

Edmonton City Centre Airport Demonstration Plan

Economic Impact Analysis

June 15, 2009

Prepared for the City of Edmonton



Study Purpose

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- ▶ Determine the current and future economic and financial impacts of the redevelopment of the Edmonton City Centre Airport (ECCA).
- ▶ Consider the economic and financial impacts redevelopment will have on neighbouring and other affected lands.
- ▶ Complete a benefit cost analysis of the Demonstration Plan from the perspective of the City of Edmonton.



Summary of Results

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- ▶ Redevelopment of the ECCA Lands, as defined in the Demonstration Plan, is estimated to result in a net fiscal benefit to the City of Edmonton.
- ▶ This benefit, as measured by the equivalent to an average annual reduction in municipal taxes, averages 2.4% over the forecast period. The net benefit of redevelopment generally increases over the forecast period, reaching an equivalent tax benefit of 5% by the end of the forecast period.
- ▶ The overall benefit to the City of Edmonton resulting from redevelopment of the ECCA lands is estimated to total \$93 million (2009 \$ net present value over 35 years using a 10% discount rate). This benefit is expected to range between \$55 and \$168 million when the discount rate applied to future costs and revenues is varied by $\pm 3\%$.

Analysis Concepts

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- ▶ The Municipal Fiscal Impact analysis and Benefit-Cost analysis utilize several important concepts:
 - ▶ Incremental Impact: The economic impact analysis measures the change in economic circumstances resulting from redevelopment of the ECCA Lands as defined by the Demonstration Plan, as compared to a continuation of airport operations (Base Case).
 - ▶ Net Present Value: Brings all future costs and revenues to current day dollars (2009 \$).
 - ▶ Discount Rate: The net present value has been calculated using a real discount rate of 10% (Canada Federal Treasury Board).
 - ▶ Real Dollars (not inflated): All figures used in this analysis are in 2009 \$.

Analysis Process

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- ▶ The economic impact analysis relies on information regarding the scope of development, costs and revenues associated with development and the timing of these events that has been prepared by the City and other members of the consulting team.
- ▶ The data employed in this analysis includes information obtained from the City and consulting team as recent as June 12, 2009.
- ▶ The analysis attempts to include all costs and revenues relevant to the fiscal position of the City of Edmonton (subject to availability of data) to provide a realistic estimate of the net economic benefits associated with the ECCA Demonstration Plan.
- ▶ Where judgement was required in interpreting available information and making assumptions integral to the analysis, it was practice to err on the side of 'understating' the benefits of the redevelopment proposal.

Incremental Analysis: Base Case vs Redevelopment

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- ▶ To evaluate the economic impacts of redevelopment, a comparison has been made between:
 - ▶ The Base Case (no change in the current status and operation of the ECCA).
 - ▶ The ECCA Redevelopment Scenario as defined by the Demonstration Plan.
- ▶ For this analysis, the Base Case utilizes the population and employment projections developed for the Municipal Development Plan (The Way We Grow) and Transportation Master Plan (The Way We Move).
- ▶ The ECCA Redevelopment Scenario incorporates adjustments to the Base Case population and employment forecasts by adding some incremental growth in both categories, and shifting growth from other locations in Edmonton to the ECCA Lands and other areas determined to be impacted by redevelopment of the ECCA.

The Base Case



Base Case: General Assumptions

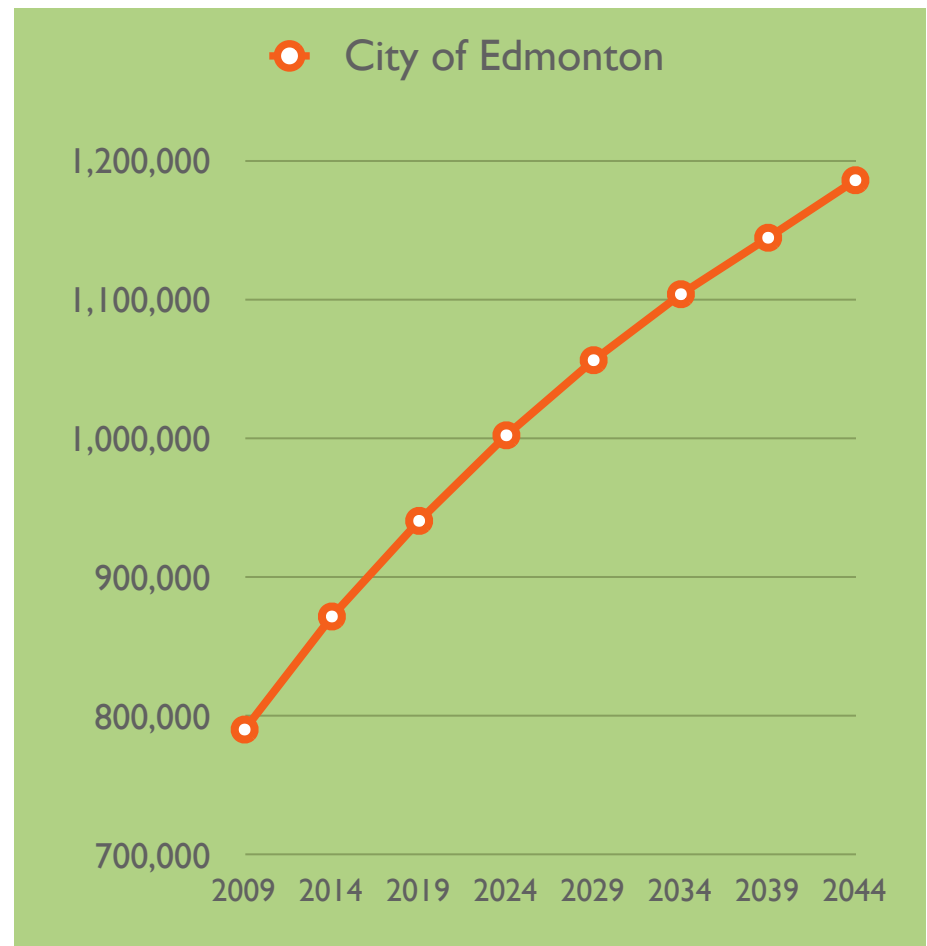
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- ▶ The Edmonton City Centre Airport would continue operations in a manner similar to its current state.
- ▶ There will be no substantial City of Edmonton supported costs associated with continued operation of the ECCA.
- ▶ The City of Edmonton will grow and develop in a manner similar to that assumed for the development of the Municipal Development Plan and Transportation Master Plan.
- ▶ Issues associated with air services at the City Centre Airport or in the Edmonton Region as a whole are outside the scope of this analysis.

Base Case: Edmonton Population Growth

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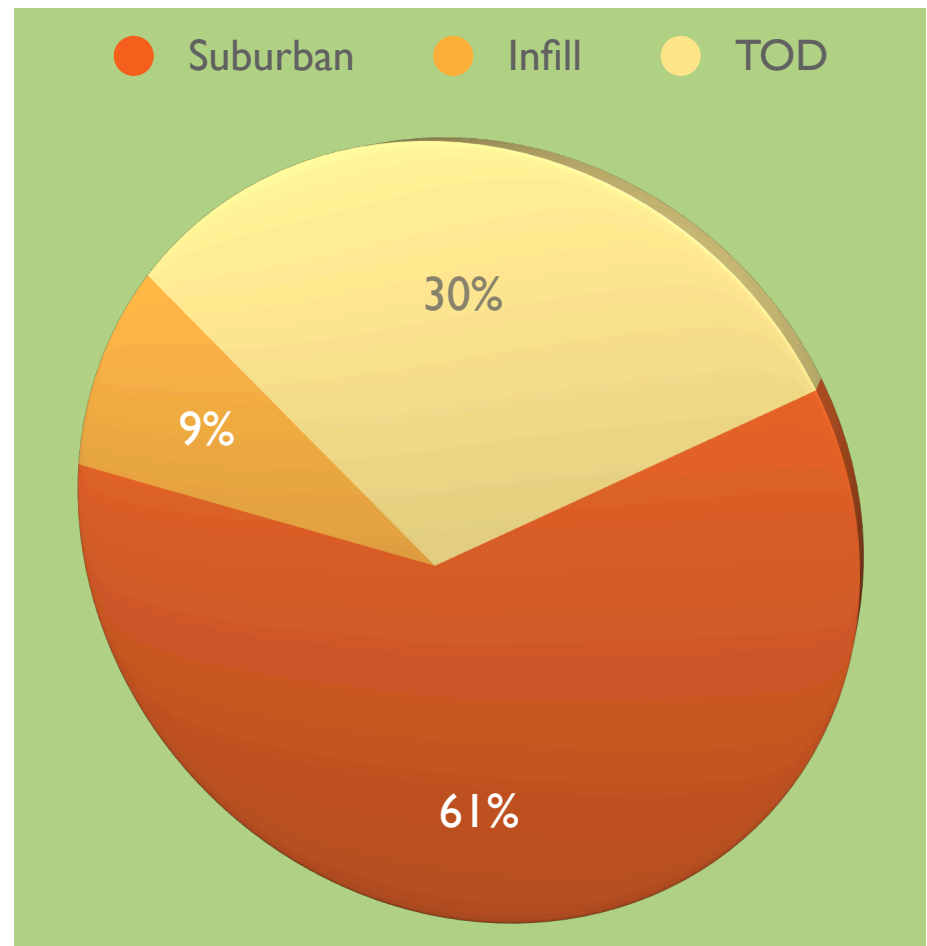
- ▶ Based on the 2006-2041 forecast used in the City of Edmonton Transit Oriented Development Population & Employment Forecasts documents.
- ▶ Adjusted the base year data to match the 2008 municipal census.
- ▶ Extended the forecast to 2044 (35 year forecast).
- ▶ Total growth over the forecast period is 359,000 increasing the City's population to 1.19 million.



