Capital Illumination Plan

2017-2027

Draft - June 2017
CHAPTER 1

Introduction

1.1 BACKGROUND

The Capital Illumination Plan represents the federal government’s key statement on illuminating the core area of the National Capital Region, under the guidance of the Plan for Canada’s Capital 2017-2067.

Through its ability to create nighttime appeal, lighting is an urban strategy that affords an opportunity to strengthen the identity and position of the National Capital Region. Urban illumination is associated with safety and visual comfort, but also plays a role in a city’s image and attractiveness. Lighting technologies are evolving and our ability to illuminate architecture and urban features is improving. At the same time, illumination’s impact on the natural environment and human health is better understood.

The wealth and beauty of the National Capital Region’s landscapes contribute to our nation’s strong and unique identity and should be showcased both day and night.

1.2 OBJECTIVES

The Capital Illumination Plan is the first strategy for illuminating and showcasing the nighttime landscape of the Capital core area as a whole. It is focused on the future, with a timeline extending to 2027.

More specifically, the objectives of the Capital Illumination Plan are to:

• Enhance the Capital’s nighttime beauty.
• Enrich the resident and visitor experience.
• Promote sustainable development.
• Support existing planning, heritage conservation and urban design strategies.
Figure 1.1
Study Area
• Strengthen ties and collaboration between federal partners, the cities of Ottawa and Gatineau, and other public and private sector stakeholders.

As the first plan aimed at showcasing the nighttime landscape of the Capital core area, and considering the broad study area, the Capital Illumination Plan adopts a high-level approach; it proposes an illumination framework and provides general recommendations. Detailed recommendations will be required for certain areas or to address specific themes, such as those provided in the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015) or the Right-of-Way Lighting Policy (City of Ottawa, 2016). One of the roles of the Capital Illumination Plan is to guide these future detailed analyses and ensure a coherent approach at the global scale.

1.3 STUDY AREA

Located on both sides of the Ottawa River, the study area covers a territory forming part of two municipalities (the Ville de Gatineau and the City of Ottawa) and two provinces (Quebec and Ontario), each with its own government and respective policies. The study area is based on the boundaries of Canada’s Capital Core Area Sector Plan (NCC, 2005), with a few exceptions arising from the specific needs of the Capital Illumination Plan, such as inclusion of the Canadian Museum of Nature. The Ottawa River is an important physical element, covering approximately one third of the study area.

1.4 SCOPE

The NCC’s planning mandate is established under the National Capital Act, giving it the unique responsibility of planning, developing and enhancing the Capital, and specifically federal lands.

In order to present a common illumination framework for the Capital core area, the study area for the Capital Illumination Plan includes properties that are not under federal authority. The NCC has no direct mandate to implement the Capital Illumination Plan’s recommendations across the entire study area; the plan therefore serves a special role as a consensus-building tool.

Given the spirit of cooperation and coordination required to create a comprehensive nighttime identity for the capital, the NCC encourages municipal partners to use the Capital Illumination Plan to guide the illumination of areas under their authority. Its development represents a joint commitment by the various stakeholders that must carry over into the implementation phase to ensure success.

1.5 DEVELOPMENT PHASES

The Capital Illumination Plan is the product of work carried out over three phases. It was developed in a spirit of cooperation with the active participation of a wide range of federal partners, the City of Ottawa, the Ville de Gatineau, and private and public sector stakeholders. The process also included active public participation through various events including discussion sessions, workshops and night walks.

**Phase 1 – Analysis**

An initial observation phase provided an in-depth understanding of existing conditions with regards to lighting in the Capital core area. It also identified international best practices. This information is presented in the Phase 1 Report – Analysis (Lumipraxis Stratégie Lumière + MMM Group, 2016).

**Phase 2 – Vision and Principles**

A vision and principles were developed based on the information gathered in Phase 1.

**Phase 3 – Plan Development**

Rooted in the vision and principles, an Illumination Concept and lighting guidelines were developed for the Capital core area.
1.6 STRUCTURE

The Capital Illumination Plan’s structure is intended to position the document as an easy-to-use resource for those working with illumination in the Capital. It includes the following chapters:

- Chapter 1: Introduction
- Chapter 2: Existing Conditions
- Chapter 3: Vision and Principles
- Chapter 4: General Guidelines
- Chapter 5: Illumination Concept
- Chapter 6: Guidelines by Type of Use
- Chapter 7: Implementation

1.7 HOW TO USE THE PLAN

As a planning and design tool, the Capital Illumination Plan’s role is to guide lighting projects. Depending on the users, it serves as a guide for:

- The management of existing lighting;
- The identification of priority lighting projects over the next 10 years;
- The design of new lighting projects;
- The evaluation of lighting proposals by federal and municipal authorities.

It is vital that each stakeholder consider the guidance provided by the Capital Illumination Plan and determine how their individual project fits within its overall vision. This plan is not intended to be a regulatory framework; the purpose of the guidelines is to support the design process for projects, rather than prescribing specific solutions. Each project is unique, and its lighting approach must be considered on a case-by-case basis according to its nature, location, surrounding context, and objectives.
2.1 KEY FINDINGS

An analysis of the current nighttime condition of the Capital core area was completed as the first phase in developing the Capital Illumination Plan. The key findings of this analysis were as follows:

1. **Lack of a comprehensive nighttime strategy**
   The Capital core area has no comprehensive nighttime strategy. Lighting projects remain isolated and disjointed undertakings, lacking a cohesive thread capable of weaving together narratives and intentions.

2. **Lack of visibility and landmarks**
   The Capital’s nighttime image is difficult to read, both in terms of the lack of prominence given to national and iconic symbols, and the lack of spatial orientation and visual landmarks.

3. **Lack of experience-based destinations**
   Exterior lighting is dominated by functional needs; the human experience is secondary. The experiential quality of the study area would benefit from the creation of special character areas and nighttime sceneries through thoughtfully designed illumination.

