

Priorities Committee Meeting_Feb12_2019

STRATEGIC INITIATIVE AND UPDATE**Bremner Area Project, Phase 3****Report Purpose**

To provide the Priorities Committee with an overview of how the financial model works for the Bremner Area Project.

Our Prioritized Strategic Goals

Goal 1 - Build strong communities to support the diverse needs of residents

Goal 2 - Manage, invest and plan for sustainable municipal infrastructure

Goal 6 - Provide facilities and services that are available and accessible to residents

Report

The Bremner Area Project contains several major components including the Area Concept Plan (ACP), Transportation Master Plan, Design and Construction Standards, Utilities Master Plan, Financial Viability Analysis, Biophysical Assessment and Agricultural Impact Assessment.

Currently the project is in Phase 3, which is the final stage of the project. Draft 3 of the ACP and technical documents are currently undergoing internal and external circulation. The third and final open house will be held on February 21 at Festival Place.

The Financial Viability Analysis for Bremner is also in its final stages. We are still accepting comments from the public, as well as internal and external reviewers for Draft 3 of the Area Concept Plan and technical documents, and this process must be completed prior to finalizing the associated costs within the financial model.

The purpose of this meeting is to review with Council how the financial model functions and to provide a list of scenarios being used to evaluate financial variables. The final Financial Viability Analysis will be brought to Council in April. Additional information on how the financial model works is provided in Enclosure 1 - Bremner Area Project Presentation.

The final ACP will be brought to Council on April 30 for Public Hearing and first reading of the ACP Bylaw. Also included will be an overview of the Bremner Design and Construction Standards and Municipal Development Plan amendments needed to support the ACP.

Council and Committee History

September 18, 2018	The Priorities Committee was updated on the Bremner Area Project and Phase 2 Public Engagement.
May 15, 2018	The Priorities Committee received the Bremner Area Project Update as a report for information.
October 25, 2016	Council adopted Bylaw 15-2016, a bylaw that identified the Urban Reserve Policy Area (Bremner) as the County's next area for growth and incorporate the Urban Reserve Policy Area (Bremner) into the Urban Service Area and incorporate the majority of the West of 21 ACP into the Urban Service Area.

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June 14, 2016	Priorities Committee received the Bremner ACP Next Steps as a report for information.
March 22, 2016	Council endorsed the Growth Management Strategy for the Urban Reserve (Bremner) and directed that Administration proceed with preparation of an ACP for the endorsed growth area.

Other Impacts

Policy: Municipal Development Plan Bylaw 20-2017 requires an ACP and supporting technical documents for the Bremner Urban Reserve Policy Area.

Legislative/Legal: The *Municipal Government Act* provides that Council may, by bylaw, adopt an Area Structure Plan.

Interdepartmental: Multiple Strathcona County departments are involved in the Bremner Area Project through inter-departmental Technical Advisory Committees

Master Plan/Framework: Transportation and Utilities master plans for the Bremner area are being created as part of the Bremner Area Project.

Communication Plan

Stakeholders and the public have been consulted throughout the process utilizing pop-up street stalls, open houses, online options and stakeholder meetings. Public open houses are advertised in the newspaper, on the website, through social media, by mail out and through the distribution of materials at key public facilities throughout the County.

