrease their use “a great deal”) is also minimal; only 2% anticipate that they will decrease their activities “a great deal” and 5% in total anticipate a decrease.
- Although LSA respondents are more likely to anticipate a change in their outdoor recreation activities than Other Calgary respondents (88%), these results indicate that across the LSA and Other Calgary, changes to people’s outdoor recreational activities are not likely to be measureable once the PRP has been completed.

Table 3.5-1: Potential Effects on Outdoor Recreational Activities

	No change	Not sure	Change Behaviour:			
			Decrease		Increase	
			Great deal	Some	Some	Great deal
	%	%	%	%	%	%
Outdoor recreation activities						
RSA	86	9	1	2	2	1
<i>n</i>	680	71	8	12	13	5
LSA	83	8	2	3	3	1
<i>n</i>	335	31	8	12	11	5
Other Calgary	88	10	1	1	1	0
<i>n</i>	338	37	2	3	4	1

Note: Percentages may not sum across to 100% due to rounding. 0% indicates < .5%. Q13

This public attitude research study placed some importance on understanding the effects on people’s day-to-day travel patterns. This was because of the need to close Barlow Trail to accommodate the PRP, and no other tangible measures to facilitate access to the airport were being examined by the Airport Authority at that time.

As can be seen from Table 3.5-2, the majority of Calgarians across the RSA, do not anticipate that the PRP will result in a change in how or where they travel on a day-to-day basis. In particular:

- Across the RSA, 85% do not anticipate a change in their travel patterns while 13% anticipate a change. As expected, LSA respondents are more likely to anticipate a changes (24% LSA vs. 8% in the rest of Calgary) due to their proximity and greater frequency of use of Barlow Trail on a daily basis.

Table 3.5-2: Potential Effects on Day-to-Day Travel Patterns

	RSA		LSA		Other Calgary	
	%	n	%	n	%	n
No	85	669	76	304	90	345
Not sure	2	13	1	3	2	8
Yes	13	105	24	95	8	32
<i>N</i>		787		402		385
Yes, Change:						
Will need to take alternative routes/detours	36	38	40	38	31	10
Will experience more traffic / congestion	32	34	35	33	28	9
Adverse Effect - Closure of Barlow Trail	19	20	19	18	19	6
Will be difficult to access the airport	8	8	4	4	13	4
Improvements with flights	4	4	2	2	6	2
Will increase in travel distance / time	4	4	4	4	3	1
No Effect - Closure of Barlow Trail	3	3	5	5		
It will be easier to travel around	3	3	2	2	3	1
Other	6	6	5	5	6	2
Don't know/not sure	6	6	3	3	9	3
<i>N</i>		105		95		32

Note: Percentages to Q15 sum to more than 100% since two responses were accepted. Q14,15

- Regardless of their location, respondents who anticipate a change to their day-to-day travel patterns describe two primary ways in which these daily travel patterns are anticipated to change in comparison to today:

Between 31% and 40% of the 13% who indicated a change stated the PRP, including the closure of Barlow Trail would require them to take alternative routes to the destinations, and between 28% and 35% of the 13% who indicated a change anticipate that the PRP would result in more traffic and congestion on their day to day travel routes.

Across all study areas, there is a consistent proportion of respondents, (19% of the 13% who indicated a change) who attribute an adverse effect to the closure of Barlow Trail.

- 8% or fewer provide other examples of how their travel patterns will changes.
 - As noted earlier significantly more LSA respondents anticipate a change to their daily travel patterns. While a higher percentage of them anticipate taking alternate routes (40% vs. 31%) and more traffic (35% vs. 28%), the type of potential effects are similar to the RSA and Other Calgary respondents. The primary difference is that three times as many LSA respondents as Other Calgary respondents anticipate having to change their daily travel patterns as a result of the PRP

This public attitude research study also placed some importance on understanding the effects on people’s use and enjoyment of property. This was because the PRP represents a major construction project within an urban area, which would results in some nuisance effects from traffic, construction noise and dust, and because there is potential for long term changes in noise levels within the RSA, and the LSA in particular as a result of the operation of the new runway. Private property is considered an important Social Asset because of its role in providing residents with a place to undertake a variety of social activities. The use and enjoyment of property also provides opportunities for interaction among neighbours. The ability to use and enjoy one’s property is considered a major determinant of one’s satisfaction with community.