4. **Aging public lighting**
   The public lighting infrastructure is aging, particularly street lighting and pedestrian-oriented lighting along streets and in parks. It sometimes fails to meet environmental best practices.

5. **Dominance of roadway lighting**
   Roadway lighting often dominates, to the detriment of pedestrian comfort and of the showcasing of architectural elements.

6. **Confusion over public lighting**
   Public lighting often conflicts with facades and urban landscapes. The wide variety of light fixture styles and types that exist in the Capital can create confusion in the legibility of areas, and complicates maintenance.
7. **Lack of shared tools for coordination among the various stakeholders**

Close collaboration is key to creating a unique nighttime identity for the Capital. Despite this, the NCC, the City of Ottawa, the Ville de Gatineau, and other key public and private stakeholders involved in developing the Capital core area have no shared tools for encouraging coordinated illumination.

Important national symbols in the central capital landscape currently lack visibility in the nighttime context.

Important sites currently lack visibility. Public lighting often produces significant glare.

Alexandra Bridge, an important daytime landmark, is not showcased at night.
2.2 PLANNING CONTEXT

This section provides an overview of the planning context for the Capital Illumination Plan. Given the study area, this context is both federal and municipal. Plans are identified below based on the entity that primarily authored them.

Existing plans are valuable in terms of providing:

- **Reference:** to identify the identity and territorial markers of the Capital core area, and establish consistency with the objectives and means of showcasing the Capital.
- **Inspiration:** to introduce a possible extension toward principles specific to the nighttime context.
- **Recommendations:** some plans feature recommendations with regard to lighting.

2.2.1 NCC

The NCC’s plans are inter-related and are structured within a particular hierarchy, as identified in the capital planning framework. The Capital Illumination Plan deals with implementation, focusing on the specific topic of lighting. It is based on the visions and policies of the Plan for Canada’s Capital 2017-2067 (NCC, 2017) and Canada’s Capital Core Area Sector Plan (NCC, 2005).

**The Plan For Canada’s Capital 2017-2067 (NCC, 2017)**

This plan outlines the future of federal lands in the National Capital Region between Canada’s sesquicentennial in 2017 and its bicentennial in 2067. It proposes the following vision: “Canada’s Capital is a symbol of our country’s history and diversity, a true reflection of our democratic values and our commitment to a flourishing and sustainable future.”

This vision is centred on three pillars:

- An inclusive and meaningful capital.
- A picturesque and natural capital.
- A thriving and connected capital.

This is the NCC’s most recent land use planning document. Its objectives and long-term policies guided the development of the Capital Illumination Plan to ensure that the nighttime vision properly honours and respects the landscapes that have shaped Canada’s Capital and serves the Capital of the future. The Capital
2.2.3 CITY OF OTTAWA AND VILLE DE GATINEAU

A significant portion of the study area is under municipal authority. Each municipality has a specific planning context that guides its urban planning and directs its future growth.

Canada’s Capital Core Area Sector Plan (NCC, 2005)

This plan defines a planning framework through policies and initiatives and orients development, programming, built and natural heritage conservation, environmental integrity, transportation infrastructure, animation, architectural quality and urban design on federal lands in the core area until 2025.

The plan supports a harmonious vision of the Capital core area as a whole. It was used as a guide to ensure that the Capital Illumination Plan remains consistent with these ideals. It identifies a need for a strategic illumination plan in the Capital core area, and includes general lighting policies used to guide the Capital Illumination Plan.

2.2.2 PUBLIC SERVICES AND PROCUREMENT CANADA

As the manager of major Government of Canada real estate properties in the Capital core area, including major buildings and bridges, Public Services and Procurement Canada (PSPC) plays an important role in planning the Capital. Through various planning documents, PSPC focusses its planning activities primarily on the Parliamentary and Judicial precincts.

Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015)

The Parliamentary Precinct Exterior Lighting Master Plan is an exhaustive reference document that offers a long-term vision of nighttime illumination and enhancement of the Parliamentary Precinct site, landscape and architecture. It describes a vision designed to enrich and elevate the nighttime experience of the historical, environmental and symbolic primacy of the site, highlighting the value of the Parliamentary Precinct at the heart of the National Capital Region, and affirming its connections to the cities of Ottawa and Gatineau.

The plan identifies opportunities to enhance the beauty and nighttime experience of the Parliamentary Precinct through technical and aesthetic strategies. Its scope is limited to the Parliamentary Precinct sector, but its recommendations influenced the entire Capital Illumination Plan study area.

These plans provided the detailed information required for a better understanding of the issues and needs of the study area and its anticipated future development.

City Of Ottawa Official Plan (City of Ottawa, 2003)

Programme Particulier D’urbanisme Du Centre-Ville De Gatineau (Ville de Gatineau, 2009)

These plans contain planning and development policies for study area lands under municipal authority.

The City of Ottawa’s Official Plan has several references to lighting, both in terms of an engineered measure to ensure a safe and secure public realm and also as an aesthetic tool to help distinguish and unify the character of special areas. As a tool for urban design, the Official Plan’s policies are broad and suggestive with no explicit direction relating to how lighting should be used or coordinated to help communicate the character of various areas. However, in order to ensure that the general design objectives of the Official Plan are met, among the features listed in the Official Plan that are subject to Site Plan review are location, size, colour and type of all building lighting.
CHAPTER 3

Capital Illumination Plan 2017-2027
3.1 Vision

The purpose of a vision statement is to establish an overall, long-term aspiration that identifies a desired future condition. The Capital Illumination Plan’s vision expresses the philosophical underpinnings of the plan, providing a qualitative context for future decision-making and establishing the highest level aspiration for the nighttime identity that will be developed in the coming decade.

Canada’s Capital is a place that contributes to the pride of all Canadians and represents the democratic values on which the nation is founded. Its history, culture, beauty and natural landscapes contribute to showcasing the Capital both nationally and internationally. The study area features a carefully designed urban, architectural and landscape composition, where the form and function of the space complement one another in a coherent manner. However, as night falls, most of this information fades or vanishes, making way for a different composition: some locations emerge from obscurity, while others disappear; boundaries blur; rhythms and atmospheres change. The nighttime setting offers an outstanding opportunity to share and uncover a different dimension of the Capital.