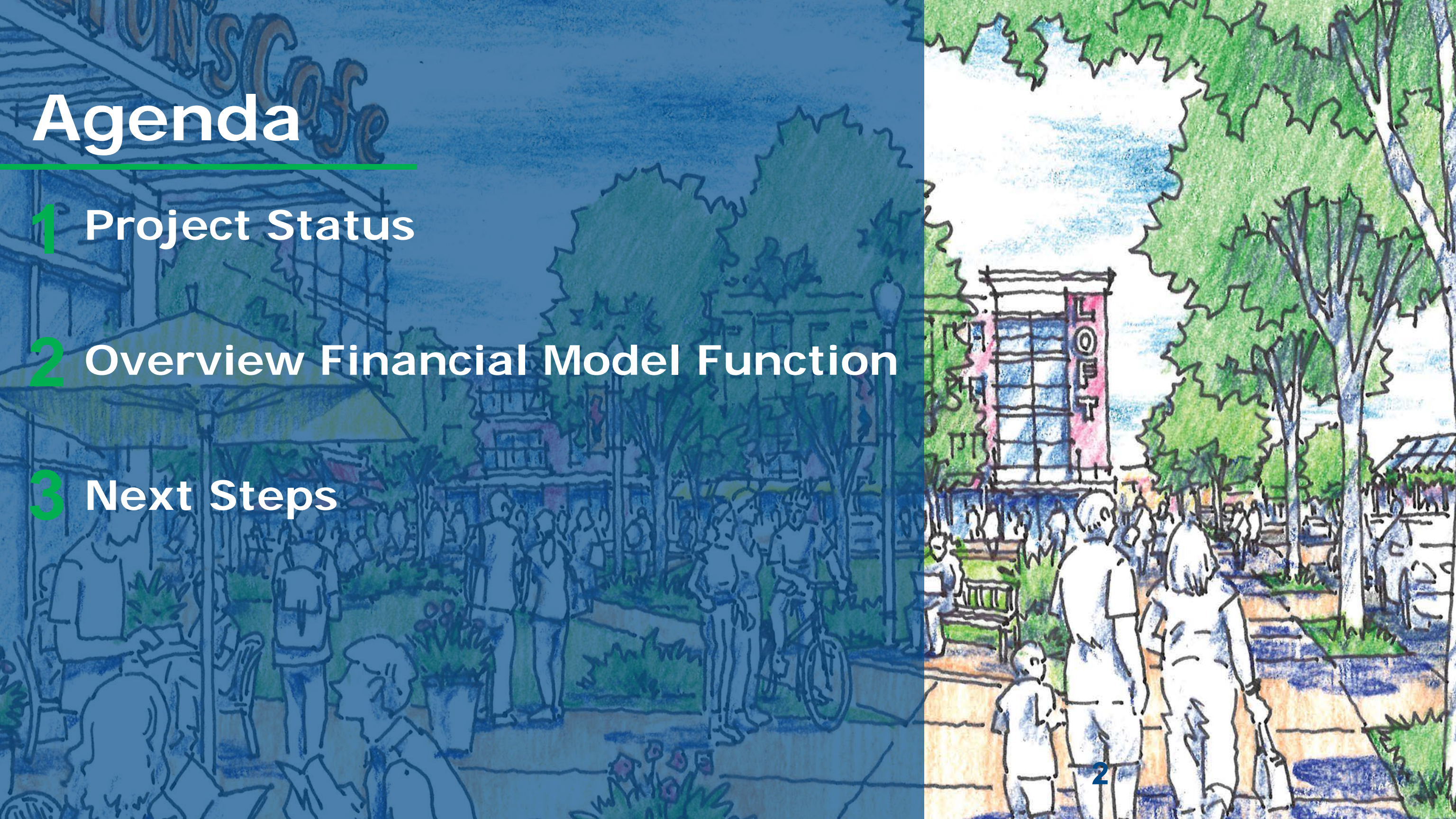
Enclosure

1	Bremner Area Project Presentation
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Bremner Area Project

Priorities Committee February 12, 2019





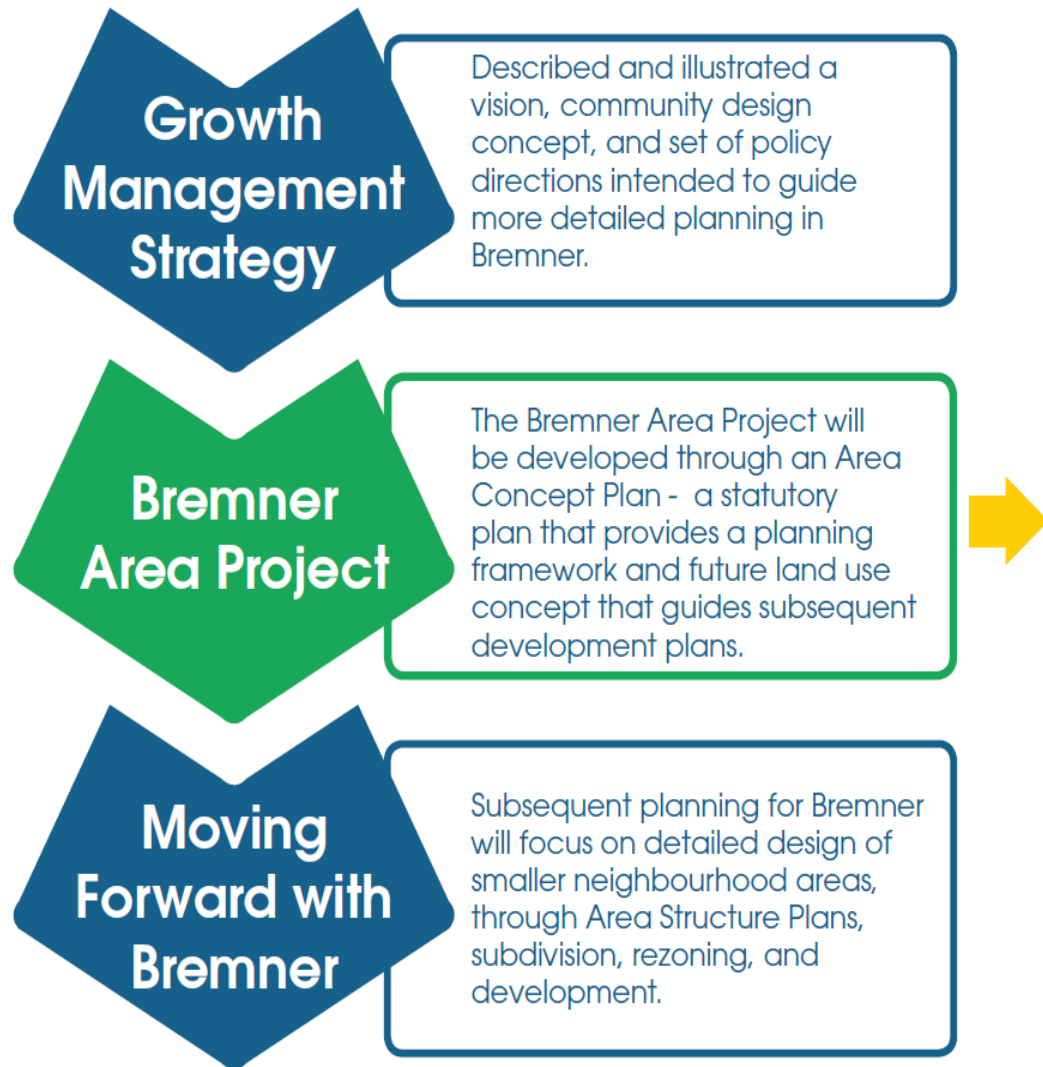
Agenda

1 Project Status

2 Overview Financial Model Function

3 Next Steps

Bremner Area Project



Bremner Area Project Phases

Phase 1 Spring 2017

- Background research
- Confirm vision and principles
- Public Open House #1

Phase 2 Summer 2017 - Fall 2018

- Prepare drafts of Area Concept Plan and technical documents
- Public Open House #2