Base Case: Distribution of Population Growth

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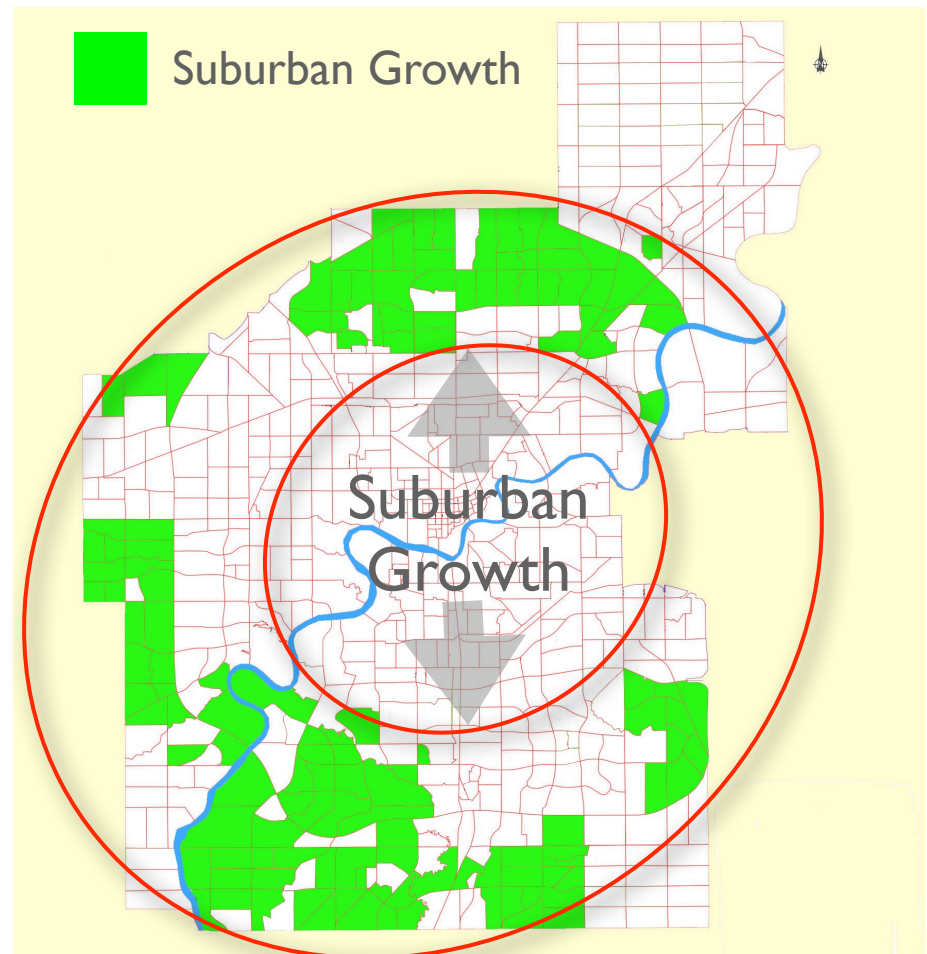
- ▶ Total City of Edmonton growth reflects an average annual rate equal to 1.17%.
- ▶ Most population growth will be suburban - comprising approximately 61% of the total.
- ▶ Transit Oriented Development (TOD) and infill development is projected to be approximately 39% of the total.



Base Case: Suburban Growth

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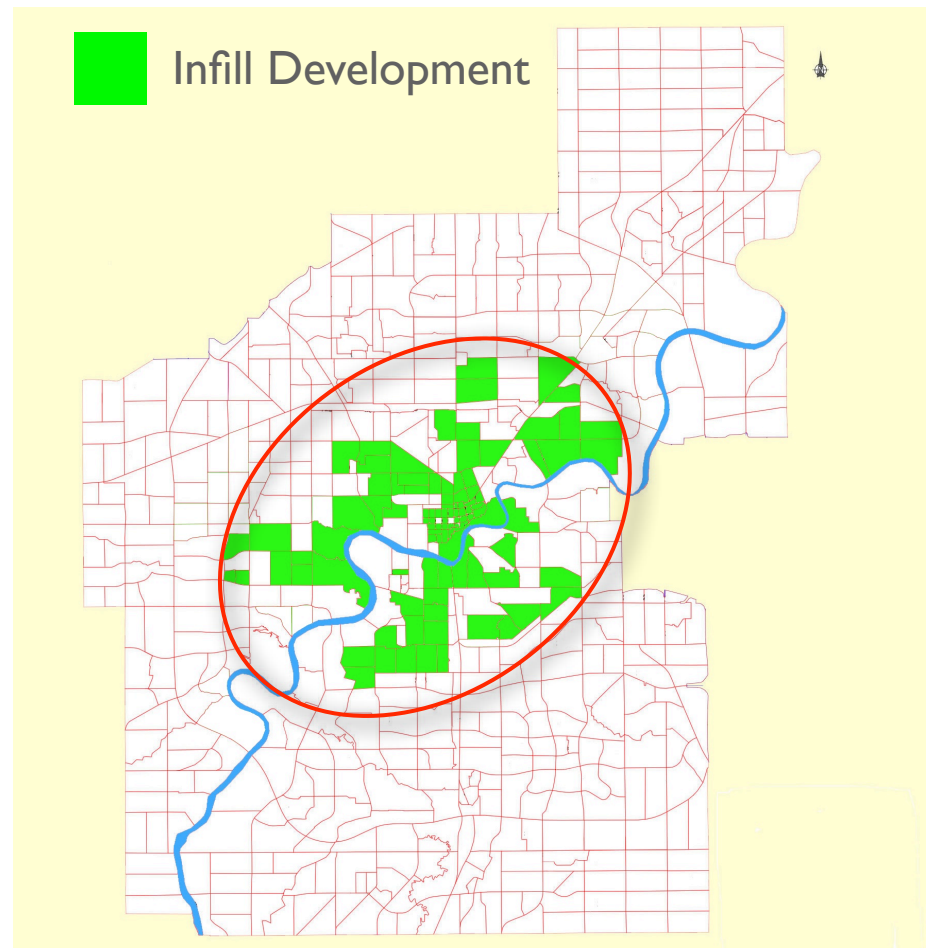
- ▶ Growth was allocated throughout the suburbs in the southwest, southeast, west, north, northeast and northwest areas of the City of Edmonton.
- ▶ Suburban growth in the Base Case is projected to total over 241,000 over the next 35 years.



Base Case: Infill Development

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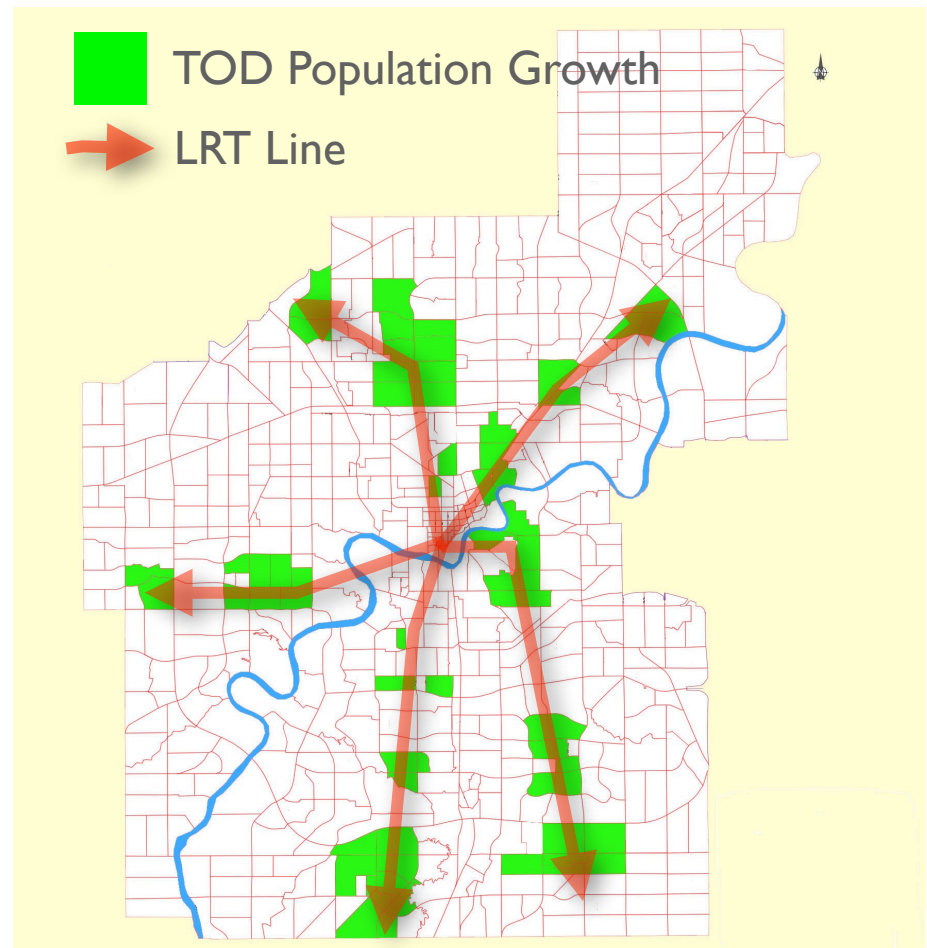
- ▶ Infill growth occurred in mature areas due to the development of the High Frequency Bus Lines, and other Compact Growth and intensification assumptions.
- ▶ Infill development in the Base Case is projected to total approximately 34,000 over the next 35 years.



Base Case: Transit Oriented Development (TOD)

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- ▶ The proposed LRT network includes a 5-legged system which will expand out to the northeast, northwest, southeast, southwest and west areas of the City.
- ▶ TOD related population growth in the Base Case is projected to total approximately 120,000 over the next 35 years.