The Capital Illumination Plan’s vision is expressed as follows:

A memorable nighttime capital that offers unique destinations and experiences, showcases the beauty of its urban and landscape composition, and fosters diversity and harmony on both sides of the Ottawa River.
3.2 PRINCIPLES

The six principles of the Capital Illumination Plan constitute the foundation for illumination planning and design in the Capital core area and support the vision. The principles reflect an approach based on sustainable development, striking a balance between the environmental, social and economic aspects of lighting.

**PRINCIPLE 1**
**Encourage responsible environmental management**

Today, the potential adverse environmental impacts of artificial lighting are duly accepted, in particular with regards to energy consumption as well as its effects on wildlife and plants. Responsible environmental management requires an approach that considers the technical aspects of lighting. The Capital Illumination Plan proposes exemplary environmental management to limit the adverse impacts of lighting on the environment while showcasing the beauty of the landscape and the architectural heritage of the Capital.

**PRINCIPLE 2**
**Reveal the beauty of the central capital landscape**

The vast landscape facing the river, which includes major buildings of symbolic importance surrounded by the central ring of Confederation Boulevard and the built edges of the cities, is referred to in this plan as the “central capital landscape”.

An understanding of the Capital core area is largely based on the prominence of national symbols inside the central capital landscape. The area features symbolic buildings, iconic structures, and a striking terrain that connect, through a sense of pride and belonging, people who live in or visit the Capital. These elements are of tremendous cultural, symbolic, aesthetic and economic value.

The Capital Illumination Plan seeks to strengthen the notion of the central capital landscape in the nighttime context in order to carry the primacy and visual coherence of national symbols into the night, protect the silhouette of the Capital core area as its signature greeting, and showcase the important cultural landscapes.

**PRINCIPLE 3**
**Showcase Confederation Boulevard**

Confederation Boulevard joins the downtown areas of Ottawa and Gatineau into a single urban composition and surrounds the central capital landscape. A ceremonial route and a pathway to discovering the Capital, it links many sites and symbols of national importance: Parliament buildings and the Supreme Court of Canada, museums, heritage sites, embassies, monuments, parks, trails and magnificent natural landscapes.

The Capital Illumination Plan seeks to showcase the role of Confederation Boulevard as a structuring nighttime element, reinforce its unique signature, provide visual continuity and foster improved linkages between the two shores.

**PRINCIPLE 4**
**Strengthen the multiple identities of the Capital core area**

The Capital core area is characterized by multiple identities. It comprises a unique assembly of symbolic and functional elements, such as federal institutions located along Confederation Boulevard, reflecting the national importance of the Capital. Its character is particularly evident in the
spectacular composition featuring the gothic revival-style Parliament buildings and their location atop the Parliament Hill escarpment, overlooking the Ottawa River.

The Capital core area is also the centre of the region’s cultural, social and economic life. As an urban centre, it comprises two large cities and serves as a place of residence for tens of thousands of people who live and work there. It contains businesses, restaurants, performance and animation areas, cultural institutions and residential neighbourhoods, all of which contribute to the region’s dynamism and prosperity.

Finally, the Capital core area features important natural landscapes. Water is one of the most prominent features of the core area, from the Ruisseau de la Brasserie and the historic Rideau Canal, to the Ottawa River and two of its tributaries, the Rideau and Gatineau rivers. Urban settlement began in the National Capital Region as a direct result of these waterways, originally as the focus for Indigenous occupation, and later for prosperous forestry-based industries that fuelled the region’s economic development. Green corridors line these waterways and include the Parliament Hill escarpment, the shores of the Ottawa River, Jacques-Cartier Park and many smaller urban parks.

These identities co-exist in the same urban space. The Capital Illumination Plan seeks to recognize, respect and strengthen these identities and celebrate the wealth generated by the diversity of the Capital core area.

**PRINCIPLE 5**

**Balance the role of light and the role of darkness**

Urban lighting should not be continuous, uniform, and static. The Capital Illumination Plan fosters a way of thinking about light in which the re-appropriation of the night in the urban space is a lighting design and quality criterion. In this way, darkness becomes a true opportunity for creativity, part of a tool kit in creating unique and interesting urban environments where places of relative and real darkness contrast with more fully lit places, together contributing to the Capital’s magic and mystery.

“We find beauty not in the thing itself but in the patterns of shadows, the light and the darkness, that one thing against another creates. A phosphorescent jewel gives off its glow and color in the dark and loses its beauty in the light of day. Were it not for shadows, there would be no beauty.” In Praise of Shadows. J. Tanizaki

**PRINCIPLE 6**

**Collaborate and coordinate for the benefit of a global nighttime image**

The Capital Illumination Plan’s success largely depends on the involvement of all stakeholders and their support for the plan’s recommendations. Rallying key players, decision-makers and users around a global nighttime image for the Capital is necessary to ensure the plan’s implementation and sustainability.

Appropriate coordination of illumination can help avoid competition and promote a mindset that conceptualizes lighting as a global urban planning and design tool. The end result will be a more balanced nighttime composition.
The guidelines for this chapter are general in nature and are applicable to all illumination projects within the study area regardless of their location or type. They are divided into three categories:

- Process for lighting projects
- Urban design
- Sustainable lighting

These guidelines must be read in conjunction with the other guidelines in this plan, based on the type and location of each project.

4.1 PROCESS FOR LIGHTING PROJECTS

All exterior lighting projects must be governed by concern for appropriateness, respect for place and humility of approach. This requires that each player involved in lighting consider how individual projects will contribute to the overall vision of the Capital Illumination Plan. Three fundamental rules should be applied to any lighting project:

- Give meaning to light. Lighting must not be grafted on artificially nor slavishly reproduce the daytime vision. It must transmit an intention, a preference and an emotion.
- Successful lighting passes unnoticed. By day, the equipment must usually be discrete. By night, lighting is not made to be seen, but rather to allow people to see.
- Always favour lighting quality over lighting quantity.