Almost all RSA and LSA residents do not anticipate any changes to their use and enjoyment or their property (92%) resulting from the PRP. As can be seen in Table 3.5-3, only 6% anticipate any sort of change. Of those respondents anticipating a change, the two most prevalent responses are disruptions due to noise (36% of the 6%) or due to increased air traffic (22% of the 6%).

Table 3.5-3: Potential Effect on the Use and Enjoyment of Property

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
No	92	722	86	345	95	364
Not sure	2	17	3	13	2	6
Yes	6	49	11	44	4	15
<i>N</i>	787		402		385	
<i>Yes, Change:</i>						
Disruption due to increased noise	36	18	43	19	27	4
Disruption due to increased air traffic	22	11	23	10	20	3
Increased pollution	8	4	5	2	13	2
Changed community due to growth	4	2	2	1	7	1
Would spend less time outside	9	5	11	5	7	1
No change/same	5	3	5	2	7	1
Would move/relocate	7	3	11	5	0	0
Other	20	10	20	9	20	3
Don't know/refused	8	4	5	2	13	2

<i>N</i>		49		44		15
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Note: Percentages to q22 sum to more than 100% since two responses were accepted. Q21,22

- A lower percentage of LSA respondents (86%) compared to Other Calgary respondents (95%) do not anticipate a change. Among the 11% who anticipate a change, 43% (of the 11%) anticipate disruptions due to increased noise, 23% (of the 11%) anticipate disruptions due to increased air traffic, and 11% (of the 11% who anticipate a change) each would spend less time outside or would move. These findings must be interpreted as a guide to the potential for effects given the small number of respondents who anticipate a change in their use and enjoyment of their property and the fact that they are yet to personally experience the changes in noise and traffic resulting from the PRP, whether they will be noticeable or not.

At this point in the survey, respondents had considered the potential for effects of the PRP on themselves and their community's well-being. The data in Table 3.5-4 indicate that the vast majority of respondents (between 83% LSA and 91% RSA) do not anticipate that the PRP will affect their decision to live in the community.

Table 3.5-4: Potential Effects on Decision to Live in the Community

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
No	91	712	83	335	94	362
Not sure	2	16	1	6	2	9
<i>Yes, Potential impact:</i>						
Would move/relocate due to noise	3	21	6	24	1	4
Would move/relocate - General	1	11	2	10	1	3
Would move/relocated due to traffic	1	9	2	9	1	2
Would move/relocate-due to increase air traffic near my home	1	6	2	7	0	1
Other	1	9	1	5	1	4
Don't know/refused	0	4	1	6		
<i>N</i>		787		402		385

Note: Percentages may not sum to 100% due to rounding. 0% indicates less than .5%. Q23

- While the proportion in the LSA respondents who do not anticipate a change in their decision is significantly lower than in the rest of Calgary, nonetheless 83% state "no effect". Of those LSA respondents (approximately 16%) who anticipate that they would consider moving due to the PRP, the major reasons offered were noise (6%) and traffic (2%).

4 COMMUNICATIONS OPPORTUNITIES FOR THE AIRPORT AUTHORITY

4.1 PREFERRED SOURCES FOR INFORMATION

To assist the Calgary Airport Authority in keeping residents informed and involved in activities at the Calgary International Airport, respondents were asked their preferences for information sources. The following summarizes the key findings from Table 4.1:

- Regardless of where respondents live one-third of them name television or radio advertising (34% in the Local Study Area and 38% in Other Calgary) as their preferred source of information. Women are more likely to name this source than men.

Table 4.1: Preferred Sources to be Kept Informed and Involved in Activities at Calgary International Airport

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Television or radio spots or advertising	37	290	34	137	38	147
Newspaper articles or advertising	28	224	23	94	31	119
Newsletters	10	75	13	53	8	30
Web-sites	9	74	9	38	9	36
Meetings with local organizations	4	34	5	21	4	15
Open houses	4	28	5	22	3	10
Email	3	27	5	19	3	11
Not wish further information	2	17	2	9	2	8
Don't Know/Refused	2	18	2	9	2	9
<i>N</i>		787		402		385

Note: Percentages may not sum to 100% due to rounding. Q23

- One-quarter of respondents (28% in the RSA) name newspaper articles or advertising.
- One-in-ten respondents prefer newsletters, with this information source more likely to be named in the LSA than elsewhere.
- Direct contact methods such as meetings and open houses are the preferred method for communication and involvement for between 10% LSA and 8% RSA respondents.

