

June 30th, 2021

The Honourable Catherine McKenna
Minister of Infrastructure and Communities
Infrastructure Canada
Communications
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Suite 1100
Ottawa, Ontario K1P 0B6
By email at: info.infc@canada.ca

**Re: *Building the Canada We Want in 2050*
Engagement Paper on the National Infrastructure Assessment**

The CSLA thanks the Minister and her team for this opportunity to provide input on Canada's **National Infrastructure Assessment** "*Building the Canada We Want in 2050*".

The Canadian Society of Landscape Architects (CSLA), founded in 1934, is a professional organization with 2,348 landscape architect members, 615 associate (or intern) members and 669 students of landscape architecture members. As the voice of the profession in Canada, the CSLA is an advocate for its members on issues such as urban design, urban renewal, sustainable development, human health and well-being, climate change, protected landscapes and cultural heritage. You can learn more about the CSLA at: <https://www.csla-aapc.ca/csla-aapc>.

The CSLA applauds the Ministry's leadership in establishing broadened parameters for the definition of community infrastructure and that the infrastructure strategy includes not only traditional transit, transportation and communications but establishes the concept of "nation-building infrastructure" inclusive of public transit, cycling paths and electric vehicles, natural assets and more inclusive forms of housing and supporting community facilities and services. Infrastructure re-development and renewal are viewed as one of the main instruments of addressing climate change and its impacts on the environment and society as a whole. Landscape architects bring experience and specialized talents to governments and infrastructure projects where climate adaptation and mitigation needs exist.

Ensuring Livable Communities

The rapid growth and intensification that many parts of the country have experienced over the last two decades and the effects of the COVID-19 have changed how we live and think about public spaces in our communities and the direction of investment for infrastructure and services. However, serious gaps are being uncovered as community needs come to the forefront. Public scrutiny of the rationale of investments and assessment of benefits to our daily lives has never been so imperative.

Behaviours are changing:

- more people are riding bikes, walking, and exploring other alternative modes of transportation.
- more people work remotely and will continue to do so.
- many of us are reconsidering travel for business and vacation.
- many of us now acutely recognize the importance of healthy public spaces in our immediate neighbourhoods, on waterfronts and river ways, of access and support for local food systems, clean water and health services, and the respite of green streets, pathways, gardens and more.

The CSLA believes that a sustainable approach for pandemic recovery and longer-term infrastructure planning needs to incorporate a focus on investments in green infrastructure inclusive of parks, and open spaces, natural infrastructure and biodiversity, in training, research and development in areas of green technology and design innovation, and a meaningful infrastructure renewal of vulnerable and Indigenous communities in urban and rural settings.

As we augment and re-scope traditional infrastructure needs, a more holistic auditing of infrastructure systems requires expert assessment at all community scales supporting the livable community vision. Landscape architecture constitutes an important leading contribution to city building and community revitalization, and a critical expertise in building a creative, multi-disciplinary perspective for relevant infrastructure planning and funding towards 2050.

Understanding Priorities in National Infrastructure Assessment

In support of the federal government's infrastructure investment focus on promoting economic growth, job creation, and competitiveness; addressing climate change and increasing resilience; and improving social inclusion and quality of life for all Canadians, the CSLA suggests the following recommendations to be considered as part of the three-priority framework.

Assessing Infrastructure Needs and Establishing a Long-Term Vision

- National Infrastructure Assessments must require a coordinated provincial/territorial, municipal and regional methodology for auditing a wide spectrum of built and natural assets to determine an inventory of federal interest that may or may not be integrated in planning or public works master studies. This hierarchy of infrastructure needs must be transparent throughout the country as there is still considerable demand to build and/or improve the basic infrastructure in many sectors of the economy. In the Northwest Territories, for instance, core transportation related projects are still required (roads, bridges, airports). In these projects, landscape architects continue to provide ecological knowledge and site remediation expertise to minimize landscape damage and repair the natural environment. In growing urban centres, many are searching for new answers for climate risk management through greater reliance in natural infrastructure and careful ecological asset management. The diversity of needs is broad and demands thoughtful analysis to establish appropriate infrastructure to address climate change priorities.
- In consultation with the appropriate authority, community level audits must also be integrated to understand implications to existing neighbourhoods, and gaps in infrastructure for current and future residents. Identify and fund the rejuvenation and expansion of the public common – those public spaces that create healthy and livable communities including parks, green spaces, greenways, recreational fields, plazas, waterfronts, renewed streets, community centers and more. Many of these may not be fully funded through standard local growth planning mechanisms.
- Audits or assessments must identify supporting infrastructure as a precursor to major growth planning and should be organized at an early stage, on a systems basis to understand high level contextual issues, opportunities, or constraints e.g. adequacy of parks and open space systems, watershed implications, urban flooding/infrastructure analysis, water management and natural heritage, groundwater vulnerability, urban canopy protection/augmentation, etc. Too often these issues are not recognized until too far down the development feasibility process when more sustainable options are lost.
- Many of our communities across the country have intensified to levels that are underserved with park spaces to support increasing populations, or are underfunded with inadequate provision of purposeful well-designed