The questions and elements identified below are intended to help guide new lighting projects in this direction. While information in this section likely falls under professional best practices for lighting designers, it will be helpful for stakeholders who are at the initial phases of a lighting intervention.
**What to light?**

The first question is to establish whether or not a site should be illuminated. This decision should consider various parameters, including the following:

- Its heritage, historic, cultural, architectural and/or social value. The illumination should contribute to beautifying the Capital and to the pride and sense of belonging of residents and visitors.
- Its communicative value. Each illumination has meaning; as such, the choice of sites to illuminate must support strategic directions in terms of development and the image of the Capital.
- Its contribution to safety or visual comfort.

The Capital Illumination Plan, and in particular the Illumination Concept (Chapter 5), should be used to guide the selection of sites to illuminate.

**Lighting for whom?**

- Who are the users of the site? Should it be visible from near or from far? When should it be visible? What type of environment is to be created and how will it be enjoyed?

**How to light?**

- The site context should be evaluated. Where is the site located? How does it relate to the Capital’s history? What is its scale? How does the building, structure or place define or relate to public space? What is its surrounding illumination setting? What are the characteristics of its natural environment?
- The architectural features of the building, structure or place should be understood. A multidisciplinary approach can help understand the site based on its aesthetic values, but also technical issues. Does it have a heritage designation? What era is it from? What are the character defining architectural details? How do its materials react to light? Are there any specific technical limitations related to illumination?
- The use of the building, structure or place is important to understand. A dialogue with the site owner or manager will reveal its uses and user traffic. As necessary, a conversation with someone familiar with the place can add to the analysis and provide valuable information on the area and its special points of interest.

**4.2 Urban Design**

Lighting projects in the Capital core area carry the potential to strengthen its identity and help create an outstanding capital. To achieve this, it is vital to encourage high-quality projects that meet the high design standards applied in the Capital core area.

The urban design guidelines are divided into the following topics:

- **Character**
- **Compatibility**
- **Colour and lighting effects**

**4.2.1 Character**

The character and aesthetics of light fixtures have a direct impact on the daytime and nighttime experience.
4.2.3 COLOUR AND LIGHTING EFFECTS

Today, new technologies offer a range of possibilities when it comes to colour variation and lighting effects. However, the wide-ranging use of these innovative technologies may create visual overload to the detriment of the quality of the nighttime environment. The use of colour and lighting effects should form an integral part of an artistic concept.

Guidelines

- Generally, favour the use of white tones and prioritise respect for the nature of the architecture and materials. For buildings, refer to Table 2 (Chapter 5) for the recommended dominant tones in the foreground, transition, and background zones.
- Limit the use of colour and lighting effects to the following applications:
  - Permanent illumination:
    - Limited, well-defined architectural elements on buildings with an artistic purpose, such as museums or art and performance buildings;
    - In art and innovation districts (Section 5.2.3);
    - In nightlife districts (Section 5.2.3), in the form of subtle expressions and soft tones highlighting limited, well-defined components (e.g., commercial entrances, architectural details, etc.).
Temporary illumination:
- Related to festivals, special public events or official celebrations;
- Intended to showcase major locations of historical or symbolic interest;
- In art and innovation districts, nightlife districts and along the Sparks Street corridor (Section 5.2.3), to create an artistic presence at night;
- In buildings and sites with an artistic purpose, such as museums and art and performance buildings, during special events such as launches, temporary exhibits, etc.

Use of colour and lighting effects in permanent lighting interventions must not overwhelm or devalue the long-range views of the central capital landscape, the symbolic character of Confederation Boulevard and its built form, and the heritage value of the site or adjacent sites.

- Ensure that colour and lighting effects:
  - Use soft tones (addition of white light to the colour), with the exception of art and innovation districts where saturated tones (use of pure colours) may be appropriate;
  - Remain subordinate to an overall reading of the area;
  - Avoid flashing or strobe effects;
  - Remains free of any commercial or marketing interests.

- Coordinate and harmonise the use of colour and lighting effects within an urban or architectural ensemble.

The subtle use of red lighting in the National Gallery of Canada’s lantern is a good example of an appropriate use of colour for limited and well-defined architectural elements on buildings that have an artistic vocation, such as museums and art and performance buildings.

In the nightlife districts, the subtle use of soft colour can be appropriate in order to showcase limited and well-defined components. In this case, a delicate and sensible use of colour highlights the entrance to a restaurant in the ByWard Market.
4.3 SUSTAINABLE LIGHTING

The Capital Illumination Plan is geared to the basic values of a nation concerned for quality of life, where respect for nature and living beings will help make the cities of the future more sustainable. Despite the benefits of lighting in terms of public safety, aesthetics and social activities, it can have adverse effects on our health and environment. The major challenge consists in maximizing the benefits of lighting while limiting its adverse impact.

The guidelines on sustainable lighting are divided into the following topics:

- Lighting efficiency and lifecycle
- Equipment and orientation
- Illumination schedule
- Design
- Maintenance and disposal
- Health and safety

4.3.1 LIGHTING EFFICIENCY AND LIFECYCLE

Urban lighting is a major source of energy consumption that contributes to greenhouse gases, and which also has economic consequences. Lighting efficiency and lifecycle are two parameters to consider when choosing a lighting system.

**Guidelines**

- Set an energy performance goal for all lighting projects.
- Give preference to maximum lighting efficiency and lifecycle.
- Favour new lighting technologies featuring low energy use, greater control flexibility and a longer life cycle (e.g., LED technology).
- Evaluate energy performance at the end of each project to identify energy and cost savings and document any technical issues encountered.

4.3.2 EQUIPMENT AND ORIENTATION

Proper selection and orientation of lighting equipment can help support a sustainable development approach.