4.2 SUMMARY HIGHLIGHTS

- People's feelings of health and safety and their level of satisfaction with living in the community is high across Calgary and indeed across the RSA.

- Crime and safety are key issues facing the community and are considered potential threats to community well-being. The airport and the PRP are currently not issues on the public' agenda.
- Indeed, the majority of respondents do not think about living near the Calgary International Airport on a daily basis. Nonetheless, the majority have heard at least "a little" about plans to build a new runway.
- The vast majority of people do not anticipate many changes in their community or their own behaviours and activities as a result of the PRP. Indeed, a clear majority of RSA and LSA people also do not anticipate any changes as a result of the PRP.
- Among those who anticipate that the PRP will affect them or their community, both positive and adverse effects are anticipated, although very few people anticipate that they will change their behaviour or attitudes adversely. Noise and traffic are key areas of adverse effect, while economic development and operational efficiencies at the airport are the key positive outcomes anticipated by survey respondents.

5 TECHNICAL APPENDIX

5.1 SURVEY OVERVIEW

The survey was undertaken by telephone among a random sample of Calgary, Airdrie and Rocky Mountain residents who are 18 years of age and older; the sample was split between men and women. Interviews were conducted from October 13 to 17, 2009, and the average length was 13 minutes.

For this study IntelliPulse established a sample requirement such that the Local Study Area as defined by AECOM Canada had a confidence interval of $\pm 5.0\%$, 19 out of 20 times, and a similar level of confidence for the remainder of the City of Calgary. As presented in Table 5.1, this resulted in a disproportional sample allocation by area with a larger number of interviews conducted in the Local Study Area than would have been conducted with a proportional sample. The data for the Regional Study Area are weighted to compensate for the disproportional sample allocation.

Table 5.1: Sample Allocation by Area

	Population Count	% of Population	Proportional Sample Allocation	# of Interviews	Weight
Local Study Area	343,770	33	259	402	0.645
Other Calgary	699,122	67	528	385	1.370
Regional Study Area	1,042,892	100	787	787	

The confidence interval for the LSA sample of 402 interviews is $\pm 5.0\%$, the Other Calgary is $\pm 5.1\%$, and the weighted Calgary sample is $\pm 3.6\%$.

5.2 RESPONDENT PROFILE

At the conclusion of the survey respondents were assured of confidentiality and asked several questions about their personal and family characteristics. As is evident throughout this report, there are very few differences in responses by these characteristics.

As can be seen in Table 5.2-1, at the most 5% of the respondents are themselves or someone in their household is financially connected with the airline industry. Hence there are too few cases to draw meaningful comparisons in responses to almost all the questions.

Table 5.2-1: Member of Household Employed at Calgary International Airport or Involved in Aviation Industry

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Yes	3	26	5	19	3	10
No	97	760	95	383	97	374

Note: Percentages may not sum to 100% due to rounding. Q25

The majority of Local Study Area (61%) and Other Calgary (59%) respondents are relatively recent residents at their present address, having lived there for 10 or fewer years.

Table 5.2-2: Lived at Present Address

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Less than 2 years	11	88	12	47	11	42
2-10 years	48	377	49	198	48	182
11-20 years	21	163	23	91	20	76
21 or more years	20	154	16	65	21	82

Note: Percentages may not sum to 100% due to rounding. Q26

A range of ages are represented in the sample. Notably respondents in the Local Study Area are somewhat younger than those in the rest of Calgary. Slightly over one-fifth of the Local Study Area respondents are in each of the 35 to 44 and 45 to 54 age cohorts, while one-fifth are in each of the top 3 cohorts in Other Calgary.

Table 5.2-3: Age of Respondents

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Under 25 years of age	5	42	7	27	5	18
25-34	16	121	17	69	15	56
35-44	18	144	23	93	16	61
45-54	22	170	23	90	21	82
55-64	19	148	16	64	20	78
65 or older	20	157	14	56	23	88

Note: Percentages may not sum to 100% due to rounding. Q27

The sample was design to have a half the sample from each gender.