The ECCA Redevelopment Scenario



Redevelopment Timeline

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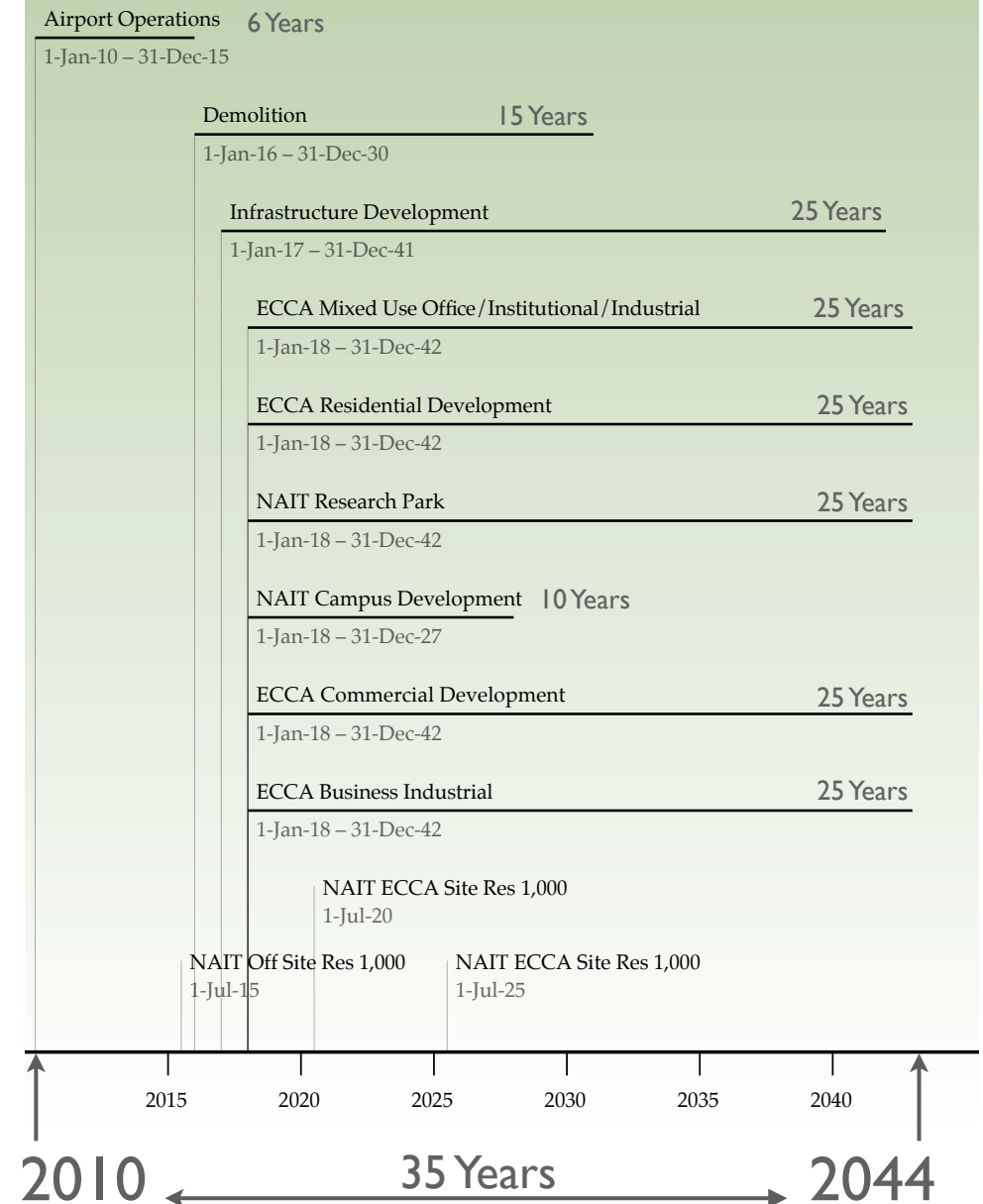
- ▶ ECCA aviation operations are assumed to continue until the end of 2015.
- ▶ Demolition required to facilitate redevelopment would begin in 2016 and continue for 15 years.
- ▶ Investment in infrastructure required to support development would begin in 2017 and continue for 25 years.
- ▶ All development in the Study Area would begin in 2018 and continue for 25 years (except the NAIT campus).
- ▶ The NAIT campus development in the Study Area would begin in 2018 and be completed in 10 years.
- ▶ Three NAIT residences (two in the Study Area and one outside the Study Area) will be developed by 2025.

ECCA Redevelopment Timeline

Key events relevant to the economic analysis of the redevelopment of the ECCA are identified in the timeline.

This timeline reflects the assumptions utilized in developing the economic impact analysis.

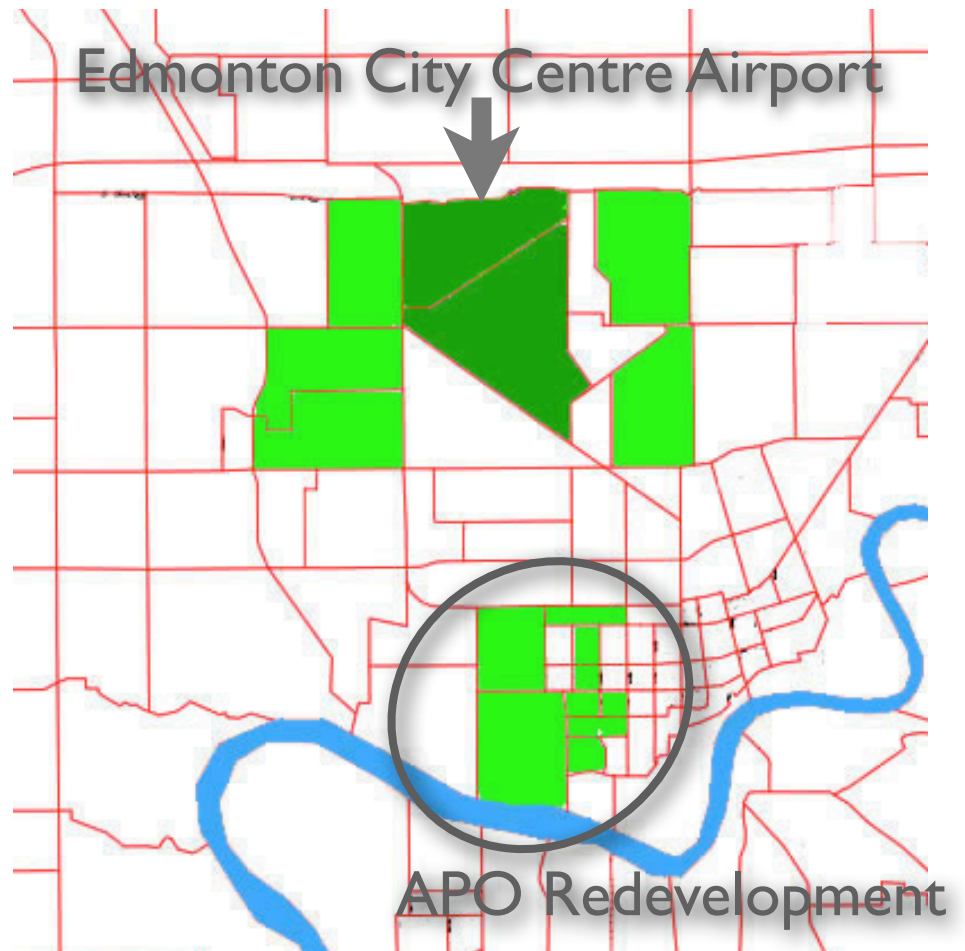
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ECCA Redevelopment Scenario: Population Growth

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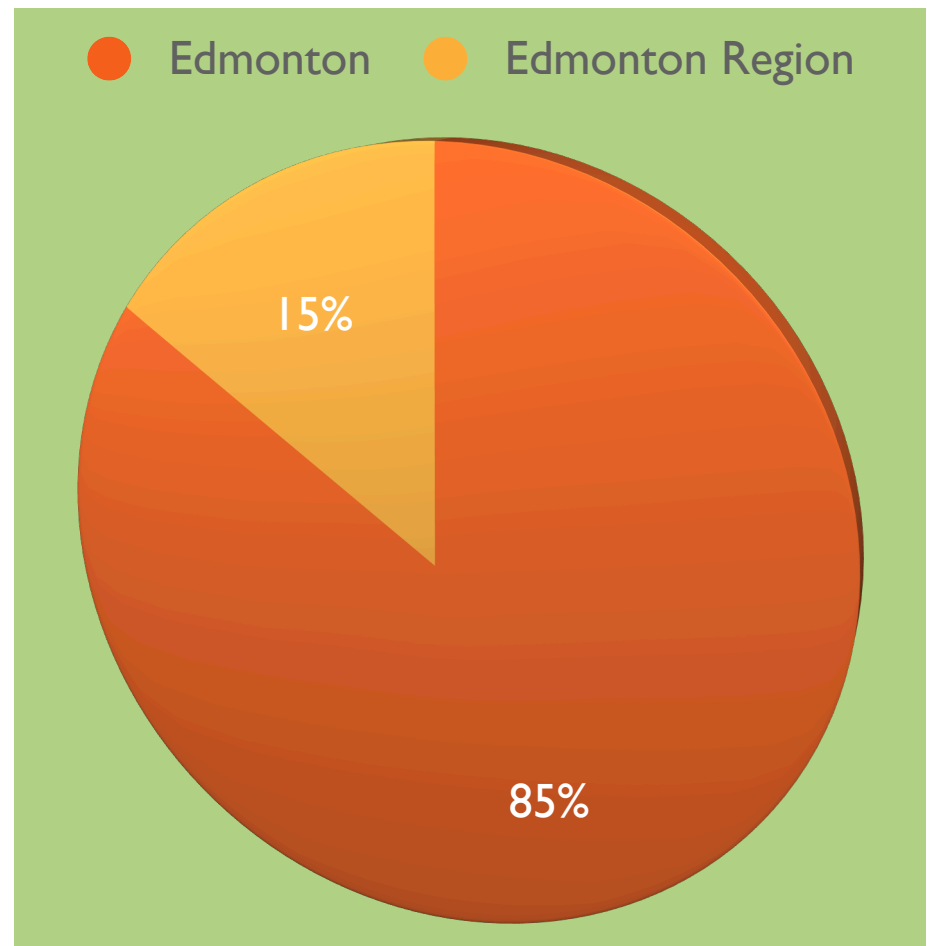
- ▶ The total population growth on the airport site is estimated to be 24,300, including 2,000 NAIT students (in residences).
- ▶ An additional 9,000 people are assumed to move to areas adjacent to the airport as a result of proximity to the ECCA redevelopment and to the Downtown/Oliver areas as a result of removal of the Airport Protection Overlay (APO).
- ▶ An additional 1,000 NAIT students (in residence) would be located east of 103 street and south of 118 avenue.