amenities for diverse users and cultures. These short-falls must not be continued with current political pressures to develop on a fast track. Early auditing could help establish new support for underfunded green infrastructure and restoration priorities where deterioration of the public realm prevails (e.g. brownfields, utility corridors, harbours, inner city spaces). Landscape architects can develop new, up-to-date parks planning model that addresses current growth demands – both in terms of parks quality, capturing of landscape opportunities and response to needs and service levels.

- Canada's natural ecosystems must be considered as essential assets in the prioritization of climate solutions and green infrastructure – careful management and financing for the protection and restoration of natural assets within urban environs, rural and remote locations of the country is fundamental to a comprehensive infrastructure plan. Park and natural heritage infrastructure is required for Canada to achieve Canada's Target 1 Challenge – adding to protected and conserved areas in each province and territory. Landscape architects have led many resource management assignments building natural legacy across the country for decades.
- Canada boasts a significant wealth of cultural heritage sites valued from coast to coast to coast, providing ecological and historical services, and in many locations unique economic development and tourism staples. High profile properties and parks commissions require re-investment and revitalization that cannot be provided through regular visitation income and operational budgets. Our cultural heritage jewels need assistance for managing for the long term. Protected areas, including Indigenous Protected Areas, and new park proposals require the participation and leadership of Indigenous governments to achieve success for all communities.
- Every region or community within the country will have a host of specific climate adaption and mitigation priorities as they all move to extreme weather risk management planning. Landscape architects are already working with communities as specialists on evidence, science-based design solutions that are essential to threats to infrastructure, and this leadership must continue. Urban risk vulnerability scenarios are complex to study involving multiple types of flooding and climate amelioration, to advance redevelopment or neighbourhood safety objectives. In northern communities, for example, the inclusion of Indigenous peoples in environmental research, monitoring and guardianship for both scientific research and traditional knowledge must be acknowledged. Funding shortfalls for the essential risk studies and mitigation infrastructure requirements must be identified in older communities and in growth centres.

Improving Coordination Among Infrastructure Owners and Funders

- A key component of infrastructure improvements in all parts of the country is the completion of land uses plan and/or supplementary studies that address comprehensive growth implications and community infrastructure requirements, of federal interest, before development processes begin. Key interrelationships of grey and green infrastructure must be considered at early stages to determine design and costs benefits that mutually support community goals. Coordinated land use and infrastructure planning supporting development is required. Modernized environmental assessment processes that provide for creative design and problem-solving dialogue, thoughtful life cycle costing and broader dialogue on “sustainable options for community solutions” should be considered.
- Park and open space lands that have historically been acquired for public benefit must not be considered as commodities for building sites and infrastructure as intensification moves forward. Although open land is scarce within redeveloping communities, land transactions for infrastructure can often be short-sighted and should be discouraged. Avoid the deterioration of the cumulative value of parks and natural systems, and specifically the removal or damage of valuable forests and wetlands within our growing communities.
- Funders and infrastructure owners need to consider comprehensive life cycle costing of public facilities as an ongoing issue. Green spaces have their own life cycle nuances. Operations and maintenance need to be incorporated into agreements for long term viability of community facilities and properties. Training and capacity building need to be pursued to ensure proper operations and maintenance of buildings, parks and natural asset

properties. New technologies and skills are required to care for green infrastructure sites as we transition into the longer term.

- Many of our landscape architect teams work with First Nation, Inuit and Metis communities across the country. Self-government and land claim agreements (including the implementation of UNDRIP) between Canada and Indigenous governments facilitate a partnership approach to decision-making. It is incumbent on Canada to conclude these agreements to meet obligations to consult as partner with Indigenous governments on infrastructure improvements.
- Inclusionary consultation processes and engagement must form the basis of infrastructure design and decision-making across the country, as well as accessibility in all forms.
- Professional collaborations and multi-disciplinary advancements can spearhead the success of infrastructure going into the future. Promote and invest in Canadian design professionals to build capacity for our own “nation-building” expertise. Our professional stature and talents are already recognized worldwide. Prioritize our leadership talents and design services to form a national foundation for ‘hiring at home’ priority procurement.
- We recommend that the CSLA participate in work groups and committees to bring this infrastructure assessment into realization, and form part of the on-going implementation of the federal infrastructure plan through advisory commission or formal working committees.