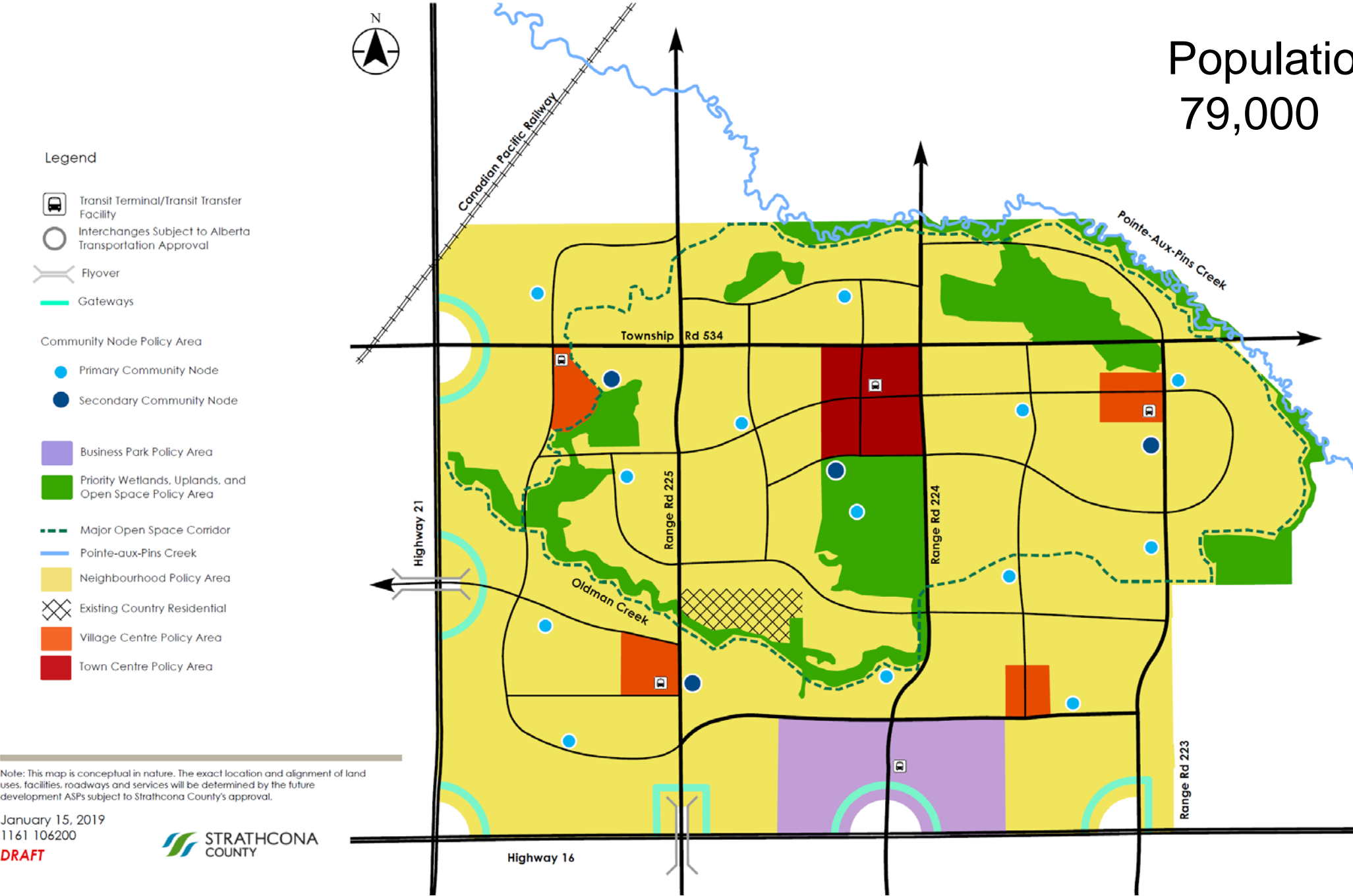
Phase 3 Winter 2018 - Spring 2019

- Finalize Drafts
- Public Open House #3
- Present Draft to Council

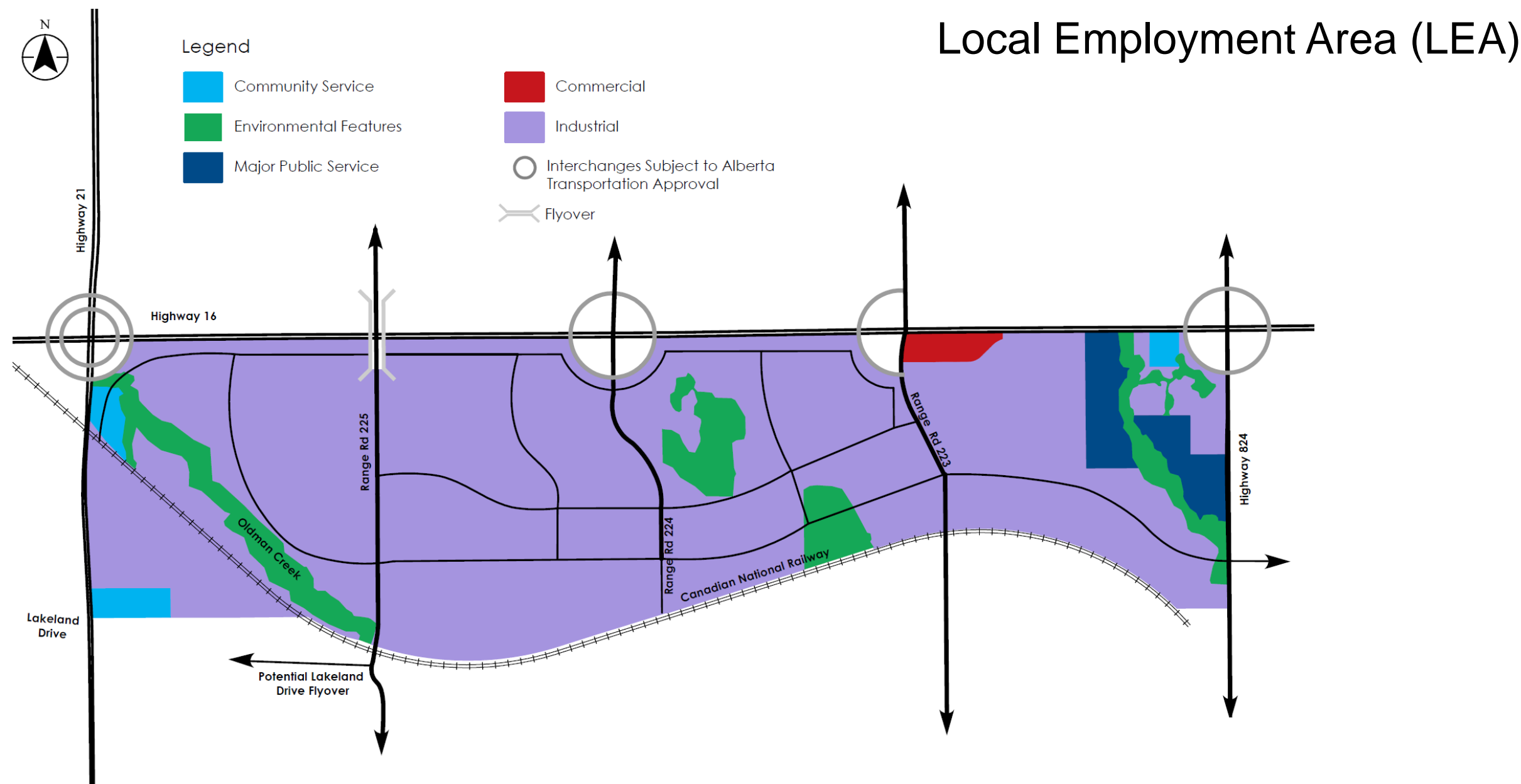
WE ARE HERE!