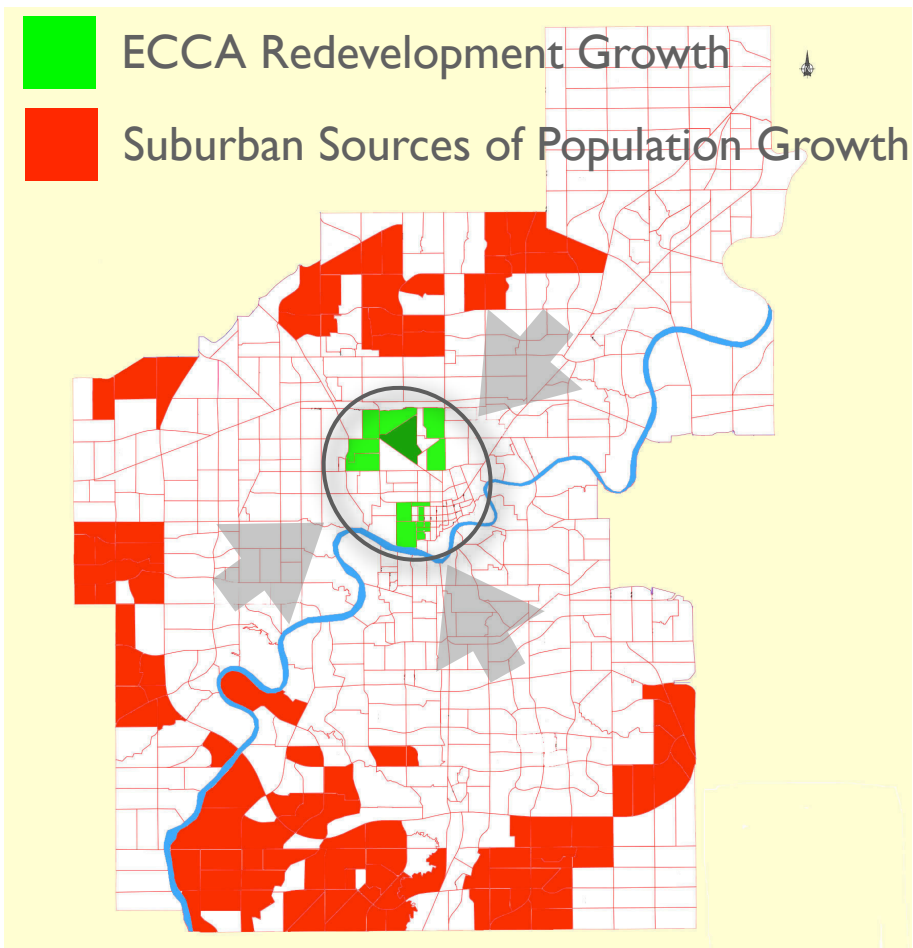
ECCA Redevelopment Scenario: Source of Population Shifts

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- ▶ The total population shifts resulting from redevelopment of the ECCA is estimated to be approximately 33,300 people.
- ▶ It is estimated that approximately 28,300 are reallocated from growth projected to occur elsewhere in the City.
- ▶ 5,000 people are assumed to be relocated from outside the City of Edmonton (from elsewhere in the Edmonton region).

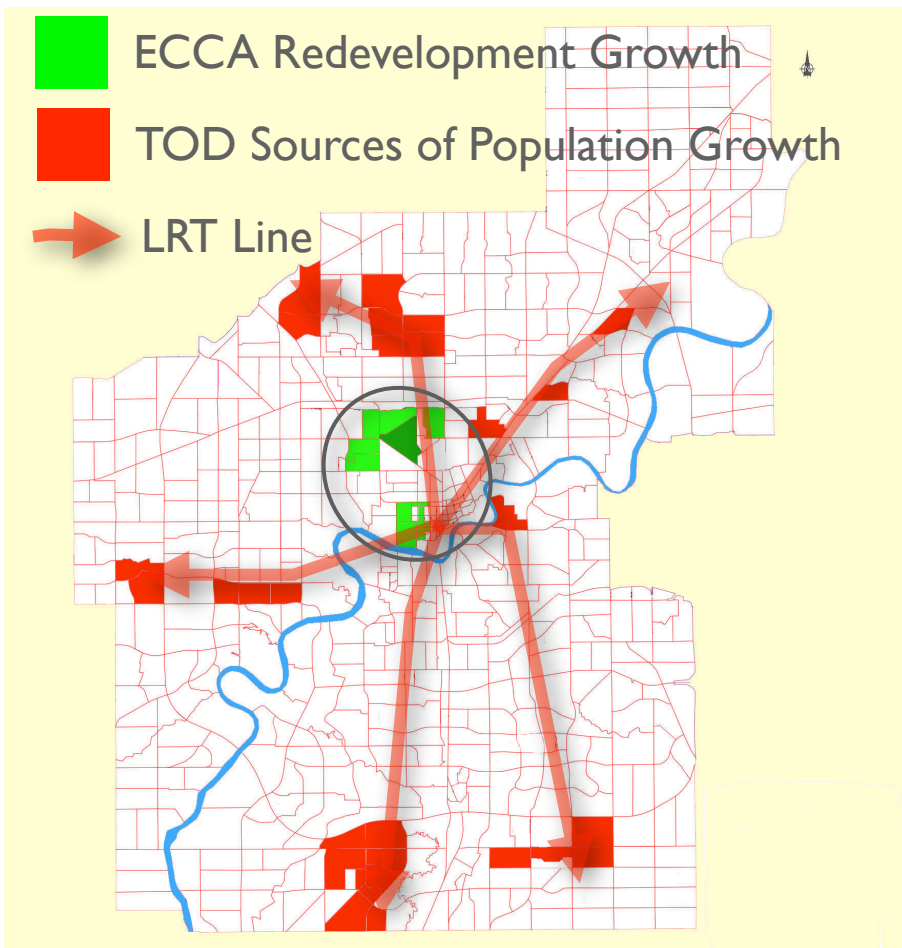


Suburban Population Relocation



- ▶ The majority of the population shift associated with the redevelopment of the Redevelopment has been a relocation of projected population growth from various neighbourhoods in the suburban areas.
- ▶ The total population growth relocated from the suburban areas to the ECCA (consistent with the Demonstration Plan) was approximately 25,300 people.

TOD Population Relocation

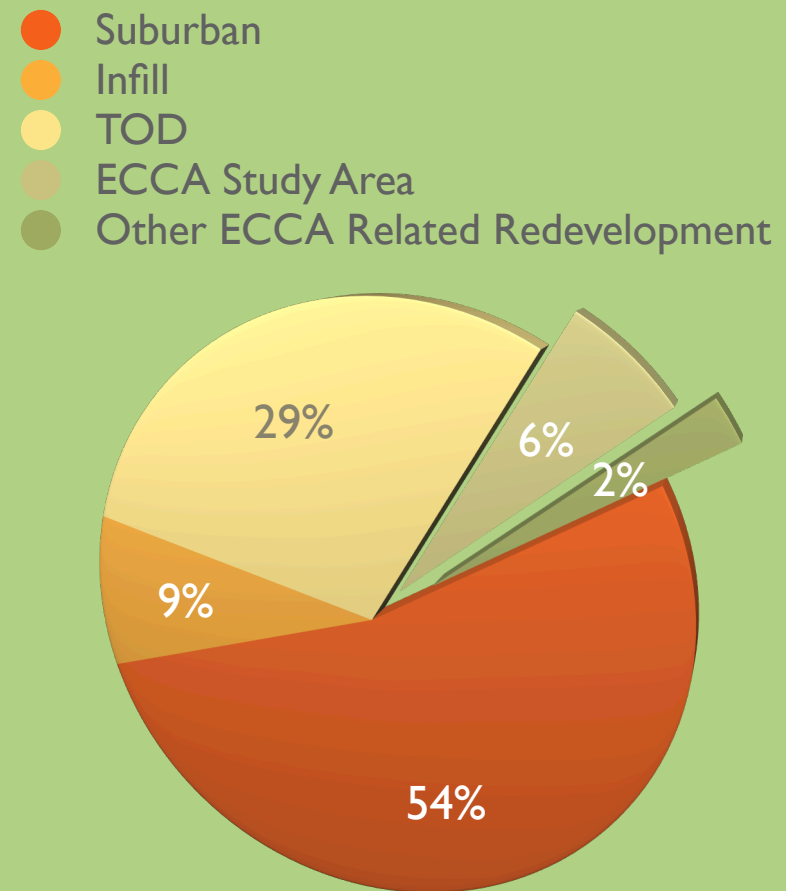


- ▶ A portion of the population shifting as a result of redevelopment of the ECCA has been assumed to come from proposed (or in some cases existing) projected TOD development along each LRT line.
- ▶ In total, approximately 3,000 people were relocated to the ECCA from Transit Oriented Development projects to occur along the LRT lines planned for Edmonton.

ECCA Redevelopment Scenario: Distribution of Population Growth

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- ▶ The ECCA Study Area will accommodate 24,300 people, equal to approximately 6% of total City growth to 2044.
- ▶ Other ECCA Related Redevelopment (in adjacent neighbourhoods and Downtown and Oliver) would be 9,000 people, equal to approximately 2% of total City growth to 2044.