Determining the Best Ways to Fund and Finance Infrastructure

- Well-articulated assessment requirements must be clearly tied to consultative prioritization will allow communities and organizations greater decision-making power and ultimately improve relations within all communities of Canada.
- A robust research and development funding source to advance green building and site development must be bolstered to engage professional experimentation and innovation for infrastructure needs. A focus on healthy neighbourhood integration of design and services needs to fuel productive pilot projects in inner city locations, rural or re-developing environs and remote communities. Cost-sharing, subsidies and rebate incentives are recognized programs that facilitate and encourage use of technologies and nature-based solutions.
- A full range of partnerships must be explored and fostered for the delivery of infrastructure design, implementation and to conduct on-going maintenance, quality control, risk monitoring. Many excellent partnerships exist as models with community groups, NGOs, Indigenous communities and private industry to ensure skilled expertise and diligent operations. Avoid partnering arrangements of infrastructure that have resulted in project fast-tracking only, with poor outcomes for design quality, critical lack of protection of ecological assets and cavalier adherence to local concerns.
- Support Indigenous communities and governments in habitat management and restoration, land and ocean management, and carbon stewardship through continued investment in existing infrastructure programs and the creation of a conservation economy.
- The Unique Needs of Canada’s North – CSLA member landscape architects live and work extensively in all three territories of northern Canada. Augmentation of funding in such programs such as Canada Nature Fund and Indigenous Guardian Pilot Program need to go further to invest in protected land projects, and to support Indigenous led stewardship of traditional lands, water and ice areas.

Federal Gas Tax Funding or other related funds are needed to support northern municipalities with infrastructure deficits and reduced reliance on diesel generated power.

Significant augmentation of funding (beyond modest amounts from Transport Canada) need to be earmarked to address real challenges in climate change within northern municipalities (infrastructure, coastlines, marine facilities) and changes to natural environs central to the northern Indigenous way of life and culture.

Food production systems require bold change to establish food resiliency and reduced dependence on subsidies. Support for food self-sufficiency and protection of critical food habitats, as well as, research on food production opportunities are urgently needed in northern communities.

About the Profession of Landscape Architecture

Landscape architects work to accommodate both the needs of human society and the natural environment, respecting the cultural landscapes of the past, and planning sustainably for future development. Landscape architects play an integral role in the processes of planning, design and management of outdoor spaces of all sizes – from small urban places to National Parks. We aim to mitigate the contribution of greenhouse gases to the atmosphere, promote ingenuity and resilience in individuals and organizations, and ensure the sustainability of our natural environment.

The work of landscape architects touches many aspects of the Canadian economy and its growth, inclusive of talents from early idea building to construction implementation. There are more than 850 landscape architectural firms in Canada, providing expertise in urban revitalization, community green space and land use planning. All firms work within a framework of multi-disciplinary professionals and many have additional expertise in architect, urban planning, engineering, ecology, horticulture/arboriculture, cultural landscapes and Indigenous relations. Their expertise is well known and included at all levels of governments across the country from coast to coast to coast. The economic activity in the landscape architecture profession has grown significantly over the last 20 years, and we advance our skills to ensure healthy, livable communities.



Biodiversity Corridor, Borough of St-Laurent, Montréal. Winner of a 2021 CSLA National Award of Excellence: <https://www.csla-aapc.ca/awards-atlas/biodiversity-corridor-borough-saint-laurent-montreal-quebec>

The pandemic has shown us that Canada can harness its resources in an emergency, identify areas that are hard-hit, and move swiftly to inject supports. The CSLA believes the pandemic has also demonstrated that we can do things differently to meet another, longer-term emergency – that of climate change and the need to meet net zero targets to adapt our communities for the inevitable.

According to a recently published report by the World Economic Forum, economic recovery efforts post-COVID-19 must address climate change and nature loss, with all infrastructure positioned to “build back better”. The report emphasizes that nature-based and sustainable practices could create more than 395 million jobs globally by 2030 and more than \$10 trillion in annual business value over the next decade. The 2021 World Economic Forum Global Risks identified that environmental degradation is the biggest risk to ecological health for the second year in a row.