Bremner Area Project

Population Approximately
79,000



Bremner Area Project



Bremner: The Financial Model





Bremner: The Financial Model

SMA

- 20+ years of analysis and modeling experience with capital projects and asset management
- Cutting edge modeling and simulation techniques
- Won more than 20 provincial and national awards

The Model

- Custom built for Strathcona County's unique needs
- Components in use in other northern municipalities (St. Albert, Edmonton)
- Modeling techniques have been used across Western Canada



Overview of the Model Function

Philosophy
Assumptions
Triggers
Structure
Monte Carlo
Cost Sharing
Funding Sources
Outputs
Scenarios



Philosophy

Be able to evaluate real financial viability over time and support discussions around cost sharing

Capture all costs that impact the County including developer costs, utility costs, costs of operation and renewal, and cost of non-capital operations

Capture all revenues related to those costs

Capture Impacts of Density

Include debt and debt service for the County as well as utilities

Include revenue and costs for the rest of Strathcona County



Major Assumptions

Timing is based on 39-year buildout plan with LEA beginning in year 9, modeled over 75 years to capture operating/renewal costs

All costs are in 2018 dollars

Triggers and infrastructure costs are estimated based on the plan for Bremner, design standards, and information provided by the County

Operating costs are based on information provided by the County


Renewal costs calculated based on an optimized cost model for keeping everything in good condition (using the Risk-Based Infrastructure Modeling System - RIMS)


The **ratio** of residential to industrial/business tax rates is constant




BREMNER ASSET THRESHOLDS


ANNUAL


 BOULEVARD TREES - planted starting year 1, then each year thereafter based on lot frontage


 FLEET - built in year 1, then expanded annually based on lot frontage


EVERY FEW YEARS


 STORM-SEWER - built in year 1, then every 3 years until year 40


 STORM WATER LAKES - built in year 1, then every 2.6 years until year 40


 MULTI USE TRAIL - built in year 13, 17, 30, 33, and 37


 ARTERIAL ROADS - built in year 1, then every year from year 6 until year 40

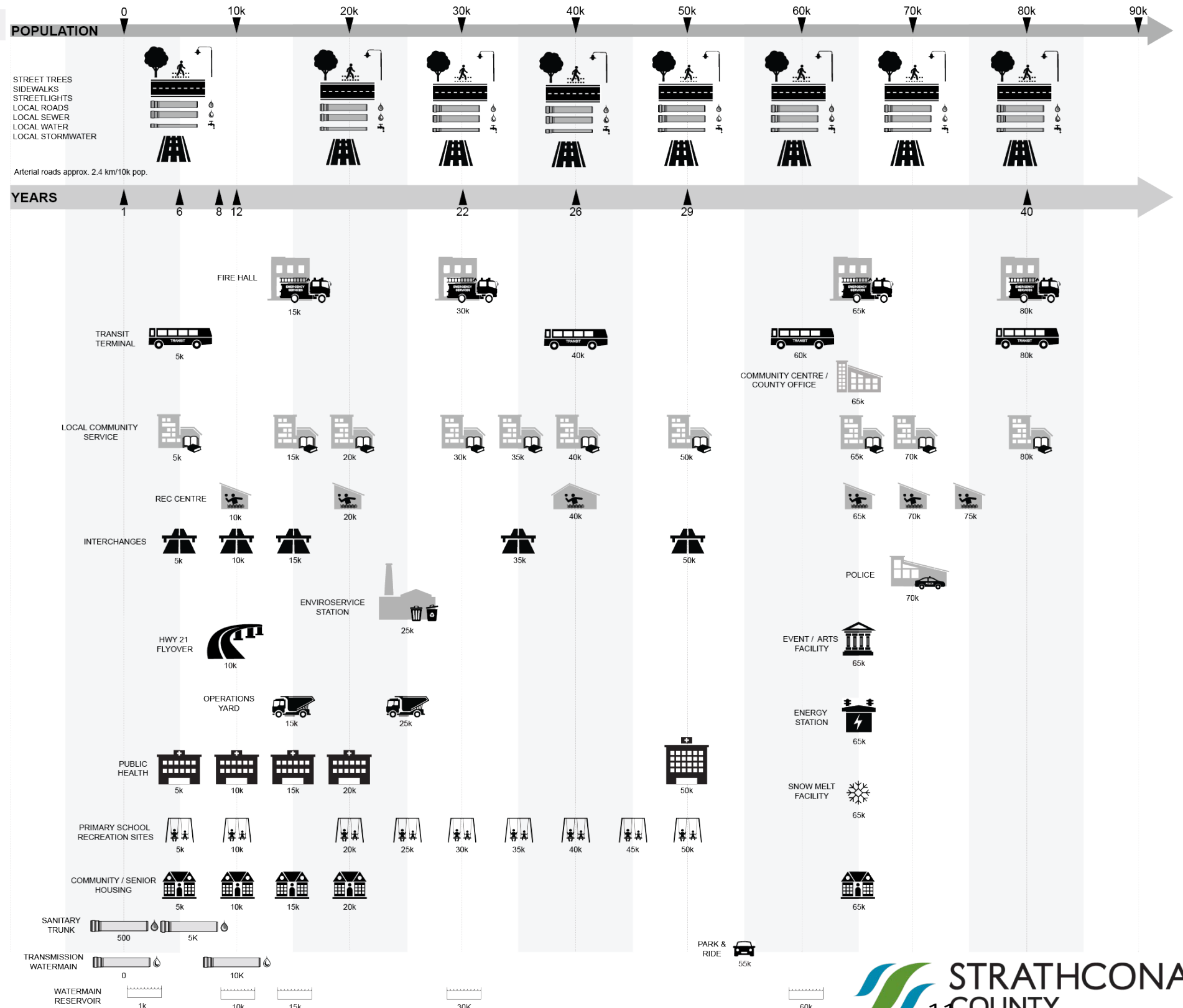
 STREETLIGHTS - built in year 1, then every year from year 6 until year 40