ECCA Redevelopment Scenario: Employment

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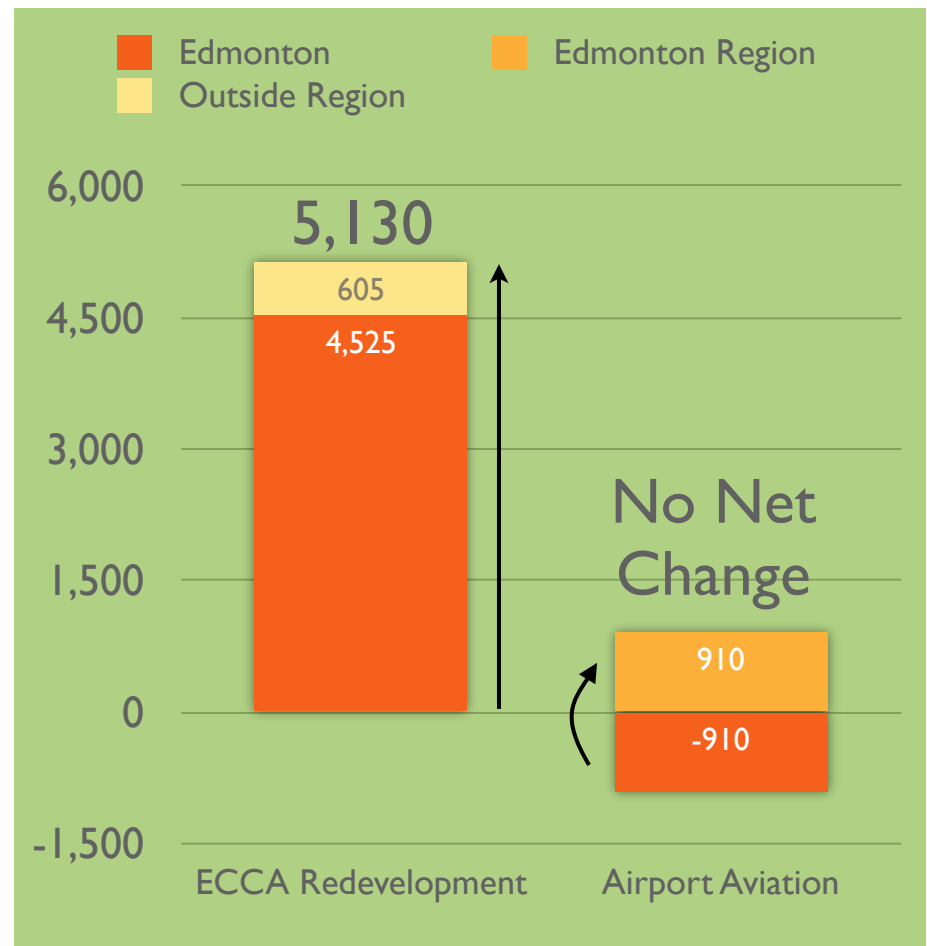
- ▶ A total of 5,130 jobs will be reallocated as a result of the ECCA redevelopment.
- ▶ 1,830 jobs are attributed to various forms of office and commercial employment in the ECCA Study Area.
- ▶ 1,920 jobs are attributed to the NAIT Expansion (NAIT Staff and Research Park).
- ▶ 1,380 jobs are attributed to the Downtown/Oliver APO Removal.

| Category | Employment |
|--------------------------------------|--------------|
| ECCA Commercial | 770 |
| ECCA Office | 400 |
| ECCA General Business | 200 |
| ECCA Mixed Use | 460 |
| NAIT Academic Staff | 1,170 |
| NAIT Applied Knowledge Research Park | 750 |
| Downtown/Oliver APO Removal | 1,380 |
| Total | 5,130 |

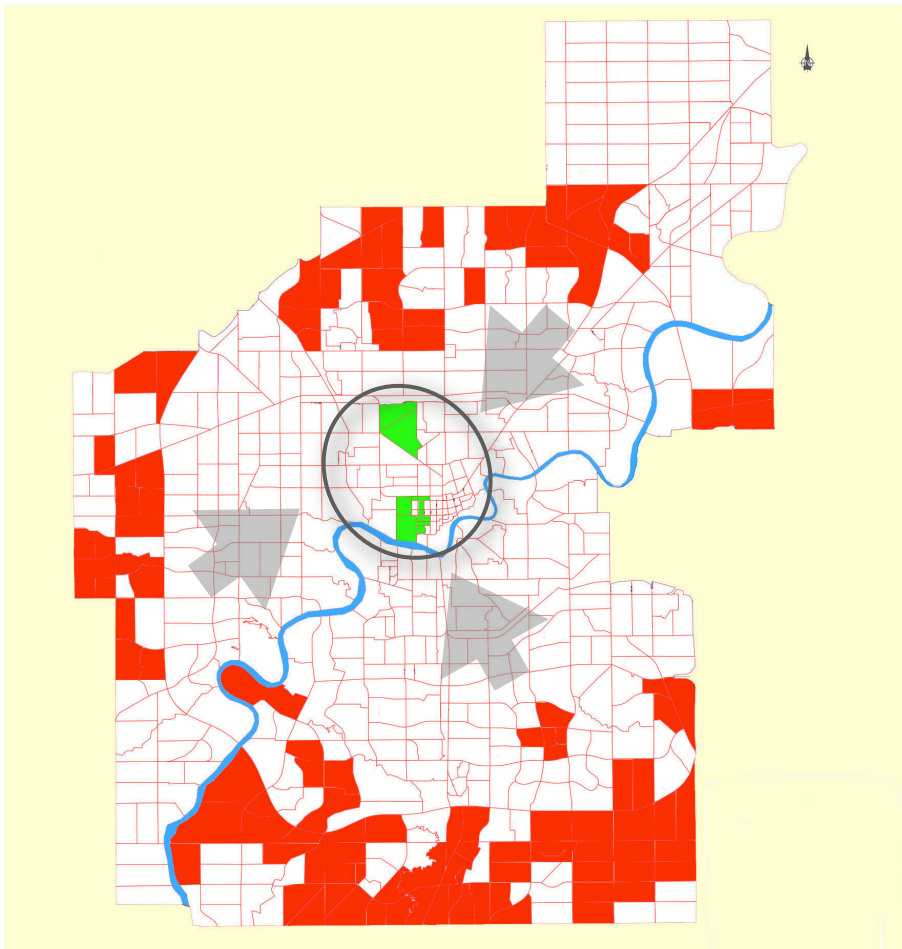
ECCA Redevelopment Scenario: Employment Shifts

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- ▶ Edmonton Airports estimated that currently there are just over 900 aviation related workers employed at the ECCA. It has been assumed these workers will relocate outside of Edmonton elsewhere within the Edmonton Region.
- ▶ With redevelopment, total employment on the airport site and related redevelopment in the downtown and Oliver areas, is projected to be 5,130.
- ▶ It is estimated that approximately 600 jobs associated with NAIT's Applied Knowledge Research Park and associated development in the Study Area will be 'incremental' to the City and Edmonton region.



Employment Relocation



- ▶ A portion of the employment associated with the redevelopment of the ECCA came from projected employment growth in various neighbourhoods in the suburbs.
- ▶ The total employment growth reallocated from the suburbs to the ECCA was approximately 4,525 jobs.
- ▶ Another 605 jobs are assumed to be 'incremental' to the City and region.

Municipal Fiscal Impacts



Municipal Fiscal Impact: Defined

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- ▶ Municipal Fiscal Impact Analysis is the determination of how a particular development affects the financial position of the municipality.
 - ▶ Definition of Scenarios: The ‘impact’ measured in this analysis reflects the difference between the Base Case (continued operation of the ECCA) and the ECCA Redevelopment Scenario (consistent with the ECCA Demonstration Plan).
 - ▶ Measurement: Impacts consider all relevant and substantial costs and revenues to the City (where data is available).
 - ▶ Results: Change in municipal tax rate “equivalents” for Edmonton ratepayers.

Municipal Operations: Operating Costs & Revenues

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- ▶ Operating costs for the following program areas were assumed to grow with population:
 - ▶ Police
 - ▶ Library
 - ▶ Parks
 - ▶ Recreation Facilities
 - ▶ Fire
 - ▶ Transit
- ▶ Operating costs associated with roads costs were assumed to change with the length of roads.
- ▶ Operating costs for all other areas were assumed to be constant and not change with growth.
- ▶ Projection of City operating revenues (excluding property taxes) were based on 2009 cost recovery rates.

Municipal Operations: Suburban vs Infill Development

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- ▶ Preliminary studies currently being done by the Office of Infrastructure and Funding Strategy indicate that for every \$1 a developer spends on infrastructure in a suburban neighbourhood, it is estimated the City spends approximately \$0.80.
- ▶ The shift in location of development, primarily from suburban areas to the ECCA Lands and surrounding areas, will result in a cost saving to the City.
- ▶ Based on the pattern of redistribution, it has been estimated that the cost saving associated with a shift of suburban to infill development will be approximately \$3,100 per capita.

Municipal Operations: Capital Costs

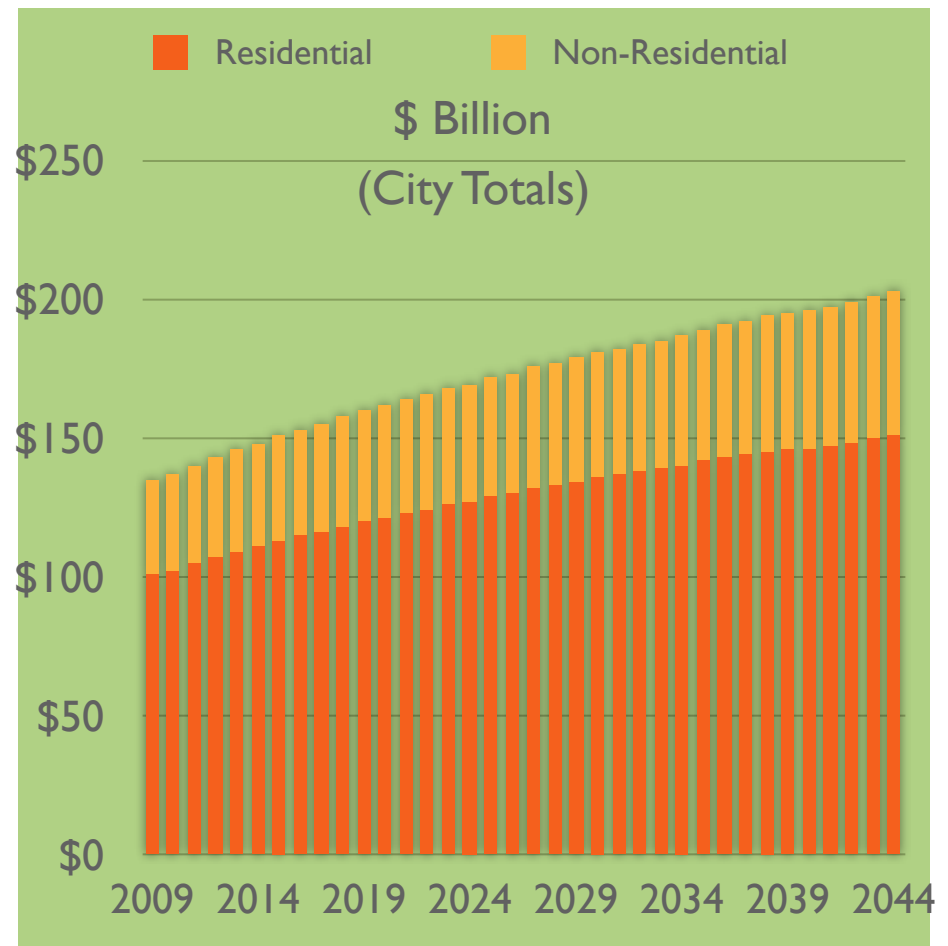
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- ▶ Base Case:
 - ▶ Capital expenditures were assumed to grow with population.
- ▶ ECCA Redevelopment Scenario
 - ▶ Select Engineering estimated the capital costs to redevelop the ECCA Study Area (\$203.8 million).
 - ▶ Other City costs for transit, environment and safety, social infrastructure and corporate infrastructure were assumed to be 80% of development costs.