**Guidelines**

- Favour equipment that provides control of on/off times and lighting modulation.
- Favour equipment that can accommodate remote or telemanagement control technologies.
- Favour durable equipment that is adapted to climate conditions and that is vandal-resistant.
- Favour lighting designs that focus light beams on the elements to be illuminated and avoid light spill, particularly toward the sky.
- Minimize light spill using the following elements:
  - Landscaping;
  - Architectural elements;
  - Plant buffers using indigenous plant species with dense, persistent foliage;
  - An appropriate opaque element (i.e., screen, roof overhang, wall).
- For public lighting, favour the use of opaque lamp hoods, opaque covers, or any other concealment device that limits the beam of light at angles exceeding 85 degrees. Avoid installing new fixtures that do not meet this criterion and consider retrofit options (e.g., using filters, reflectors, etc.) for existing light fixtures that do not meet this criterion (e.g., globe-type fixtures).
- Limit the use of ground lighting, which is prone to significant wear and tear in a winter climate and to pedestrian glare.
- Determine overall costs, based on factors that extend beyond the initial investment. Take account of parameters such as the performances of lamps, light fixtures and the systems that manage them, as well as operating, maintenance and recycling costs.
4.3.3 ILLUMINATION SCHEDULE
The possibility of adjusting lighting levels is one of the most relevant lighting options with regards to sustainable development. It allows for operational flexibility that sidesteps static systems operating on an “all or nothing” basis, in favour of dynamic configurations that distribute only the amount of light required at each moment of the night based on activity level.

The Capital Illumination Plan proposes various potential operating categories. The recommendations are provided for illustrative purposes; dimming levels must be determined on a case-by-case basis for each project, in cooperation with the various stakeholders and users and based on preliminary testing.

GUIDELINES
• Consider modifying activation time and lowering lighting levels based on the parameters suggested in Table 1. To ensure that dimming remains imperceptible, the suggested lighting reduction levels should occur progressively and continuously over several 10-minute segments.
• Consider public safety as the leading priority in all initiatives that involve lowering lighting levels.
• Consider the use of remote-controlled or motion-activated lighting in low-traffic, low-traffic speed spaces, such as recreational pathways, parks, courtyards and parking lots.

4.3.4 DESIGN
A quality illumination project is not limited to the use of high-performance, energy-saving equipment. Consideration for the site, the elements that comprise and surround it, and its use, ensures that lighting sources are correctly positioned in order to only provide light where and when it is needed.

GUIDELINES
• Adjust lighting levels and identify the lighting quantity required to ensure proper performance of visual tasks, based on the recommendations of standards, codes and regulations in force.
• Lower the intensity of light sources according to the environmental sensitivity of the site. More specifically:
  ▪ Confirm the presence of any threatened species, essential habitat or ecologically sensitive site that might suffer adverse environmental effects due to the lighting proposal.
  ▪ Limit the illumination of natural habitats and ecologically sensitive areas.
  ▪ Limit the installation of lighting in locations where it can have harmful environmental effects that cannot be mitigated.
• Comply with applicable mitigation measures to avoid disturbing nocturnal fauna and flora.
• Adopt lighting best practices with regard to birds.

Telemanagement
Although this technology is still in limited use because of its high cost, it represents a future solution for connected, smart cities. It offers:
• Remote control by computer to modify lighting scenarios, including the ability to lower lighting levels;
• The immediate return of information on the operational status of the lighting system;
• Simplification of cleaning and maintenance;
• One of the most effective energy-savings options;
• Possible interaction between lighting and various technologies (sound, Wi-Fi, etc.)
<table>
<thead>
<tr>
<th>Mode</th>
<th>Description and Potential Uses</th>
<th>Recommended Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Functional Lighting</td>
<td>Functional lighting requiring activation for the entire night (e.g., streets, major pathways, public places, health and safety services, etc.)</td>
<td>• Activation at sunset.</td>
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<tr>
<td></td>
<td></td>
<td>• 50% reduction from midnight to 5 a.m.</td>
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<tr>
<td>Transportation System Lighting</td>
<td>Lighting related to public transit networks (stations and associated infrastructure).</td>
<td>• Activation at sunset.</td>
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<tr>
<td></td>
<td></td>
<td>• 50% reduction during off-peak hours.</td>
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<td></td>
<td></td>
<td>• Fully deactivated when public transit services end.</td>
</tr>
<tr>
<td>Illumination Lighting</td>
<td>Illumination to support the embellishment of the nighttime landscape (e.g., buildings, visual landmark elements, commemorative monuments, public art, etc.)</td>
<td>• Activation at sunset.</td>
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<td>• Deactivation starting between midnight and 2am (based on location and use).</td>
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<td>On a case-by-case basis for the most important elements of the nighttime scenery, as identified in the Illumination Concept (Chapter 5):</td>
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<tr>
<td></td>
<td>• Activation at sunset.</td>
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<td></td>
<td>• Illumination in “night mode” starting at midnight (“night mode” involves a specific lighting design that lowers light in a gradated operation or by partial deactivation).</td>
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<tr>
<td>Dark Zone Lighting</td>
<td>Lighting dedicated to areas identified as dark zones (see Chapter 5).</td>
<td>• Activation at sunset.</td>
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<td></td>
<td>• Lowered intensity and reduced amount of lighting, if not total deactivation, at 10pm.</td>
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<tr>
<td>Seasonal Lighting</td>
<td>The National Capital Region’s northern climate entails implications with regards to lighting. The presence of snow for several months of the year affects the amount of light required due to its reflective properties, but also because of the way it changes how land is used.</td>
<td>• Lower lighting levels to take account of snow reflection. Reduction to be determined according to on-site tests.</td>
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<td></td>
<td>• Modify or turn off lighting in areas where snow is not removed and public access is not provided, taking care to maintain safe urban conditions, avoid black holes along urban routes and keep visual landmarks illuminated.</td>
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<tr>
<td>Indoor Office Lighting</td>
<td>Contemporary architecture often includes a significant amount of glazing that has a major impact on the legibility of the night landscape in the Capital. Various buildings have equipment that allows the possibility of turning off lighting (centralized management, control system, detection system, etc.). Others are encouraged to consider this option when updating their indoor lighting.</td>
<td>• Turn off indoor lighting of office buildings no later than 1 hour after they are no longer in use and until regular occupancy begins (not including safety lighting and remote-monitoring lighting).</td>
</tr>
</tbody>
</table>

Table 1
4.3.5 MAINTENANCE AND DISPOSAL
Maintaining the range of lighting installations in excellent condition throughout their lifecycle requires regular maintenance, performance monitoring and the capacity to learn lessons from existing installations. This supports the ability to maintain their energy efficiency, extend their lifecycle and lower replacement costs. At the end of its lifecycle, lighting equipment should be recycled or discarded appropriately to ensure it poses no risk to human health or the environment.