Table 5.2-4: Gender

	RSA		LSA		Other Calgary	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Male	50	391	50	200	50	191
Female	50	396	50	202	50	194

Note: Percentages may not sum to 100% due to rounding. Q28

5.3 RECORD OF CALL

Table 5.3 Details of Call Attempts

	Total
Total	19414
No answer	1282
Busy	41
Answering machine	2699
Modem / Fax	500
Not In Service	61
Operator intercept	3356
Line answered	1601
Default value	679
Business	108
Language barrier / No English	488
DQ B - Not 18 years or older and Calgary resident	11
DQ C - Not home telephone	9
Call back later to finish the survey	631
Quota full	39
Not available during field window	60
Refusal	6918
Refusal (Mid-survey)	144
Completed interview	787

5.4 QUESTIONNAIRE

1. What is the most important issue facing your community today? (PROBE) Is there a second major issue? (ACCEPT UP TO TWO RESPONSES)
 - 1.
 - 2.

 2. Generally speaking, how satisfied are you with living in your community? Are you very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?

Very satisfied	1
Somewhat satisfied	2
Not very satisfied	3
Not at all satisfied	4

 3. What one thing or issue has the greatest influence on your satisfaction with living in your community? (ACCEPT ONE RESPONSE...PROBE TO ENSURE CLARITY REGARDING WHETHER THIS IS A POSITIVE OR A NEGATIVE INFLUENCE)
 - 1.

 4. In general, how would you rate your overall feeling of your personal health and safety living in your community ? Would you rate your feeling of personal health and safety as ... READ RESPONSES

Poor	1
Fair	2
Not sure (Volunteered) / No Answer	3
Good	4
Excellent	5

 5. What one thing or issue has the greatest influence on your feelings of personal health and safety living in your community? (PROBE)? (ACCEPT ONE RESPONSE...PROBE TO ENSURE CLARITY REGARDING WHETHER THIS IS A POSITIVE OR A NEGATIVE INFLUENCE)
 - 1.
- Now I'd like to ask you a few questions about maintaining or enhancing the well-being of your community overall over the next ten years.
6. What things or issues in your community affect your use and enjoyment of your property the most? (PROBE) Is there a second thing or issue? (ACCEPT UP TO TWO RESPONSES)
 - 1.
 - 2.

 7. What do you feel is the most important **attribute or feature of your community** that needs to be maintained or enhanced to support community well-being in the next decade? Is there a second attribute? (ACCEPT UP TO TWO RESPONSES)
 - 1.
 - 2.

 8. What do you feel is the **greatest threat** to your community's overall well-being in the next decade? Is there a second item? (ACCEPT UP TO TWO RESPONSES)
 - 1.
 - 2.

9. In your day-to-day living, how often do you think about the fact that you live near the Calgary International Airport site... very often, often, not very often, or never?
- Never 1
 - Not very often 2
 - Often 3
 - Very often 4
 - Do not live near the airport site (volunteered)..... 5

READ SLOWLY The Calgary International Airport frequently exceeds its current runway capacity, which means aircraft are often waiting to arrive and depart Calgary International Airport, resulting in frequent airline delays and increased emissions from idling aircraft. In response, the Calgary Airport Authority is moving forward with the development of a new runway at the Calgary International Airport. The new runway will require a \$500 million investment by The Calgary Airport Authority. In anticipation of a new runway, a land use regulation was put in place in 1979 that restricted development in areas that could be affected by aircraft noise. The Airport Vicinity Protection Area or AVPA Regulation has provided noise protection for surround neighbourhoods for decades, and will continue to protect existing communities for years to come. The regulation also allows new development to proceed in a manner that is compatible with airport operations now and in the future.

The new Runway Project itself will involve typical construction activity on the airport site and modifications to the road network both on and off the airport site, including the closure of Barlow Trail between 48 Avenue NE and Airport Road. Once in operation, the Calgary International Airport will be able to handle more aircraft, more effectively than today.

10. How much have you heard about plans to build a new runway at the Calgary International Airport site? .
- Nothing at all 1
 - Not very much 2
 - A little 3
 - Very much 4
11. Considering your community's well-being today, do you anticipate any positive or negative changes in the overall well-being of your community that would result from the Runway Project at Calgary International Airport?
- No (Skip to Q13)..... 1
 - Not sure (Volunteered) (Skip to Q13) 2
 - Yes 3

IF YES:

12. What are the two most important changes in your community's overall well-being that you anticipate as a result of the Runway Project? (ACCEPT UP TO TWO RESPONSES...PROBE TO ENSURE CLARITY REGARDING WHETHER THEY ARE POSITIVE OR A NEGATIVE CHANGES)
- 1.
 - 2.
13. Thinking of where you go for outdoor recreational activities, do you anticipate any changes to your use of outdoor recreational areas such as bikeways, golf courses and community parks nearest the Calgary Airport site ?
- Do not conduct activity 1
 - No 2
 - Not sure (Volunteered) 3

Yes x

If YES:

B. Will your use READ RESPONSES	Increase a great deal	Increase somewhat	Decrease somewhat	Decrease a great deal	Not sure (VOL)
	6	5	4	3	2

14. Thinking about how and where you travel on a day to day basis, do you anticipate any changes to your day to day travel patterns?