Taxable Assessment: Base Case

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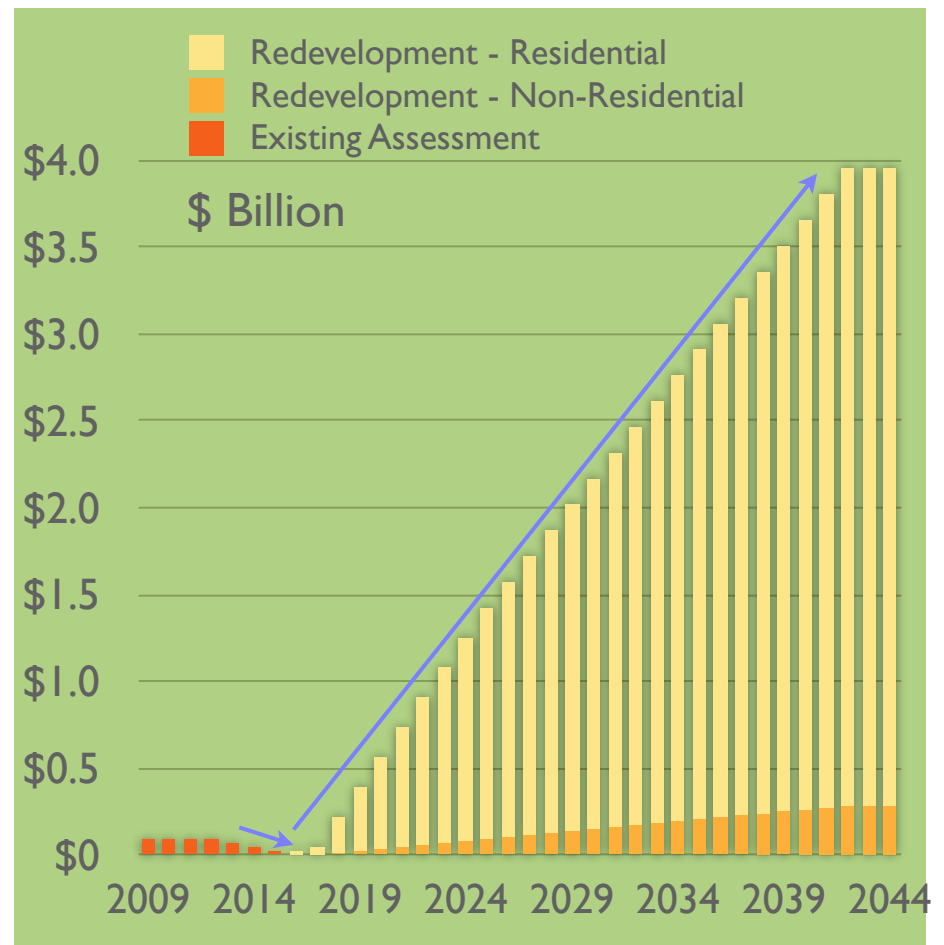
- ▶ Residential assessment is projected to increase from \$100.5 billion in 2009 to \$150.8 billion in 2044.
- ▶ Non-residential assessment is projected to increase from \$34.4 billion in 2009 to \$51.5 billion in 2044.
- ▶ Total assessment is projected to increase by 50% over the next 35 years.



Taxable Assessment: ECCA Redevelopment Study Area

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- ▶ As the airport is redeveloped, existing assessment will be lost and replaced with residential and new non-residential development.
- ▶ Redevelopment of the ECCA will result in a loss of an estimated \$42 million associated with existing development in the Study Area. It has been assumed this reduction is phased in over four years beginning in 2013.
- ▶ Assessment associated with redevelopment in the Study Area begins in 2018 and grows to \$3.95 billion by 2042.



Taxable Assessment: NAIT

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- ▶ Academic facilities as part of the NAIT development in the Study Area are exempt from municipal property taxation.
- ▶ Non-academic facilities have been assumed to be taxable as follows:
 - ▶ Two residences: 100% of estimated assessment.
 - ▶ Business park: 50% of estimated assessment.
- ▶ This incremental assessment has been included in the ECCA Redevelopment - Assessment.



Taxable Assessment: Change in Residential Assessment

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- ▶ Redevelopment of the ECCA will result in a small net reduction in taxable residential assessment in Edmonton.
- ▶ While this reduction varies over the forecast period, it peaks at approximately \$130 million, which is small compared to the residential assessment base in the City - equal to over \$100 billion.
- ▶ Total residential assessment will decline marginally in the ECCA Redevelopment Scenario due to a shift from primarily single family suburban development in the Base Case to primarily multi-family development in the ECCA Lands, adjacent neighbourhoods and the Downtown and Oliver areas as a result of redevelopment.
- ▶ While the total population in the ECCA Redevelopment Scenario is slightly higher than the Base Case, the average residential assessment per capita drops because of the shift in dwelling unit types.

Taxable Assessment: Change in Non-Residential

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- ▶ Redevelopment of the ECCA will result in an initial net reduction in taxable non-residential assessment in ECCA.
- ▶ There is an estimated \$42 million assessment loss associated with existing development at the airport.
- ▶ This reduction is offset over time by an increase in non-residential development in the Study Area and the Downtown and Oliver areas as a result of redevelopment.
- ▶ By the end of the forecast period, all of the lost assessment associated with existing development at the ECCA is replaced by new non-residential assessment.

ECCA Land Development

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- ▶ It has been assumed that the City of Edmonton would develop the ECCA lands and incur the costs associated with the development of the infrastructure required to service the land as well as the soft costs associated with marketing the serviced lands.
- ▶ Revenues associated with the sale of serviced lands have been estimated by Colliers. These estimates have been utilized in this analysis, although the timing has been adjusted to conform to the 25 year development horizon.



ECCA Land Development: Development Costs

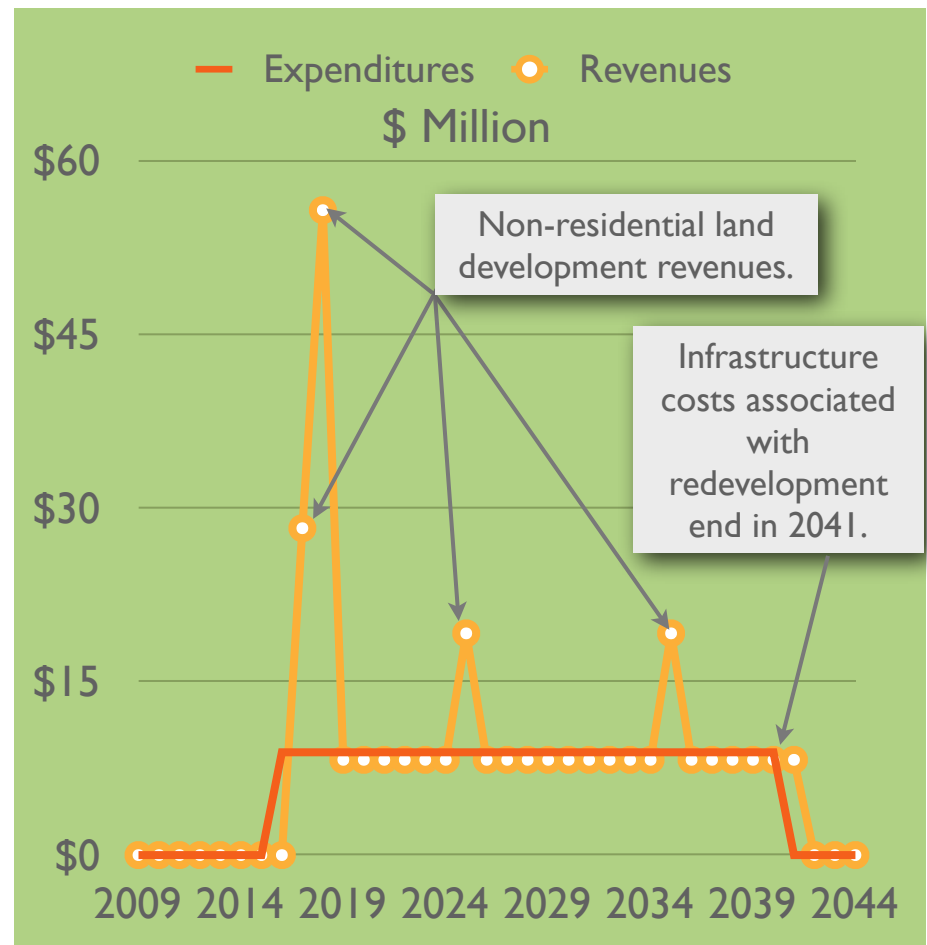
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- ▶ **Infrastructure Costs ('Hard Costs'):** These include the costs for the following (Select Eng.):
 - ▶ Roads (Local and Collector)
 - ▶ Water, Sanitary & Storm Systems
 - ▶ Other Costs (e.g. Fencing, walkways, geotechnical testing, etc.)
- ▶ **Marketing & Sales ('Soft Costs'):** Include the cost of marketing and completing the land sales transactions (estimated to be 20% of 'hard costs' - Colliers).