Guidelines
• Develop a lighting system maintenance plan.
• Favour locations and equipment that allow for easy maintenance, including access to the lamp, safe working conditions and the use of standardized materials.
• Favour solutions based on the obsolescence of the installations:
  - Explore replacement options for the most obsolete and/or unsuitable installations.
  - Favour an adjustment option for more recent installations that no longer meet existing standards.
• Optimize the management of lighting installations by facilitating the implementation of technical solutions, such as the creation of databases, telemanagement or centralized systems that allow for remote diagnostics and lighting control. Until then, keep up-to-date maintenance records.
• Regularly monitor installations and replace any defective lamps promptly, prioritizing areas of high public use.
• Develop waste management plans to dispose of all materials in an environmentally acceptable way at appropriate locations and in accordance with applicable regulations.

4.3.6 HEALTH AND SAFETY
Lighting is essential for humans, creating numerous benefits for the human body and mind: positive mood, sense of comfort and well-being, and socialization. It also has a direct impact on real and perceived safety. However, artificial lighting can also have unwanted effects; in addition to the direct risks associated with glare, scientific research is producing evidence showing the impact of light on humans, particularly in regards to regulating the biological clock and circadian (day/night) rhythms.

Guidelines
• Respect standards, codes and regulations with regards to universal accessibility.
• Consider Crime Prevention through Environmental Design (CPTED) principles in the design of lighting projects, in particular public lighting.
• Ensure that lighting creates no source of intense, blinding light, or dynamic effects that might compromise road safety or user comfort.
• When possible, locate light sources beyond the typical field of vision and locate light fixtures outside the main movement axes.
• Minimize light spill outside the area to be lit. In particular, avoid light pollution on residential properties.
• Favour Capital Illumination Plan guidelines on colour temperature for public roads (Chapter 6).

The Lights Out Program
In Canada, collisions with windows result in an estimated 16 to 42 million bird deaths per year. Many bird species migrate at night, guided by constellations. These birds can become disoriented by urban light sources and may fatally collide with buildings.

In order to help mitigate this problem, many American and Canadian cities, including Toronto, Washington DC, Boston and San Francisco, participate in the Lights Out program which encourages measures to reduce light that is emitted by buildings. Lights Out is a voluntary program where building owners, managers and tenants work together to ensure that all non-necessary lighting will be turned off during bird migration periods. For example, participants are encouraged to turn off lights outside of working hours, to install motion detectors and timers, and to minimize the amount of light shining out of windows at times when light is necessary. Certain cities, notably Toronto and Calgary, have gone even further by adopting bird-friendly building and window designs that offer solutions for reducing the number of collisions.
The Illumination Concept establishes a broad outline of the overall nighttime scenery proposed for the study area. It is presented in three parts, progressing from a high-level to a more detailed scope:

- **Illumination zones**
- **Structuring elements**
- **Sectors**

The Illumination Concept identifies lighting guidelines for specific areas and key physical components in order to support their role in the proposed overall nighttime scenery. In addition to providing direction for individual lighting projects, it assists in the process of strategically identifying priority lighting initiatives that could be implemented within the next ten years.

### 5.1 ILLUMINATION ZONES

The identification of illumination zones adopts a high-level approach to the study area. The purpose of the illumination zones are to:

- Strengthen the visibility of the central capital landscape through the creation of a nighttime foreground and background;
- Bring together in a coherent manner a wide diversity of urban landscapes and architectural expressions on both sides of the Ottawa River, and encourage a harmonious distribution of light between the two shores.

It is important to define the point of observation of the study area that accompanied the identification of illumination zones. As a key geographic and historic location within the National Capital Region, the centre of the Ottawa River, within the central capital landscape, served as the starting point of observation of the study area. This centre point is located at an equal distance from both shores, at the centre of the Confederation Boulevard ring, and at the centre of
Notes:

- Zone boundaries are conceptual given the scale of the study area.
- The notion of foreground and background in the Capital Illumination Plan is distinct from the NCC’s views protection policies identified in the document entitled “Canada’s Capital Views Protection” (NCC, 2007), which relate to building height and are intended to protect views of national symbols. The intent of the Capital Illumination Plan in this regard is limited to addressing existing conditions and enhancing nighttime views.
the study area.

Starting from the centre of the river, the following zones are identified:

- The foreground, warm and timeless, corresponding to the central capital landscape. It includes the interior and exterior zones of the Confederation Boulevard ring.
- The transition zone, connecting the capital and civic realms that invites people to discover nightlife areas. This zone is located along the exterior perimeter of the Confederation Boulevard ring. It features a mix of buildings types and architectural styles, allowing for multi-layered illuminations.
- The background, characterized by the buildings located around the transition zone. Its evolving boundaries will be shaped by future urban development projects. Background residential sectors introduce a gradual return to darkness.

For each zone, Table 2:

- Guides the choice of buildings to illuminate;
- Identifies lighting guidelines by zone, including a dominant lighting tone.

The zones are identified based on existing built form characteristics and future intensification projects. The guidelines for each zone are not prescriptive; their objective is to steer new building illumination projects and encourage the justification of proposals that may not conform to the guidelines identified and which as a result may, for example, jeopardize the legibility of the foreground and background.

Each lighting project must also refer to the other guidelines in this plan.