 WALKWAYS - built in year 1, then every year from year 6 until year 40

 RURAL ROAD - built starting in year 8, and every year until year 40

 WATER - built in year 1, then every year from year 8 until year 40

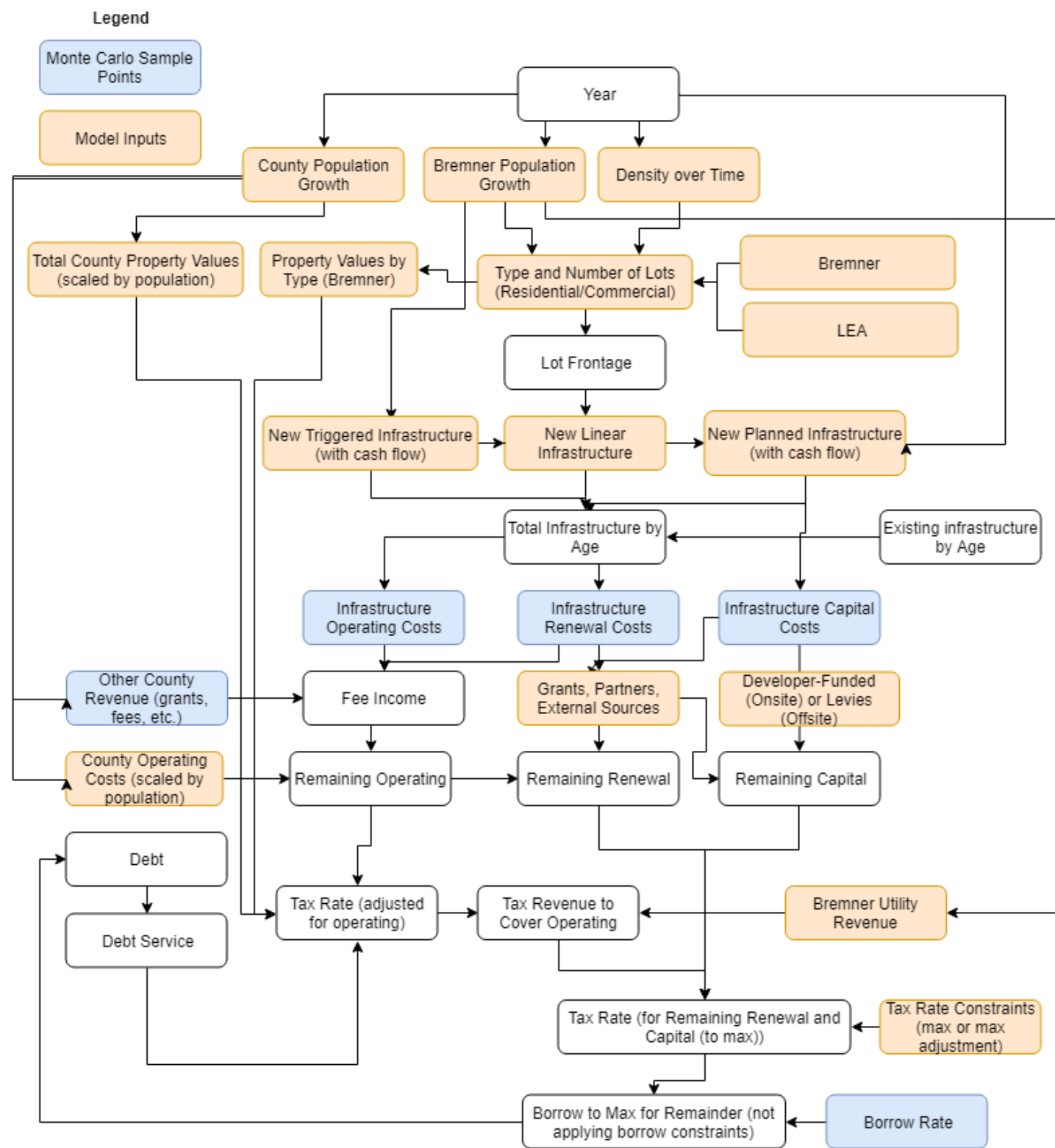
 MR SITES - built starting in year 2, then every year until year 40



