

2. *Inspiring neighbourhoods:*

The pilot is proposed for skeletal and arterial (i.e. major) roadways that connect communities, using landscaping approaches that are applicable also within neighbourhoods along residential roads and in parks, and depending on the design they may add colour, distinctiveness, and opportunity for community engagement.

3. *A city that moves:*

Landscaping design and maintenance will address traffic safety/visibility concerns.

4. *A healthy and green city:*

Several environmental benefits ascribed to roadside naturalization include: increased biodiversity associated with native species; enhanced habitat for pollinators and birds; interception of storm water runoff; carbon sequestration by shrub and tree species; and resilience to drought conditions and climate change.

5. *A well-run city:*

By partnering with public institutions and private industry to explore innovative approaches to landscaping, The City will be leveraging opportunities to cost share, gain access to additional professional expertise and networks, and inform the development of business plans and best practices for habitat restoration of current open spaces and for new development alike.

What does Success look Like and How will it be Measured?

The project will be a success if:

1. The naturalized landscaping treatments and related assessments and engagement can be completed as planned within the constraints of available budget and resources;
2. Preliminary results of biological monitoring indicate appropriate rates and extents of desired vegetation establishment as an initial return on investment;
3. Calgarians have had more opportunity to deepen their understanding of vegetation management, native species, biodiversity, and ecological processes in Calgary's open spaces including roadsides (beyond natural area parks) as a result of this project; and
4. The full costs and methods deployed in the pilot project are carefully tracked and documented to form the evidentiary basis for future business cases for capital investments in boulevard naturalization and for potential changes in practices and specifications for new development city-wide.

Economic measures of success, with respect to potential future long-term operational cost savings in as a financial return on investment may not be measurable in the two-year timeframe. However, one valuable insight to be gained from this pilot project would be how the market (i.e. landscape construction firms) price the unconventional landscaping treatments and materials. Other key information needed to validate assumptions around the effort and costs required for ongoing control of regulated weeds and maintenance for this type of naturalized landscaping will only become available over several years, as plant communities establish and evolve subject to annual variations in local climate (e.g. drought conditions) and potential disturbances (e.g. utility

work in the right-of-way). Accordingly, an additional successful outcome of this project would be for partnerships to be established with academic institutions that lead to ongoing monitoring of naturalized landscapes and ecosystem processes over time, beyond the two-year timeframe of the pilot, to complement or expand on any monitoring work undertaken by The City.

The biophysical assessment component of this project, being scoped to include assessment of existing “low maintenance” areas throughout the city, will be valuable in providing some historical context and reference information beyond the two-year project timeline. This retrospective view will contribute to project success by providing insight to actual maintenance and weed control effort (relative to mowed turfgrass) over time, and by providing visual reference examples when engaging the public and gauging levels of acceptance of the more natural looking roadsides.

In relation to key indicators of success for this project, there are two related metrics already established through strategic plans and policy:

- The MDP/CTP Core Indicators for Land Use and Mobility and also the One Calgary budget include increases in the percentage of urban forest tree canopy; note that a project of this magnitude will not result in percentage-point increases in tree canopy, although naturalization at scale city-wide in the future would make meaningful contributions.
- The Biodiversity Strategic Plan established a target of 20 per cent naturalization of open space (832 ha) in the corporate land holdings by 2025, and Calgary Parks indicate that currently The City has restored approximately 6 per cent of open space; the successful completion of this pilot project would add another 5 per cent (past the half-way mark in meeting the 20 per cent target) and may help the business case for further naturalization.

Success will be measured and reported back to PFC by Q4 2022 with the following key indicators:

Measure	Target
Financial: Improved business case information	100% of costs tracked
Ecological: Per cent increase in naturalized open space city-wide	5%
Social: Number of Calgarians engaged in the pilot subject matter	Increased understanding

Project Alignment with Current Policies and Plans

The proposed project aligns with and will help to advance the implementation of several key city-wide policies, plans and procedures including but not limited to the following.

Calgary Transportation Plan (2009):

1. Improve the air quality on and around mobility corridors by increasing vegetation, decreasing impervious surfaces, and supporting the use of renewable energy and other techniques to mitigate climate change (Policy 3.12.b)
2. Preserve and enhance biodiversity to support the natural environment in and around mobility corridors (Policy 3.12.c)
3. All new and retrofit road and street designs should incorporate green infrastructure strategies to contribute to the environmental health and visual aesthetics of the urban fabric (Policy 3.7.o)
4. Native vegetation and a layered tree canopy structure should be incorporated within corridors to reduce the urban heat island effect and improve air quality (Policy 3.7.q)

Municipal Development Plan (2009):

1. All land use and transportation planning and development should seek to conserve and protect ecosystems by: (i) recognizing the interconnectedness of air, land, water, climate, ecosystems, habitat and people; ... (v) establishing, protecting and restoring native habitat and areas of biodiversity locally and regionally; ... (ix) promoting innovative technologies and processes to achieve environmental goals (Policy 2.6.a)
2. Land use planning and development, urban design and transportation planning processes should incorporate the principles of green infrastructure, which seek to: ... (iii) mimic nature through engineered green systems to reduce the impact on the ecosystem; and (iv) improve the aesthetic (visual) quality and sense of place of all communities and landscapes (Policy 2.6.1.a)
3. Create an interconnected open space system within and between watersheds to ensure that the ecological integrity of open spaces and parks are recognized and protected as the most critical element of Calgary's green infrastructure (Policy 2.6.4.f)
4. Manage natural areas and open spaces [i.e. includes public land set back from roadsides] primarily to conserve and promote native biodiversity (Policy 2.6.4.n).

Our BiodiverCity: Calgary's 10-year Biodiversity Strategic Plan (2015):

1. Restore 20 per cent of current open space to support the conservation of biodiversity
2. Evaluate landscapes in Calgary and set targets for conservation measures to identify, protect and manage ecological cores and corridors [e.g. includes naturalized open space]
3. Identify invasive species in open space and complete strategies for their management.

Climate Resilience Strategy and Action Plans (2018):

1. Update design guidelines for City infrastructure to ensure resilience to extreme weather events and chronic climate changes.