**Guidelines**

- Follow the guidelines identified in Table 2 to guide building illumination projects according to their location within the identified zones.
- Conduct a preliminary global spectrocolorimetric study to determine the right LED chromatic composition to use for copper roofs and apply it systematically to all lighting used with this material, in an effort to encourage a harmonious and homogeneous approach.
- Develop detailed exterior lighting master plans for major urban redevelopment projects having a strong visual influence on the foreground and background composition. For examples, existing and evolving areas such as LeBreton Flats, Albert and Chaudière islands, and the high-rise buildings of the Portage complex play a critical role with regards to both foreground and background compositions.

**Tones of white (see Table 2)**

![WARM WHITE](image1)  ![NEUTRAL WHITE](image2)  ![COOL WHITE](image3)
<table>
<thead>
<tr>
<th>Zone</th>
<th>Buildings to prioritize for architectural lighting</th>
<th>Illumination guidelines</th>
</tr>
</thead>
</table>
| **Foreground** | • Centre Block  
• East Block  
• West Block  
• Confederation Building  
• Justice Building  
• Supreme Court of Canada  
• Library and Archives building  
• Canadian Museum of History  
• Château Laurier | • Dominant tones:  
  ▪ Give preference to warm white (2,200K to 3,500K) to neutral white (3,500K to 4,200K) tones.  
  ▪ Reinforce the legibility of the national symbols and the heritage value of the cultural landscapes.  
  ▪ Favour a softer lighting approach for buildings outside the Confederation Boulevard ring.  
  ▪ Showcase copper roofs.  
  ▪ Favour exceptional architectural lighting treatments that underscore the inherent value of each building and foster a reading of architectural details.  
  ▪ Favour the use of high-quality lighting with excellent colour rendering. |
| **Interior of Boulevard Ring** | • Buildings that house large public institutions or events.  
• Buildings that express symbolic, historical or cultural values.  
• Buildings of outstanding architectural quality.  
• Recognized heritage buildings.  
• Buildings with a major influence on the visual continuity of Confederation Boulevard (e.g., facades along Wellington Street, Sussex Drive and Mackenzie Avenue in Ottawa, and along Laurier Street in Gatineau). | |
| **Transition Zone** | • Buildings that house large public institutions or events.  
• Buildings that express symbolic, historical or cultural values.  
• Buildings of outstanding architectural quality.  
• Recognized heritage buildings.  
• Buildings with a major influence on the visual continuity of Confederation Boulevard. | • Dominant tones:  
  ▪ Heritage or historic buildings: Give preference to warm white (2,200K to 3,500K) to neutral white (3,500K to 4,200K) tones.  
  ▪ Contemporary buildings: Give preference to neutral white (3,500K to 4,200K) to cool white (4,200K+) tones.  
  ▪ Encourage less systematic illumination than for the foreground, but sufficient enough to highlight the urban landscape and nighttime destinations.  
  ▪ Showcase copper roofs.  
  ▪ Avoid creating visual competition with foreground buildings.  
  ▪ Create visual links to nightlife areas.  
  ▪ Follow recommendations on turning off lighting inside offices (Section 4.3.3). |
| **Near Background** | • Buildings that house large public institutions or events.  
• Buildings that express symbolic, historical or cultural values.  
• Buildings of outstanding architectural quality.  
• Buildings of recognized heritage value.  
• Buildings with a major influence on the visual continuity of Confederation Boulevard. | • Dominant tones:  
  ▪ Give preference to neutral white (3,500K to 4,200K) to cool white (4,200K+) tones.  
  ▪ Avoid creating visual competition with foreground buildings.  
  ▪ Limit the use of lighting at the top of tall buildings.  
  ▪ In the far background, favour a return to darkness and a reduction of illuminations.  
  ▪ Follow recommendations for turning office lights off inside buildings (Section 4.3.3). |
| **Far Background** | • Buildings that house large public institutions or events.  
• Buildings that express symbolic, historical or cultural values.  
• Buildings of outstanding architectural quality.  
• Buildings of recognized heritage value.  
• Buildings with a major influence on the visual continuity of Confederation Boulevard. | |

Note: The intent of the recommendations on dominant tones is to create a visual distinction between the nighttime foreground and background. As such, these guidelines only apply to buildings visible from a distance. In some cases, a particular building’s materials may not necessarily conform to what is typical within its zone; in such a situation, the material type and colour should always be considered as the main criterion when determining the appropriate lighting approach.
5.2 STRUCTURING ELEMENTS

The second component of the Illumination Concept is the identification of key areas and physical components that deserve special lighting treatment – the structuring elements. The following categories of structuring elements are identified:

**Dark zones**
- Waterways
- Greenspaces

**Nighttime landmarks**
- Confederation Boulevard
- Key nodes
- Feature sites
- Buildings

**Nightlife areas**
- Art and innovation districts
- Nightlife districts
- Sparks Street corridor

**Evolving areas**
- The Islands
- LeBreton Flats

General guidelines are proposed for each type of structuring element. The detailed guidelines for specific locations are identified in the sectors (Section 5.3).
Figure 5.2
Structuring Elements
Dark Zones

Dark Zones

- Waterways
- Greenspace
5.2.1 DARK ZONES

The natural landscapes and watercourses of the Capital core area are of great environmental importance. Given the potential negative impacts of artificial lighting on the fauna and flora, a balance must be struck between the need to project the image of an attractive and dynamic capital, and the need to preserve the darkness of the night.

The presence of lighting in natural landscapes can improve user experience and promote opportunities for nighttime use of public space. However, light-sensitive wildlife and plants live in these areas. Exposure to artificial light in natural habitats can cause a variety of negative impacts in some species. For example, light attracts insects, repels bats, causes spatial disorientation in migrating birds, activates photosynthesis systems in plants, and disrupts biological sleep patterns and seasonal cycles in vertebrates.

The following two categories of dark zones are identified:

- **Waterways**
- **Greenspaces**

The illumination objectives of dark zones are as follows:

- Reduce the harmful effects of artificial lighting on the fauna and flora.
- Protect the dark sky.
- Contribute to showcasing the urban components of the nighttime scenery by providing contrasting dark areas.

