

## Future of Transportation: COVID Recovery Scenarios

### RECOMMENDATION:

Administration recommends that the SPC on Transportation and Transit recommend that Council receive this report for the Corporate Record.

### HIGHLIGHTS

- As part of the Future of Transportation Portfolio, Transportation collaborated with Planning & Development, Resilience & Infrastructure Calgary and several other business units to develop three strategic foresight scenarios for Calgary after the pandemic.
- What does this mean to Calgarians? The City is proactively planning responses to changes in travel behavior and urban growth that have been influenced by COVID-19.
- Why does it matter? Proactive planning to manage short-term uncertainties will help ensure that The City can continue to provide effective service to Calgarians, and continue working towards our strategic goals.
- The three scenarios (detailed in Attachment 1, and summarized in Attachment 2), are:
  - Rapid Recovery
    - *Pandemic*: short duration, exit in early 2021
    - *Economy*: spikes in energy / oil demand; little diversification
    - *Growth*: moderate population & job growth; suburban focus
    - *Remote Work*: avg. 2 days / week (25% less commuting downtown)
    - *Retail & Delivery*: balance of physical retail & online delivery
  - Increased Crisis
    - *Pandemic*: severe second wave, exit late 2021
    - *Economy*: extended depression with high unemployment
    - *Growth*: initially shrinking population & jobs, followed by slow growth
    - *Remote Work*: avg. 1 days / week, but less overall travel
    - *Retail & Delivery*: loss of traditional retail; low-cost online shopping
  - Transformational Change
    - *Pandemic*: multi-year, multi-wave pandemic
    - *Economy*: diversified 'green' economy; more 'live local & work global'
    - *Growth*: steady but slower growth; greater share of growth in region
    - *Remote Work*: avg. 3+ days / week (40% less commuting downtown)
    - *Retail & Delivery*: primarily online shopping with fewer retail stores
- 15 actions have been identified that should be implemented as Calgary recovers from the pandemic. Descriptions of each action are provided in Attachment 1.
  - 8 of the 15 actions are 'low-risk, high-benefit' actions that will improve resilience in any of the scenarios. These will be incorporated into 2021 work plans.
  - Ongoing monitoring will determine if the remaining actions should be initiated.
- Administration will continue to monitor real-world conditions and changing trends. The report contained in Attachment 1 will be updated periodically, with the next planned update after the 2020/2021 peak flu season.
- Strategic Alignment to Council's Citizen Priorities: A city that moves

## Future of Transportation: COVID Recovery Scenarios

### DISCUSSION

The Future of Transportation Portfolio identifies and prepares for new technologies, societal trends and major disruptions that may have lasting impacts on Calgary's transportation system. The Future of Transportation: COVID Recovery Scenarios have been developed to understand the potential short-to-long term impacts of the pandemic on the transportation system and key land uses. The scenarios are not projections or forecasts. Instead they reflect a range of plausible futures. Real-world conditions will include a mix of factors from one or more scenarios.

Some elements of the scenarios, such as the duration and severity of the pandemic, or changes in global energy markets, are beyond the control of The City of Calgary. However, many aspects of the scenarios can be influenced by policies and actions implemented by The City, as well as actions taken by citizens and private businesses.

Insights from the scenarios, and implementation of the recommended actions, can also help to address the key concepts discussed at the 2020 September 21 Strategic Meeting of Council on Planning and Mobility. These concepts included:

- ensuring equity in transportation and land use planning,
- addressing and mitigating the impacts of climate change,
- removing barriers to strategic growth areas and ensuring affordability of growth.

Building on these key concepts, several important considerations for each scenario are:

- Rapid Recovery
  - *City Finances:* Funding levels would be sufficient but unpredictable, due to moderate population and job growth, but ongoing variability associated with cyclical demand changes in the oil & gas sector.
  - *Energy Sector:* This scenario incorporates a resurgence in global energy and oil demand as the pandemic subsides. Projections for peak oil demand remain in the early-to-mid 2030s, consistent with pre-pandemic forecasts.
  - *Climate Change:* While remote work would help to reduce transportation emissions from commuting, this may be offset by growing use of delivery service vehicles and more discretionary trips by remote workers during the day.
- Increased Crisis
  - *City Finances:* Due to depressed economic conditions, high office vacancies and reduced commuting, municipal funding levels and service delivery would be very constrained. Service levels for infrastructure and City services would need to be reconsidered.
  - *Energy Sector:* This scenario incorporates a global economic depression due to a severe second wave of COVID-19. Calgary would be more heavily impacted than many other cities due to the further suppression of global energy and fuel demand.
  - *Equity:* The economic depression described in this scenario would increase demand on some municipal services, while simultaneously constraining available budgets to deliver City services.
  - *Social Disorder:* The risk of social disorder may also grow in this scenario, requiring additional resources to manage effectively.