ECCA Land Development: Net Development Impact

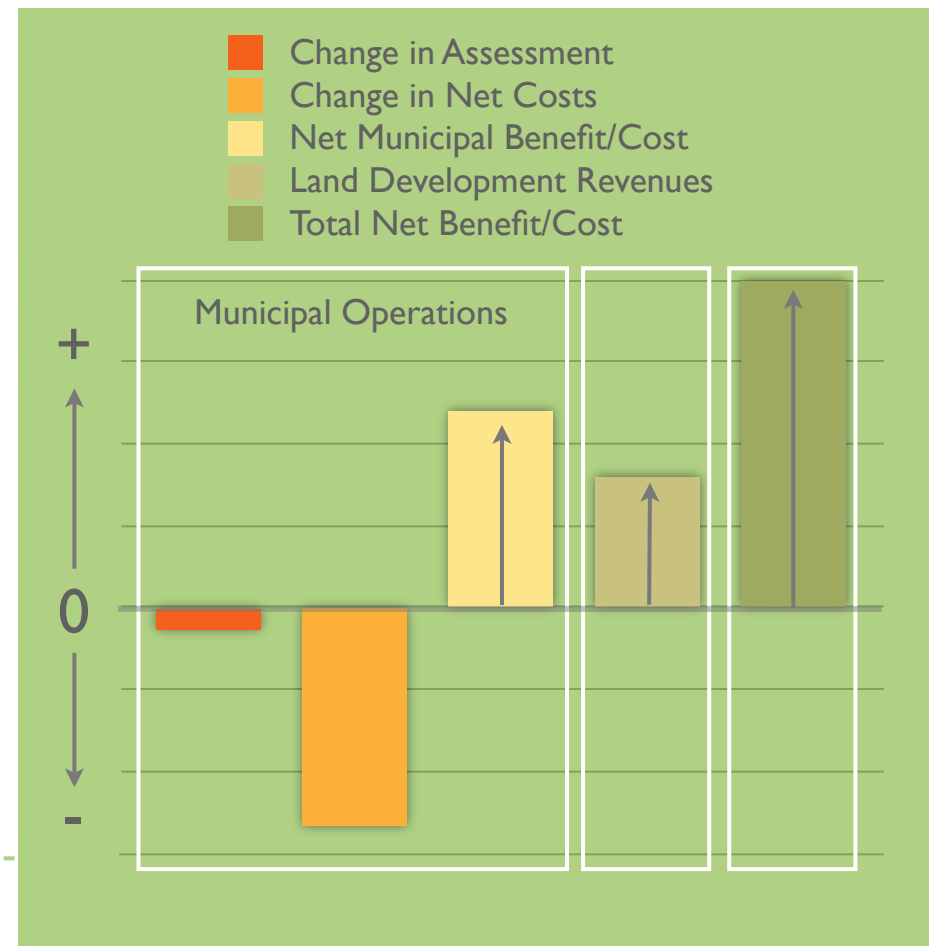
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- The costs associated with development include the 'hard costs' associated with infrastructure construction and 'soft costs' associated with marketing the lands. These costs are estimated to total \$8.9 million and have been assumed to be evenly spread over 35 years between 2017 and 2041.
- Revenues associated with serviced land sales are estimated to be \$8.2 million/yr (2018-2042) for residential and \$89 million for non-residential to be collected at four points in time (2018, 2019, 2026 and 2036).



ECCA Redevelopment Scenario: Municipal Fiscal Impacts

- ▶ Municipal Operations show a net benefit to the City as a result of a substantial reduction in net costs that exceed the small decline assessment.
- ▶ Land Development nets a positive financial benefit to the City.
- ▶ The total net benefit/cost to the City is equal to the sum of the net Municipal Operating benefit plus the net Land Development benefit.



Tax Rate Equivalents

A Note on Projected Tax Rates

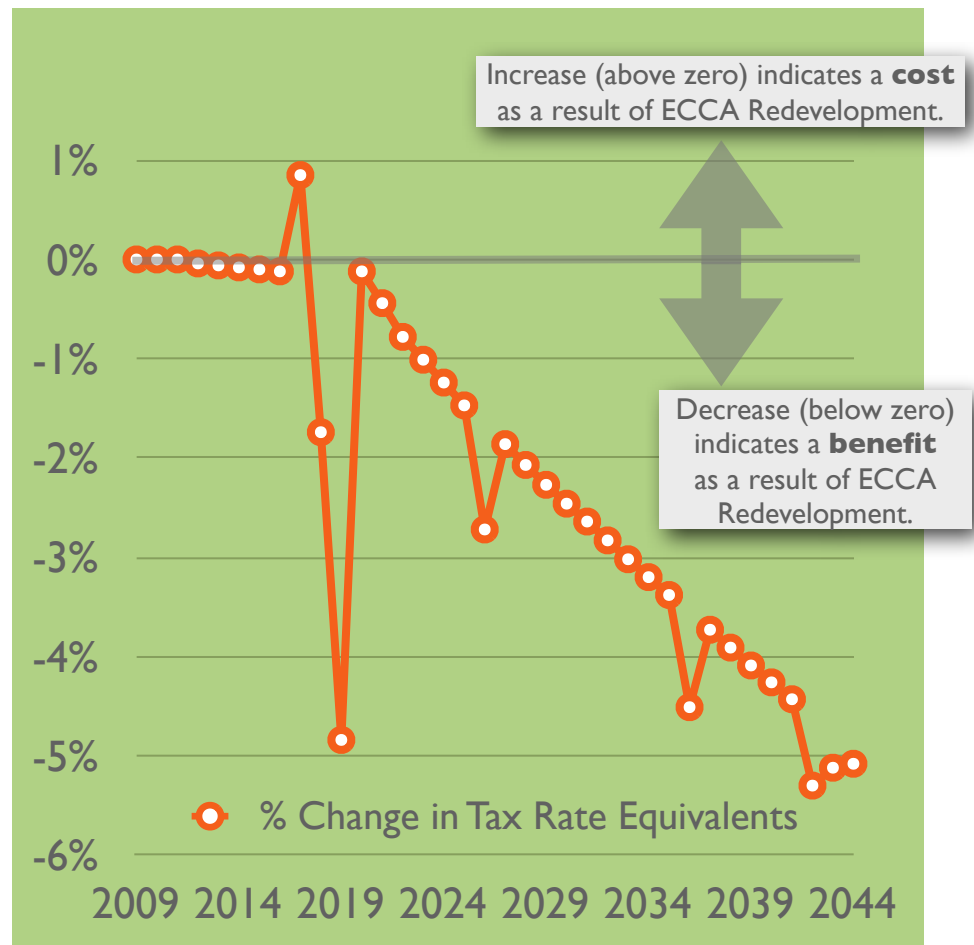
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- ▶ To simplify the analysis, all relevant future municipal costs and benefits have been assumed to fall on the municipal tax rate. It is recognized that this is not consistent with current City of Edmonton accounting and budgeting practices. However it has been employed to allow the impacts to be reflected in a single measure.
- ▶ As a result, all municipal costs and benefits included in the analysis have been converted into a what is termed - a “tax rate equivalent”.
- ▶ The tax rate impact results presented in subsequent slides are NOT a projection of future municipal tax rates, but rather a measure by which the results of the ECCA Redevelopment Scenario can be compared to the Base Case (continued aviation operations from the ECCA).
- ▶ The municipal tax rate equivalent has been estimated to balance the City’s budget in each year of the forecast, so there is no surplus or deficit created and no net change in reserves.

Municipal Fiscal Impact: Tax Rate Equivalent Impacts

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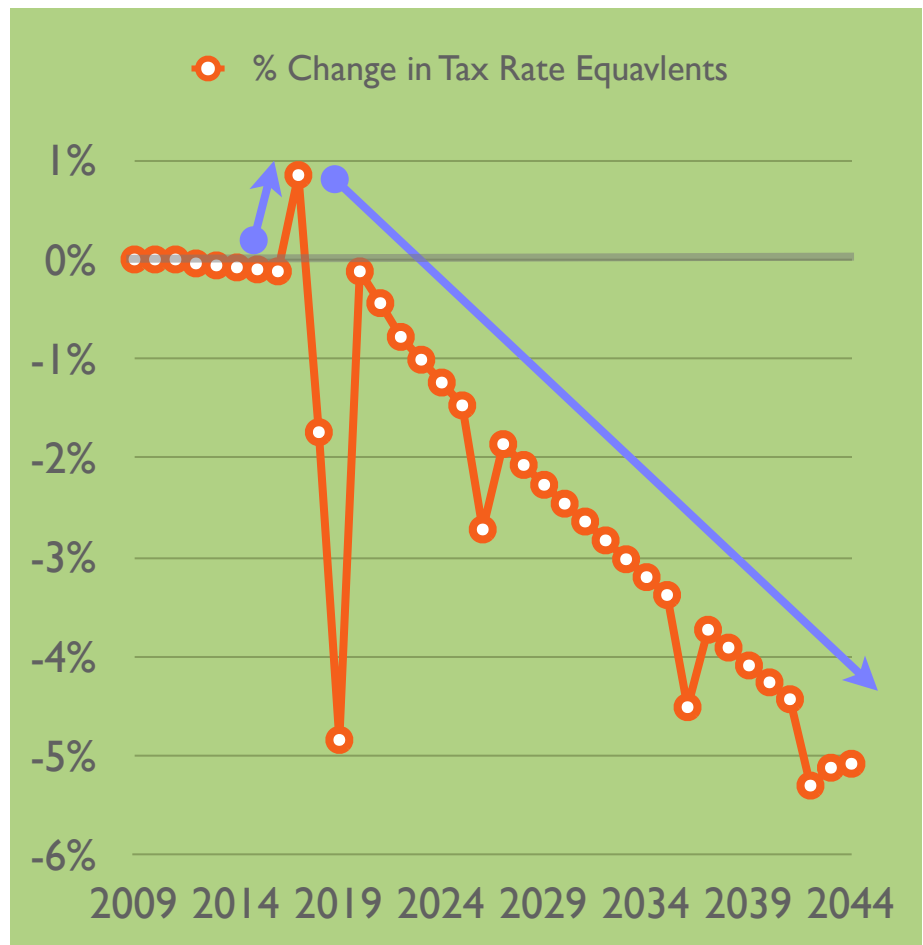
- ▶ The municipal impacts, as measured by the property tax rate equivalents, have been estimated by comparing the ECCA Redevelopment Scenario against the Base Case.
- ▶ Over time the impacts vary depending on costs and revenues received by the City in each year.
- ▶ When the change in tax rate equivalents is positive (greater than zero), there would be a tax rate equivalent increase with the the ECCA Redevelopment Scenario.
- ▶ When the change in tax rate equivalents is negative (less than zero), there would be a tax rate equivalent reduction with the ECCA Redevelopment Scenario.