No 1
 Not sure (Volunteered) 2
 Yes x

If YES:

15. In what ways might your day to day travel patterns change in comparison to your travel patterns today ? (ACCEPT TWO RESPONSES)

1.
2.

Do you foresee that the Runway Project ...

16. ... Is likely to change your satisfaction with living in your community?

No 1
 Not sure (Volunteered)..... 2
 Yes x

If YES:

B. Will your satisfaction with community... READ RESPONSES	Go up a great deal	Go up somewhat	Go down somewhat	Go down a great deal	Not sure (VOL)
	6	5	4	3	2

17.... Is likely to change your feeling of personal health and safety?

No 1
 Not sure (Volunteered)..... 2
 Yes x

If YES:

B. Will your feeling of personal health and safety... READ RESPONSES	Go up a great deal	Go up somewhat	Go down somewhat	Go down a great deal	Not sure (VOL)
	6	5	4	3	2

18. ... Might it change the image or character of your community?

No 1
 Not sure (Volunteered)..... 2
 Yes x

If YES:

B. Will your community's image or character... READ RESPONSES	Improve a great deal	Improve somewhat	Diminish somewhat	Diminish a great deal	Not sure (VOL)
	6	5	4	3	2

19. ...Might it change the economic development potential of your community?
 No 1
 Not sure (Volunteered)..... 2
 Yes X

If YES:

B. Will the economic development potential... READ RESPONSES	Improve a great deal	Improve somewhat	Diminish somewhat	Diminish a great deal	Not sure (VOL)
	6	5	4	3	2

20. Might it change how often do you think about the fact that you live near the Calgary International Airport site as compared to today?
 No 1
 Not sure (Volunteered)..... 2
 Yes X

If YES:

B. Are you likely to think about living near the Calgary Airport site....READ RESPONSES	A great deal more than today	Somewhat more than today	Somewhat less than today	A great deal less than today	Not sure (VOL)
	6	5	4	3	2

21. Do you anticipate any changes to your use and enjoyment of your property?
 No 1
 Not sure (Volunteered)..... 2
 Yes X

If YES:

22. In what ways might your use and enjoyment of property change in comparison to how you use and enjoy your property today ? (ACCEPT TWO RESPONSES)
 1.
 2.

23. Do you anticipate that the Runway Project at the Calgary International Airport site might affect your decision to live in your community?
 No 1
 Not sure (Volunteered)..... 2
 Yes X

If YES:

- How would the Runway Project affect your decision to live in your community ? (ACCEPT ONE RESPONSE)
 1.

24. How do you prefer that the Calgary Airport Authority keep you informed and involved in its activities at Calgary International Airport. Do you prefer (ROTATE)... (ACCEPT ONE RESPONSE)
 Web-sites..... 1
 Open Houses 2
 Newsletters 3
 Newspaper articles or advertisements 4
 Television or radio spots or advertisements 5
 Meetings with community organizations.....6

Email 7

DO NOT WISH TO BE FURTHER INFORMED OR INVOLVED (VOLUNTEERED).....7

Now I have a few final questions to help us classify your answers with other people we have interviewed.

25. Are you or is any member of your household a current employee at Calgary International Airport or involved directly in the aviation industry ?

No..... 1

Yes..... 2

26. How many years have you lived at your present address?

Less than 2 year 1

2 to 10 years 2

11 to 20 years 3

21 or more years..... 4

27. What is your age please? Are you ...?

Under 25 years of age..... 1

25 - 34 2

35 - 44 3

45 - 54 4

55 - 64 5

65 years of age or older 6

28. Gender (By Observation)

Male 1

Female 2

29. What is the name of your community / neighbourhood ?

1.

30. What is your postal code?

1.