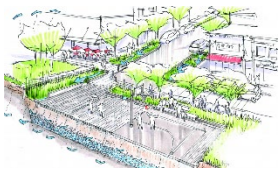
Whether we are dealing with the short-term emergency of this pandemic or the deeper and longer-term climate change emergency, more studies show that climate change mitigation and adaptation efforts require investments in sustainable practices and infrastructure renewal. Those practices include creating healthy spaces, revitalizing public infrastructure, and applying solutions based on natural and nature-based infrastructure (e.g., green roofs, green parking areas, natural drainage basins and naturalized storm water management, greenways and trails). Research outcomes and innovation funding in these areas of green technologies and site implementation are pressing needs that should continue through federal inputs.

The Role of Landscape Architects in Green Recovery and Climate Change

Landscape architects are well-prepared to participate in a green recovery and to support this important work to establish meaningful infrastructure assessments to address climate change, urban and rural renewal throughout the country. Landscape architects are advocates for an ecosystem-based approach to policy, planning, design, and decision-making. The federal government is the level of government best equipped to provide the resources required to support all communities and levels of government in building a new national infrastructure framework and advancing toward a low carbon economy.

The talent and skill of our landscape architectural professionals can be seen in the public realm on prominent projects in every major city, province and territory in the country. To name a few one has only to look at award winning initiatives such as: **the Naturalization of the Don River** and the **Port Lands** community redevelopment on the Toronto waterfront; and **The Forks** river and floodway renewal in Winnipeg, the **Lachine Canal** in Montreal, and the **Échangeur Charest/Robert-Bourassa** in Québec City. **Calgary's Downtown Flood Barrier** project and **Nova Scotia's Flood Mapping** studies have also benefited from our professional guidance in execution.

These multimillion-dollar investments have taken place over the last decade with infusions of federal funding and have involved the creative leadership of landscape architects and urban designers who are committed to “big picture landscape thinking” around urban renewal, ecological restoration and climate change adaptation and mitigation.



Recently, there have been several award-winning projects recognizing the work of landscape architects within collaborative teams on the City of Vancouver's innovative **Rain City Strategy**, a green rainwater infrastructure and management initiative: <https://www.aapc-csla.ca/awards-atlas/rain-city-strategy-green-rainwater-infrastructure-and-rainwater-management-initiative>.

In Scarborough, **the Meadoway** is transforming a 16-kilometre hydro corridor into one of the largest linear urban greenspaces in Canada where recreational spaces, walking and biking paths, community gardens, and native plant species will take the place of empty spaces of monocultural grass: <https://www.csla-aapc.ca/awards-atlas/meadoway>.



In Calgary, **Dale Hodges Park** is a fully integrated 40-hectare park, stormwater treatment facility and one of the largest public artworks in North America. These name only a few of the high quality landscape architectural projects that will address infrastructure renewal, social needs, community health and resilience, all the while creating employment and addressing climate change: <https://www.csla-aapc.ca/awards-atlas/dale-hodges-park>

There are many more of these projects needed in the economic transition and recovery phases from COVID-19 – developments that engage communities in decision-making, respect cultural and Indigenous leadership on ancestral lands and engender a commitment to healthy, useful, enjoyable, climate-ready spaces. There are many more examples in the CSLA's [Livable Communities](#) and [Nature-Based Solutions by Design](#) documents referenced here, including roof top urban farms that support local populations with locally grown produce; parks and greenways; planting of native species in urban streetscapes and forests; coastal rejuvenation; water management; pathways and streetscapes that encourage green mobility and spacing. A green recovery and strong infrastructure foundation will depend on challenging many

current practices to ensure we build and plan better, economize and realize multiple benefits to enhance public and private spaces, urban renewal and prioritize health.

The CSLA believes these recommendations will recognize the emergencies and infrastructure deficits that we currently face and support both the economic recovery from COVID-19, as well as climate change adaptation and net-zero targets. These crucial actions will go a long way to ensuring that Canada maximizes its resources and builds a strong national infrastructure foundation towards 2050. Landscape architects are poised to assist at all levels of infrastructure implementation to ensure a better future for the environment and all Canadian's health and well-being.

References

[*Livable Communities*](#), published by the Canadian Society of Landscape Architects

[*Nature-based Solutions by Design*](#), published by the Canadian Society of Landscape Architects.

Yours sincerely,



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President
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Endorsement by CSLA Provincial, Territorial and Regional Component Associations

The CSLA is composed of members from 9 provincial, territorial and regional component associations from across the nation. The following component associations have endorsed this engagement letter. By doing so, they add their important voices to the CSLA's recommendations.



Ontario Association of
Landscape Architects (June 30th, 2021)



Manitoba Association of
Landscape Architects (June 30th, 2021)



Saskatchewan Association
of Landscape Architects (June 30th, 2021)



Northwest Territories Association
of Landscape Architects (June 30th, 2021)



Nunavut Association of
Landscape Architects (June 30th, 2021)