## Future of Transportation: COVID Recovery Scenarios

- Transformational Change
  - *City Finances*: Municipal funding levels would be more predictable in this scenario due to greater economic diversification, but slightly more constrained when compared to past economic growth periods in Calgary.
  - *Energy Sector*: This scenario incorporates recent analyses from some major oil companies that global oil demand may have peaked in 2019. This is caused by both ongoing disruptions from the pandemic and global decarbonization efforts. This scenario also accounts for Federal stimulus funding that drives diversification to a 'green' economy in Calgary.
  - *Climate Change*: While remote work would help to reduce transportation emissions from commuting, this may be offset by dramatic rise in the use of delivery service vehicles in this scenario, along with more discretionary trips by remote workers during the day.
  - *Regional Growth*: This scenario incorporates a greater share of growth in the region, enabled by a significant move to remote work. This creates a new level of flexibility for some people to live wherever they choose. Such a shift would require increased regional coordination for services such as transit. Transit and parking revenues would also be impacted by reduced commuting demand to the downtown in this scenario.

The Transportation COVID Recovery Scenarios have already been applied to support the Next 20 update of the Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP). A 'stress test' of the MDP/CTP Sustainability Principles was conducted to identify areas where increased efforts will be required to optimize the outcomes for Calgary as real-world conditions track towards one (or a blend of two) of the scenarios. Summary findings from the stress test are provided in Attachment 3.

Transportation has also been actively involved in a parallel strategic foresight process led by Resilience & Infrastructure Calgary, known as Future Focused Calgary (as outlined in the *2019 Resilient Calgary Strategy*). The Future of Transportation findings are being incorporated into the Future Focused Calgary scenarios, which will be available to the corporation to evaluate planning strategies and inform The City's 2023-2026 planning processes.

### **STAKEHOLDER ENGAGEMENT AND COMMUNICATION (EXTERNAL)**

- Public Engagement was undertaken
- Public Communication or Engagement was not required
- Public/Stakeholders were informed
- Stakeholder dialogue/relations were undertaken

As part of the research to develop the scenarios, and to develop the recommended actions, Administration had the following interactions with targeted stakeholders:

- Alberta Health Services to validate the pandemic assumptions in each scenario;
- the development industry on office-to-residential building conversions;
- ongoing remote work questions in The City's Business Perspectives Panel survey.

## **Future of Transportation: COVID Recovery Scenarios**

---

### **IMPLICATIONS**

#### **Social**

Analysis of the scenarios highlighted a number of potential equity issues, ranging from inequities caused by changing economic conditions, to new work & lifestyle opportunities that may be available to some workers but not others. An action specific to addressing inequity has been incorporated into the recommendations (see Attachment 1), and equity is a lens that will be applied in all transportation and land use planning projects.

#### **Environmental**

Each scenario has different implications for Calgary's ability to achieve the 80% GHG reduction targets set out in the Climate Resilience Strategy. Transportation accounts for approximately one-third of all GHG emissions in Calgary, with buildings accounting for the remainder.

The potential travel changes outlined in the Discussion section reinforce the need for low-emissions vehicles to help reduce transportation emissions, as well as complete communities and infrastructure that enables walking and cycling for daily trips (e.g. to buy groceries).

#### **Economic**

The economic implications of each scenario are addressed in the Discussion section above.

#### **Service and Financial Implications**

**Implication:** Other (potential future impacts to capital & operating budgets)

This analysis was completed in-house, with no direct service or financial implications. However, each scenario has potential short-to-long-term implications for City services and finances, as outlined in the Discussion section above.

### **RISK**

Strategic foresight scenarios help identify risks before they emerge, and reduces the likelihood that The City will be caught by surprise. The actions identified through the Future of Transportation: COVID Recovery Scenarios should be adequately resourced to address the risks identified from each of the scenarios.

### **ATTACHMENT(S)**

1. Future of Transportation: COVID Recovery Scenarios Summary Report
2. Quick Reference: Transportation COVID Recovery Scenarios
3. Summary of Scenario Stress Test on MDP/CTP Sustainability Principles

#### Department Circulation

General Manager	Department	Approve/Consult/Inform
Doug Morgan	Transportation	Approve
Stuart Dalgleish	Planning & Development	Consult