Appendix B

Community Character and
Cohesion Analysis Data

Appendix B - Community Character and Cohesion Analysis Data

Zone	Calgary Residential Community	Human Assets						Economic Assets			Physical Assets				Social Assets			
		Population Density	Mobility	Children at Home	Immigrant Population	Recent Population Change	Current Population	Change in Household Income	Labour Force Participation	Housing Type	Housing Tenure	Housing Quality	Recent Development Activity	Transportation Access (i.e., C-Train Station, Deerfoot Trail / Stoney Trail Access)	Date Established	Social Isolation	Amount of Open Space (ha)	Key Community Facilities
Measure		Persons per Hectare	% Persons Moved (2005-2006)	Average Number (2006)	% Population (2006)	% Population Change (2008-2009)	Number of Persons (2009)	2005-2008 % Median Household Income Change (2006)	% Participation - 25 Year or Older (2006)	% Single Detached (2006)	% Owned (2006)	% Dwelling Requiring Major Repair (2006)	Total Recent Development Permits (2008, 2009)	Presence of C-Train Station or Direct Access to Deerfoot Trail or Stoney Trail (2009)	Year of Establishment	% Persons Living Alone (2006)	% Total Area	Presence of Community Center, Tennis Courts, Swimming Pool, Hockey Rink, Skating Rink, Sports/Playfields or Other Facilities
City of Calgary		30.3*	20.4	1.1	24.8	2.16	7,406*	1.8	75	57.8	72.8	4.9	37.3*		1962*	10.2	13.1*	
Northeast (Residential)	Albert Park/Radisson Heights	30.3 perspns	26.9	1.2	27.2	-2.34	6,047	-3.3	71.4	30.4	39.4	8.1	36	C-Train Deerfoot Trail	1910	11	19.5	Community Center, Hockey Rink, Outdoor Skating Rink, Sports/Playfield
	Castleridge	50.3	20.9	1.4	38.7	-3.68	6,096	-7.1	77.4	74.5	76.7	5.8	13	C-Train	1980	3.5	7.1	Community Center, Sports/Playfields
	Coral Springs	37.0	9.3	1.6	55.8	0.03	6,009	-8.9	79.8	93.8	96.6	0.7	21	Stoney Trail	1991	1	7.8	None
	Dover	24.8	20.8	1.1	19	-0.14	10,300	-4.2	73.8	44.7	68.4	6.3	32		1971	12.1	16.4	Community Center, Hockey Rink, Outdoor Skating Rink, Sports/Playfields
	Erin Woods	43.9	19.8	1.3	26.3	-1.62	6,972	2.4	86.3	80.8	80.8	3.6	28		1981	5.1	10.8	Community Center, Outdoor Skating Rink, Sports/Playfields
	Falconridge	47.0	22.5	1.4	32.2	0.51	10,130	-1.2	79.4	51.6	67.9	6	33		1979	4.5	10.6	Community Center, Sports/Playfields
	Forest Heights	41.1	18.7	1.2	36.8	0.34	6,168	-2.5	73.4	40.5	69.2	6.3	18		1959	6.4	8.6	Community Center, Indoor/Outdoor Skating Rink
	Forest Lawn	33.1	29.3	1	20	-1.74	7,676	-4.3	70	33	41.8	13.1	50		1910	10.4	5.2	Community Center, Swimming Pool, Sports/Playfields
	Marlborough	30.8	18.7	1.1	33	-2.15	8,176	-5	72	68.9	70	5.7	29	C-Train	1967	6.7	9.5	Community Center, Sports/Playfields
	Marlborough Park	34.4	18.2	1.3	27.7	0.21	8,554	1.4	76	64.2	82.5	5.3	26		1972	5.4	13.5	Community Center, Tennis Courts, Outdoor Skating Rink, Sports/Playfields
	Martindale	45.7	19.8	1.4	39.4	0.63	12,406	-2.8	81.1	92.1	87.5	2.7	49		1983	3.2	16.8	Hockey & Outdoor Skating, Rink, Sports/Playfields, Basketball Courts, Teen Park