Triggers



Model Structure





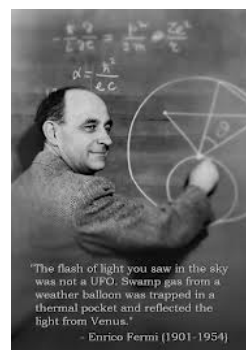
Monte Carlo Simulation

HISTORY: THE MANHATTAN PROJECT

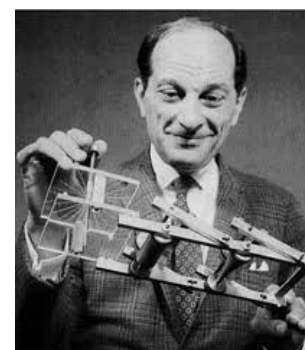
Studying neutron histories, thermonuclear reactions

Not analytically solvable

Arduous statistical sampling and calculation to simulate



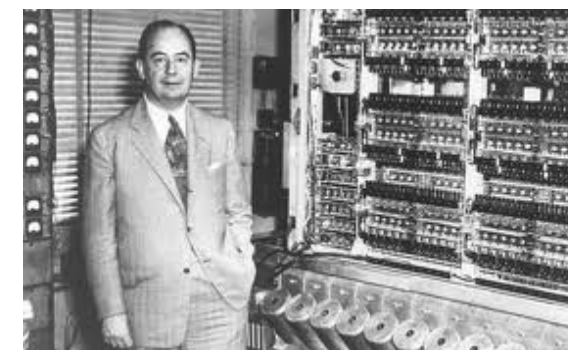
Enrico Fermi:
Experimental nuclear physics and computational approaches



Stanislaw Ulam:
Became interested in using “statistical sampling” for many problems



Nick Metropolis:
One of the first “computer programmers” for these problems



John von Neumann:
Devised Monte Carlo algorithms and helped develop digital computers

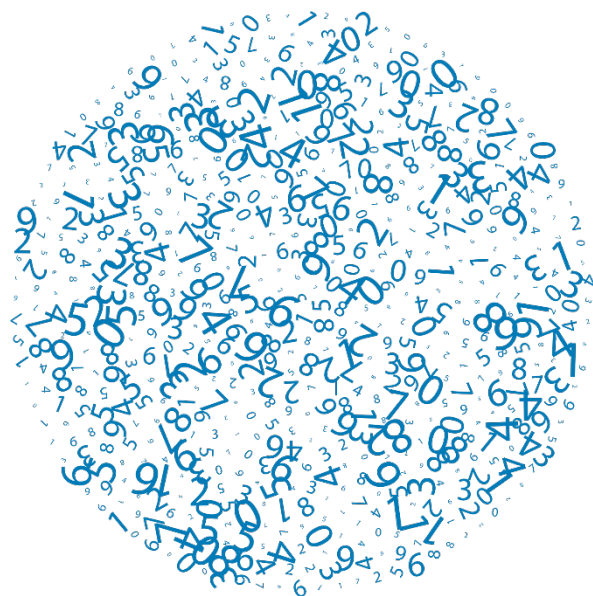


Using Monte Carlo

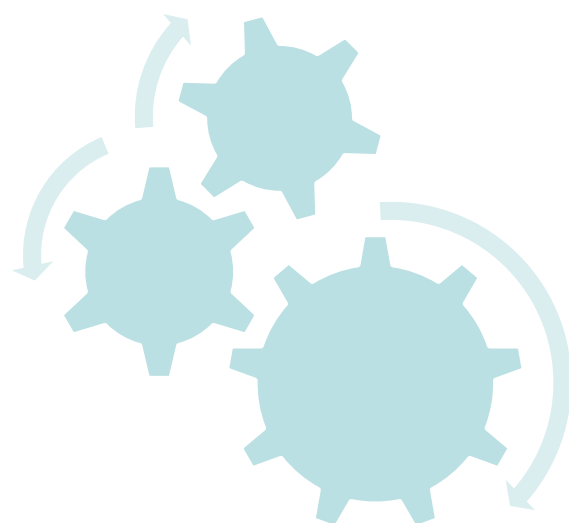
Statistical modeling technique

Captures the cumulative impact of uncertainty

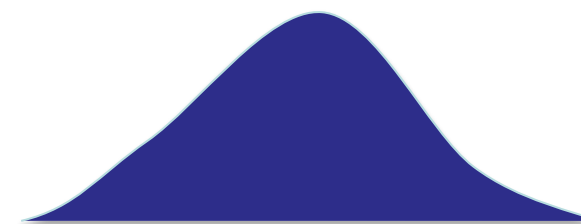
Better understanding, better estimates, better decisions