Municipal Fiscal Impact: Tax Rate Equivalent Impacts

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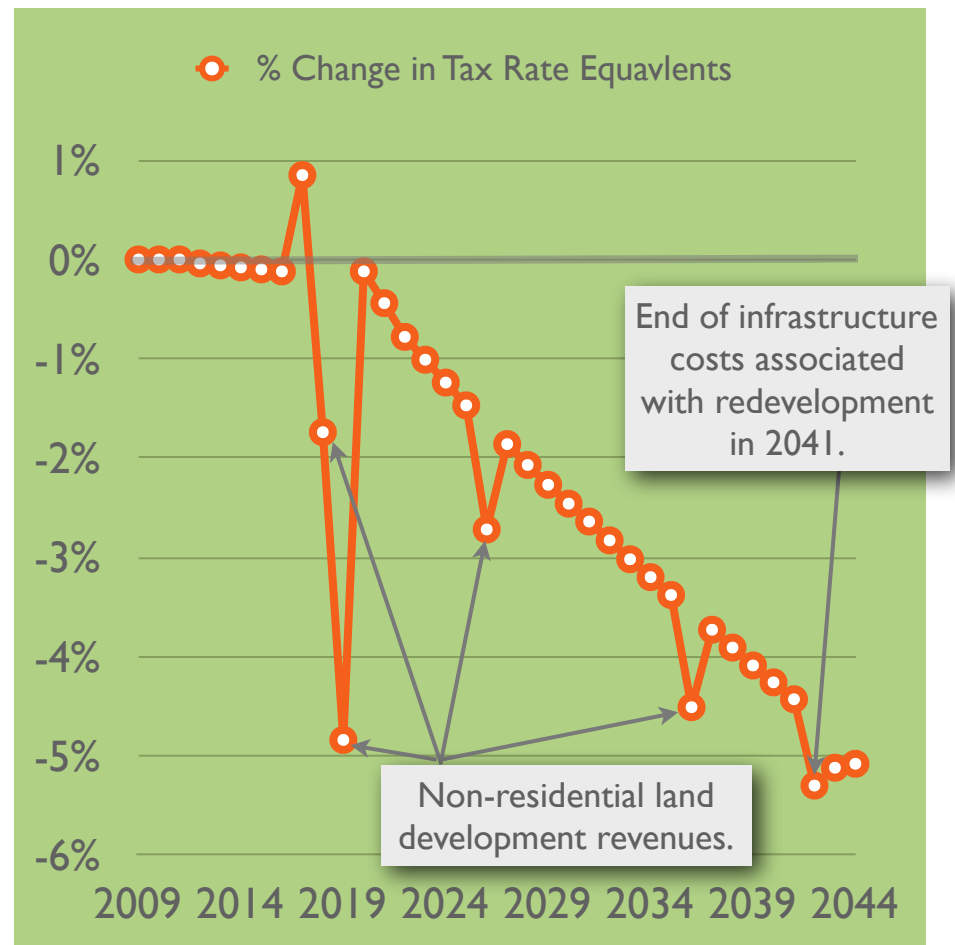
- ▶ There is an increase in the tax rate equivalent in 2017 as a result of the investment in infrastructure starting in this year.
- ▶ Generally the tax rate benefits of redevelopment increase over time (as denoted by a reduction in the tax rate equivalent) as development occurs and tax revenues and land development revenues accrue.
- ▶ The spikes in reduced tax rate equivalents are due to non-residential land development revenues assumed to be received in 2018, 2019, 2026 and 2036.
- ▶ A tax equivalent benefit also occurs in 2041 with the end of investment in infrastructure costs.
- ▶ The average change in tax rate equivalents is a reduction of 2.4%.



Municipal Fiscal Impact: Tax Rate Equivalent Impacts

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- ▶ The major downward spikes in equivalent tax rates in 2018, 2019, 2026 and 2036 are related to the timing of non-residential land development revenues.
 - ▶ 2018 (\$20 million): Commercial, General Business and Mixed Use revenues.
 - ▶ 2019 (\$47 million): NAIT and Mixed Use revenues.
 - ▶ 2026 & 2036 (\$11 million each year): Commercial, General Business and Mixed Use revenues.
- ▶ The costs associated with infrastructure development for the ECCA Redevelopment Scenario end in 2041.



Benefit-Cost Analysis



Benefit Cost Analysis

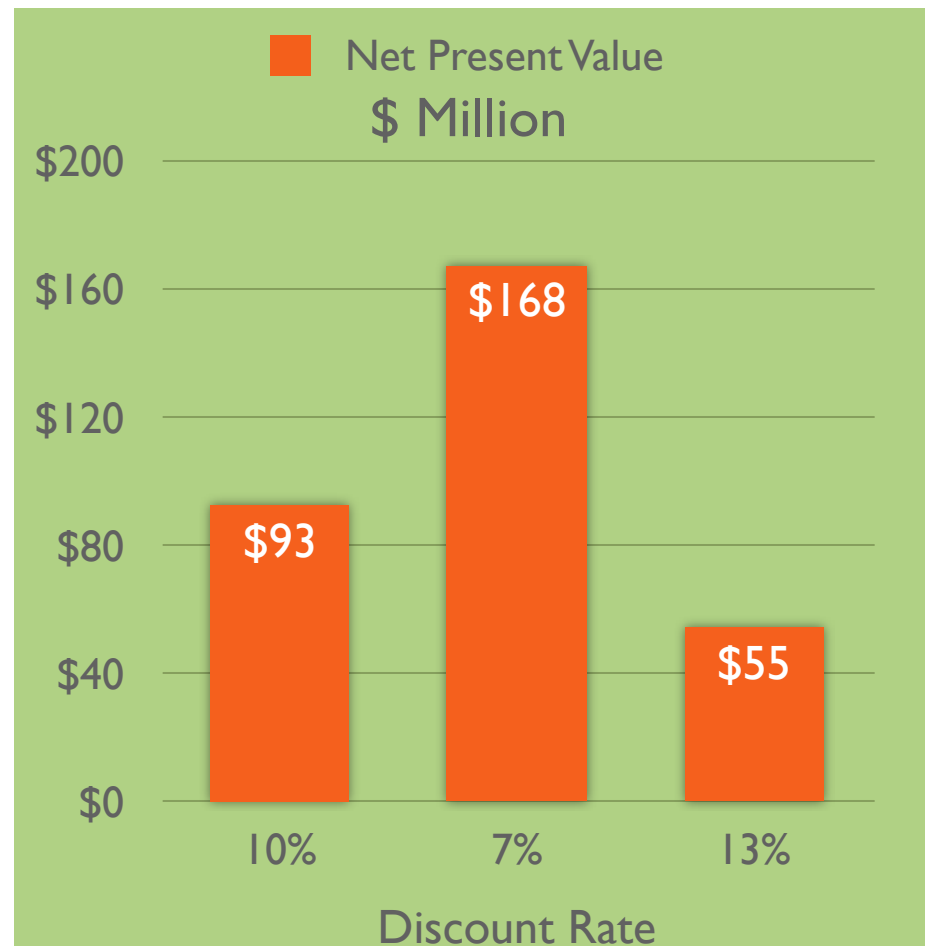
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- ▶ Benefit-cost analysis is an analytical approach used to consistently evaluate investments to determine their desirability.
- ▶ Generally, when a project or investment is favorable, it has a positive Net Present Value.
- ▶ Net Present Value is a process of discounting future costs and revenues associated with a project to put them into current dollar terms.
- ▶ The Discount Rate is used to adjust all future costs and revenues to reflect the time value of money.

ECCA Redevelopment Scenario: Net Present Value

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- ▶ The value to the City of Edmonton of redeveloping the ECCA is estimated to total \$93 million (Net Present Value) when a discount rate of 10% is applied to all future benefits and costs.
- ▶ Testing the sensitivity of this result by varying the discount rate by $\pm 3\%$ provides a range of positive values between \$55 million and \$168 million (for a discount rate of 13% and 7% respectively).



ECCA Redevelopment Scenario: Other Benefits

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- ▶ In addition to the quantifiable benefits and costs included in the net present value calculation, there are other potential benefits associated with the ECCA Demonstration Plan that have not been quantified. These include:
 - ▶ The development is consistent with the Municipal Development Plan (The Way We Grow) and Transportation Master Plan.
 - ▶ It will improve the viability of the NW LRT leg and transit in general.
 - ▶ There will be an appreciation in the value of lands adjacent to the ECCA with the removal of aviation activity.
 - ▶ There will be synergies associated with having the City's major post secondary institutions located centrally and connected to an integrated LRT system.

ECCA Redevelopment Scenario: Factors Affecting NPV

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- ▶ There are several important assumptions incorporated in the analysis that have a significant impact on the results:
 - ▶ Timing of Redevelopment: As most of the benefits associated with redevelopment occur near the end of the forecast period, implementing redevelopment sooner would generate a more positive benefit-cost result. Similarly, delaying redevelopment will reduce the current value of these net benefits.
 - ▶ Source of Population & Employment Growth: It has been conservatively assumed that most of the population and employment shifts to the ECCA are from other future growth within the City of Edmonton, primarily suburban neighbourhoods. It is possible the City could attract more growth from elsewhere in the Region and outside the Edmonton Region, which would increase the value of redevelopment to the City of Edmonton.

Conclusions



Conclusions: Municipal Fiscal Impacts

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- ▶ Redevelopment of the ECCA, as defined in the Demonstration Plan, would result in the equivalent of a net tax saving to the City of Edmonton.
 - ▶ On average, over the 35 year forecast period, the benefit of redevelopment of the ECCA Lands is estimated to be the equivalent of a municipal tax reduction of 2.4% per year.
 - ▶ Over the long term, the net tax benefits of redeveloping the ECCA Lands increases. By the end of the forecast period, the benefit of redevelopment is estimated to reach the equivalent of a 5% reduction in municipal tax rates.

Conclusions: Benefit Cost Analysis

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- ▶ The value of redeveloping the ECCA Lands is, in aggregate, a net benefit to the City of Edmonton's financial position.
 - ▶ The net present value of all quantifiable future costs and benefits associated with the redevelopment of the ECCA Lands is estimated to be \$93 million. This assumes that all future benefits and costs are discounted at a rate of 10% (Federal Treasury Board Guidelines).
 - ▶ Varying the discount rate used to estimate the net present value by $\pm 3\%$ yields the following results:
 - \$168 million at a discount rate of 7%
 - \$55 million at a discount rate of 13%
- ▶ The redevelopment of the ECCA Lands consistent with the Demonstration Plan will afford other benefits to the City not included in the NPV calculation.