	Mayland Heights	29.3	18.4	0.9	17.3	-0.92	5,931	-8.2	69.5	43.2	58.3	4.8	30	Deerfoot Trail	1962	13.2	13.9	Community Center, Outdoor Skating Rink
	Monterey Park	32.3	14.8	1.4	48.7	0.36	10,536	-3.5	70.7	78.9	91.2	2.1	26	Stoney Trail	1985	3.2	7.9	Community Center, Tennis Courts, Sports/Playfields
	Pineridge	37.1	19.2	1.2	29.5	0.31	9,808	-4	75	46.2	69.9	5.8	26		1974	9.2	11.3	Community Center, Outdoor Skating Rink
	Rundle	42.6	22.3	1.4	36.3	-0.94	11,252	-1.4	74.2	56.2	68.9	8.7	20	C-Train	1973	4.3	9.4	Community Center, Outdoor Skating Rink, Sports/Playfields, Hard Surface Rink
	Saddle Ridge	31.0	32.2	1.3	47	11.57	12,255	4.2	85.3	98	96.5	1	43	Deerfoot & Stoney Trail	1960	2.4	7.7	Community Center, Hockey Rink, Outdoor Skating Rink, Sports/Playfields
	Southview	13.1	17.7	1.2	24.6	-0.81	2,079	-12.8	63.6	64	59.9	8.7	23	Deerfoot & Stoney Trail	1950	10.6	10.4	Community Center, Outdoor Skating Rink
Taradale	49.1	25.8	1.4	47.8	10.18	14,515	7.3	82.8	85.3	90.7	1.8	41		1984	2.4	12.2	None	
Temple	41.9	15.4	1.3	32.5	0.67	10,999	0.2	78.6	62.3	75.5	6.6	32		1977	3.9	8.8	Community Center, Tennis Courts, Hockey & Outdoor Skating Rink, Sports/Playfields	
Vista Heights	19.5	20	1.2	22	5.21	2,220	-14.6	72.3	48	50.3	11.8	13	Deerfoot Trail	1962	5.5	31.4	Community Center, Outdoor Skating Rink	
Whitehorn	44.6	15.7	1.3	44.3	1.22	11,807	0.3	75.1	68.5	79.9	3.1	40	C-Train	1973	3.5	8.8	Community Center, Outdoor Skating Rink	
Skyview Ranch **	0.0	n/a	n/a	n/a	n/a	26	n/a	n/a	n/a	n/a	n/a	3	Stoney Trail	n/a	n/a	0.2	n/a	
Southeast	Acadia	27.1	21.7	0.8	20.7	-1.15	10,574	-3.5	69.2	45.5	60.1	6.2	58	Deerfoot Trail	1960	16	11.1	Community Center, Squash/Racquetball Courts, Indoor Skating Rink
	Douglasdale /Glen	19.5	11.6	1.2	22.3	0.29	11,749	n/a	79.9	94.3	97.2	1.8	66	Deerfoot Trail	1986	3.2	17.9	None
	Inglewood	13.1	26.8	0.7	12.7	-0.64	3,263	11.4	80.8	36.4	68.4	6	63	Deerfoot Trail	1929	24.1	41.5	Community Center, Tennis Courts, Swimming Pool, Outdoor Skating Rink
	Ogden	21.2	17.7	1	13.7	-1.07	8,692	-1.4	74.9	51	64.8	9.4	58	Deerfoot Trail	1912	10.8	23.7	Community Center, Indoor Swimming Pool, Indoor Hockey & Indoor Skating Rink
	Ramsay	21.9	29.5	0.8	18	-3.8	1,950	0.2	79.1	64.1	57.6	13.1	40		1914	19.9	13.5	Community Center, Outdoor Skating Rink
Riverbend	24.8	10.7	1.2	18.5	0.01	10,081	-1.1	82.4	93.5	95	2.8	34		1982	4.1	22.8	Community Center, Outdoor Skating Rink, Sports/Playfields	
Northwest (Residential)	Beddington Heights	37.3	17	1.3	29.3	0.82	11,951	-2.1	78.2	59	77.8	6.1	50		1979	6	10.9	Community Center, Hockey Rink, Outdoor Skating Rink, Sports/Playfields
	Bridgeland	16.9	31.2	0.7	22.5	-1.92	5,150	22.3	65.2	26.1	45.6	9.4	52	C-Train	1914	28.8	19.7	Community Center, Sports/Playfields
	Country Hills	19.5	17.8	1.1	21.7	1.91	3,684	-4	84.7	67.9	93.6	2.8	23		1990	9	11.1	Community Center, Swimming Pool, Skating Rink, Sports/Playfields