RANDOM NUMBERS
WITH CERTAIN BEHAVIORS



COMPUTATIONAL
MODEL



RANGE OF
POSSIBLE RESULTS



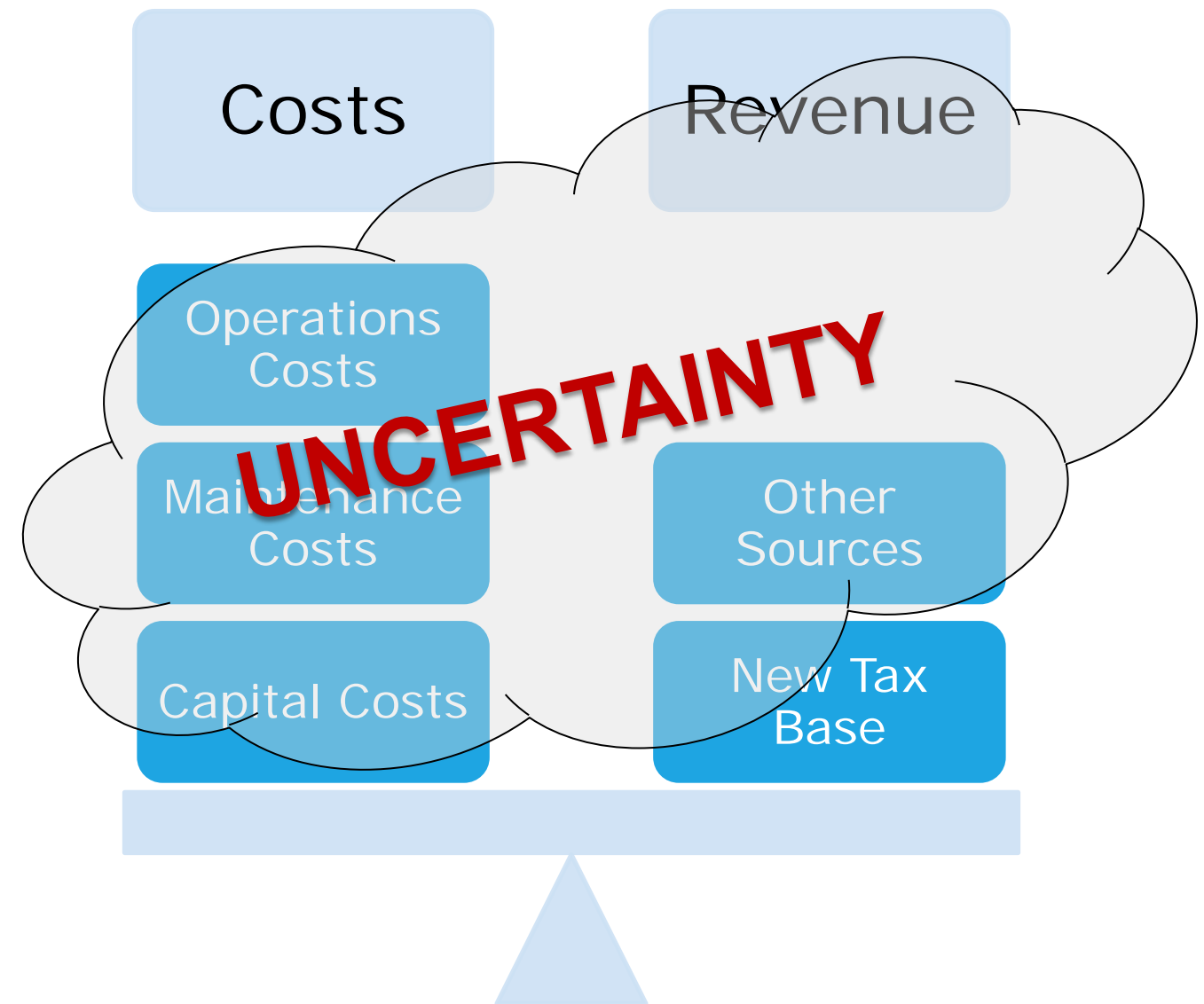
Monte Carlo

Monte Carlo Parameters

- 1000 iteration totals
- Sampled variables allowed to adjust
- 10% of base cost up or down per year

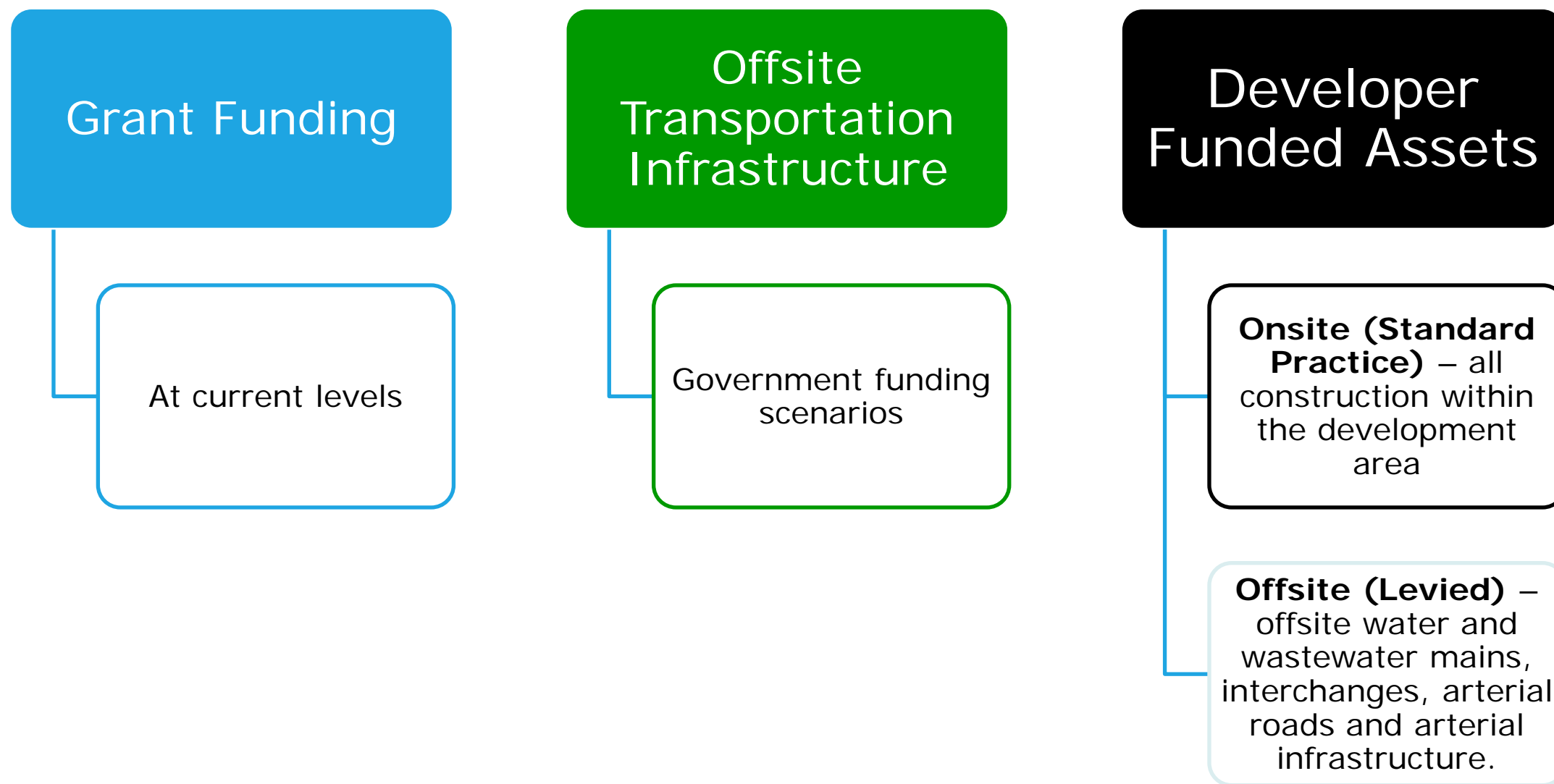
Sampled variables include:

- Property Values
- Capital, operation and maintenance costs
- Interest rates for borrowing





Cost Sharing





Funding Source Assumptions

Applicable Asset	Cost Type	Cost Sharing Base Assumption		Assumption Explained
Onsite – roads, sidewalks, sewer, SWMF, streetlights, trees, traffic signage, streetscaping	Capital	100 %	Bremner Developer	Traditional and Standard Practice
Offsite - water mains Clareview Reservoir/ Transmission Connection	Capital	50 % 50 %	Bremner Developer EPCOR	Discussions with EPCOR
Reservoirs	Capital	100 %	County	Current Practice
Offsite – interim sanitary/ ultimate sanitary trunk	Capital	50 % 50 %	Bremner Developer ACRWC	Discussions with ACRWC
Flyovers	Capital	100 %	Bremner Developer	Current Policy
Highway 21/534 interchange	Capital	25 % 25 % 50 %	Bremner Developer Adjacent Development Basin Alberta Transportation	Discussions with Area Developers
Highway 16 interchanges	Capital	20 % 80 %	Bremner Developer Alberta Transportation	Assumption 80% regional traffic and 20% local traffic
Soft Infrastructure – Recreation centers, local community facilities, fire halls, police station	Capital	100 %	County/grants	Current Policy and Practice
Utility - water and wastewater infrastructure, SWMF, reservoirs	Operating	100 %	Utility Fees (Residents)	Current Policy
All other infrastructure	Capital, operating, renewal	Taxes, fees, grants, other revenue		Standard Practice



Outputs

**Total Capital
Costs**

**Capital Costs by
Asset Type and
Year**

Cash Flow by Year

**Tax Rate by Year
and Type of Rate
(residential,
commercial,
industrial)**

**Annual Tax
Revenue**

Annual Debt

**Area Developed &
Density**

**...and other
variables of
interest**



Scenarios

Assumption	Base Assumption	Assumption Explained	Scenario	Scenario Explained
Growth Rate	1.79%	Strathcona County's calculated Growth Rate	1.3%	Meets EMRB population growth rate low projection in 2044.
Highway 16 Interchanges	80% Alberta Transportation 20% Bremner and LEA Developer	Assumption 80% regional traffic and 20% local traffic	Scenario 1: 33% Developer 33% Alberta Transportation 33% Federal	Hwy 16 will likely have a federal component because it is part of the federal highway network. Recent examples have show federal and provincial funding between 60-90%. Examples: 41 Avenue Interchange in Edmonton.
			Scenario 2: 25% County 25% Developer 25% Alberta Transportation 25% Federal	
Offsite Water Main	Clareview Reservoir/ Transmission Connection	Discussions with EPCOR indicate this is their preferred option	34 Street and 92 Avenue Supply Connection	Existing County supply connection point.



Scenarios

Assumption	Base Assumption	Assumption Explained	Scenario	Scenario Explained
Industrial Growth	Current growth	Based on Industrial Land Strategy 2002-2011 historical industrial growth	Half of Current Growth	Industrial revenue growth slowdown.
Grants	Current Grants (75% to Bremner)	Based on Sherwood Park being built out and continuation of annual programs to maintain infrastructure; therefore, grants available for growth area.	Half of Current Grants	Government funding slowdown / changes.
Debt	25 years	Current Debt Servicing practice for utilities and buildings	15 years	Can decrease total payments but increases the amounts paid annually has impacts on affordability. Paying off debt sooner means more debt capacity available quicker. Developers request shorter terms because the overall costs are lower.
Local Employment Area (LEA)	Included	Historically proposed as rural industrial growth area	Excluded	To show EMRB the Development of Local Employment Area is a benefit for future growth and Highway 16 Interchange construction.

Next Steps

- Third and final Open House February 21 at Festival Place.
- Third draft Area Concept Plan (ACP) and technical documents currently undergoing internal and external circulation.
- The Financial Viability Analysis for Bremner is in its final stages.
- We are still accepting comments from the public, as well as internal and external reviewers for the third draft of the Area Concept Plan and technical documents, and this process must be completed prior to finalizing the associated costs within the financial model.
- The final Financial Viability Analysis will be brought to Council in April.

Next Steps

- March 12 PCM report back on final Open House and external circulation comments.
- Final ACP, technical documents and Financial Viability Analysis will be brought to Council in April.
- April 30 Public Hearing and First Reading of the ACP as well as Bremner Design and Construction Standards overview for acceptance.
- April 30 will also include Municipal Development Plan amendments to support the ACP.
- EMRB referral following First Reading.