	Coventry Hills	38.0	25.5	1.1	23	4.17	15,688	1.8	88.4	95.1	95.4	1.1	66	Stoney Trail	1991	4.9	12.8	Community Center, Swimming Pool, Skating Rink, Sports/Playfields
	Crescent Heights	37.6	30.2	0.7	20.9	2.19	6,113	-0.4	82.4	29.1	45.3	8.7	72		1914	27.7	12.6	Community Center, Outdoor Skating Rink, Sports/Playfields
	Evanston	9.1	44.3	1.1	25.6	22.61	4,599	n/a	85.5	92.5	93.5	0	37	Stoney Trail	2007	2.7	10.3	None
	Greenview	44.2	34	0.8	27.1	1.93	2,004	-16.3	75.3	15.2	38.2	10.3	2	Deerfoot Trail	1991	20.2	9.6	Community Center, Hockey Rink, Indoor Skating Rink, Sports/Playfields
	Harvest Hills	33.7	18.4	1.2	19.4	0.34	7,434	-3.2	82.9	81.5	95.2	1.6	40		1990	4.6	9.1	Community Center, Swimming Pool, Skating Rink, Sports/Playfields
	Hidden Valley	28.8	14.3	1.4	25.9	0.3	11,772	0.6	82.8	88.9	95.4	0.5	36	Stoney Trail	1990	3.9	19.7	Tennis Courts (planned), Outdoor Skating Rink, Sports/Playfields
	Highland Park	26.1	30.7	0.7	15.3	-3.37	3,579	-13.9	73.2	24.7	34	12	28		1946	25.5	3.6	Community Center, Outdoor Skating Rink
	Highwood	22.8	16	1	13.4	0.46	2,165	-0.2	70.1	63.8	70.4	6.5	24		1954	11.8	6.6	Community Center, Outdoor Swimming Pool and Skating Rink, Sports/Playfields
	Huntington Hills	28.5	17.5	1	23.6	-0.2	13,594	-6.9	69.8	54.8	65.6	6.5	63	Deerfoot Trail	1967	9.5	15.5	Community Center, Curling/Hockey Rink, Indoor Skating Rink, Sports/Playfields
	MacEwan Glen	36.9	9.5	1.4	23	-1.56	5,233	4.1	80.6	87.5	90.4	3.9	18		1982	4.2	11.4	None
	North Haven	27.5	12.3	1.1	11.3	-1.32	2,323	18.3	63.6	61.8	67.4	5.3	9		1963	9.2	9.3	Community Center, Outdoor Skating Rink
	North Haven Upper	24.2	15	0.8	19.2	1.09	650	1.8	71.6	100	89.1	6.5	0		1954	5	11.4	Community Center, Outdoor Skating Rink
	Panorama Hills	26.5	24	1.3	41.7	15.09	16,444	-14.1	80.8	81.7	97.7	0.8	94	Stoney Trail	1997	4	13.7	Community Center, Swimming Pool, Skating Rink, Sports/Playfields
	Renfrew	21.4	22	0.8	18.2	0.92	5,698	16.2	78.8	37.9	64.3	7.6	85	Deerfoot Trail	1950	20.4	26.4	Community Center
Sandstone Valley	36.0	9.4	1.3	38.8	0.03	6,476	-6.9	73.5	78.4	91.9	2.9	23		1982	4.1	11.3	None	
Thorncroft	26.9	21.2	1	21.8	-0.2	8,792	2.7	70	52.4	68.5	6.1	42		1954	10.3	17.5	Community Center, Hockey Rink, Indoor Skating Rink, Sports/Playfields	
Tuxedo Park	34.7	28.5	0.8	21.4	0.64	4,594	-0.1	74.9	35.9	45.9	8.9	91		1929	22	2.4	Community Center, Outdoor Skating Rink, Sports/Playfields	
Winston Heights Mountain View	12.1	17.3	0.8	17.9	-0.25	3,632	17.2	72.4	42.1	69.8	5.8	52	Deerfoot Trail	1932	18.8	11.1	Community Center, Outdoor Skating Rink, Sports/Playfields	
Southwest	Downtown East Village***	47.0	24.3	0.3	31.9	5.7	2,448	-7.5	40	4.7	16.2	2.6	9	C-Train	1900	58.8	19.2	None

Legend:
 Highest
 Higher
 Approximately Same
 Lower
 Lowest

Notes: * indicates an average for the LSA and not the City of Calgary
 ** Skyview Ranch indicators not shaded due to lack of data in some cases, which skew results
 *** Year of Establishment for Downtown East Village listed as "early 1900s"