Particularly careful use of light is recommended within dark zones, with consideration for the anticipated nighttime uses and the preservation of the integrity of natural landscapes.

5.2.1.1 WATERWAYS

This dark zone consists of the major waterways, including an adjacent 10m buffer zone. The major waterways include the Ottawa River, the Rideau River, the Gatineau River, the Rideau Canal, and the Ruisseau de la Brasserie. They have an important role to play with regards to ecosystems and fauna, given their role as movement corridors. Reptiles, amphibians, fish, and other animals live in and travel through these waterways.

**Guidelines**

- Keep lighting levels to the minimum required for the comfort and safety of users, with the exception of “feature sites” identified in the Illumination Concept and, on a case-by-case basis, sites that support water-based tourism (e.g., cruises).
- In locations where lighting is provided:
  - Pay special attention to the orientation of light fixtures:
    - Use full cut-off light fixtures.
    - Avoid pointing beams toward the water due to reflections.
    - Avoid pointing beams at natural habitats.
  - Favour the use of motion detectors and passive light (contrasting tones and materials, use of reflectors, etc.).
  - Favour the “dark zone lighting” curfew mode (see Table 1 for parameters).
- Favour the use of lighting equipment that minimises high frequency blue waves and ultraviolet rays.
5.2.1.2 GREENSPACES

Greenspaces consist of the network of shorelines and parks, including Jacques-Cartier Park, Major’s Hill Park, Confederation Park, and the Garden of Provinces and Territories. In spite of the urban character of the study area, a large number of animals and birds depend on these assets for habitat. They also act as a stopping place on annual migration routes.

**GUIDELINES**

- Keep lighting levels to the minimum required for the comfort and safety of users. However, on a case-by-case basis, use lighting to showcase significant built form components and visual landmarks and to support events and water-based tourism.
- Favour lighting that encourages contemplation, encourages nighttime strolling, and supports the economic development of related activities.
- Focus public lighting on major access points and most frequented and safe pathways. Favour a colour temperature of 2,000K to 3,000K for public lighting.
- Favour the use of full cut-off and low, human-scale public lighting. Prioritize greenspaces for the retrofit of globe-style light fixtures to minimize excess light spill toward the sky. The replacement of such light fixtures should also be considered, except in cases where such a use is justified on the basis of heritage considerations.
- Illuminate important built form components and visual landmarks to showcase them and to provide orientation (e.g., buildings, public art, commemorative monuments, important intersections, fountains, etc.).
- Favour refined, subtle lighting designs in order to preserve intimate, semi-dark ambiances.
- Consider the use of motion-activated lighting.
- Favour the use of lighting equipment that minimises high frequency blue waves and ultraviolet rays.
- Favour the following curfew modes (see Table 1 for parameters):
  - For pathways, main accesses and areas where a 24h use is anticipated: “permanent functional lighting” mode;
  - For other pathways: “illumination lighting” mode;
  - For illuminated built form components: “dark zone lighting” mode.

• Refer to the sectors for detailed guidelines applicable to specific greenspaces (Section 5.3).
The ecological importance of waterways

From an ecological perspective, the presence of two key designated areas and critical habitat serve to underline why waterways require sensitive lighting approaches.

- Important Bird Area (IBAs): IBAs are sites that shelter specific groups of birds: threatened species, congregations of birds or restricted-range species. When a species occupies an area in sufficient numbers for at least one season (in winter, during migration or during breeding season), it is considered a “trigger” species and the zone receives IBA designation. The Ottawa River shelters over 300 bird species, almost half of them migratory birds. It is one of the most important waterfowl migration routes on the continent and a vital rest area for many bird species. The Lac-Deschênes – Ottawa River IBA covers the south-west portion of the study area. The migratory bird nesting period generally lasts from early April to late fall.

- Designated natural areas: The study area is close to four natural habitats valued by the NCC. These valued natural habitats include Leamy Lake, Rockcliffe Park, lac des Fées, as well as the Champlain bridge islands and Lemieux bridge island. These natural areas support vulnerable essential habitats of certain species, and are important for the protection of regional biodiversity. The NCC prioritizes the protection of these natural habitats.

- Critical habitat: Over 200 species at risk have been identified on NCC lands, including several within the study area. The term “species at risk” refers to plant or animal species that have been granted special status by federal and provincial governments. It also includes species identified by the Committee on the Status of Endangered Wildlife in Canada and those that are on provincial lists of threatened or vulnerable species. The NCC ensures the protection of the critical habitats of species at risk on its lands based on the measures identified in federal and provincial recovery programs. The NCC prioritises the protection of these critical habitats by minimising the impact of light pollution within ecologically sensitive zones.
5.2.2 NIGHTTIME LANDMARKS

Landmarks play an important role in the nighttime context. Depending on their type and location they can provide spatial orientation, support a better understanding of the area, and become nighttime destinations.

The following categories of landmarks are identified:

- **Confederation Boulevard**
- **Key nodes**
- **Feature sites**
- **Buildings**

The illumination objectives of nighttime landmarks are as follows:

- Facilitate orientation in the nighttime urban space.
- Showcase certain important locations and buildings, from close and/or from a distance.
- Create a strong, distinctive signature for Confederation Boulevard, recognizable day and night, on both sides of the river.
- Strengthen access points to Confederation Boulevard.

5.2.2.1 CONFEDERATION BOULEVARD

A commemorative route and pathway to discovering the Capital, Confederation Boulevard plays a dominant role in the landscape and life of the Capital core area. Covering 7.5 kilometers, it is divided into three parts:

- **Central ring:** Crosses the Ottawa River to connect the downtown cores of Ottawa and Gatineau.
- **Northeastern section:** Follows Sussex Drive in Ottawa, passing through the Capital’s international sector to Rideau Hall.
- **Southern section:** Provides a grand approach along Elgin Street, from Laurier Avenue in Ottawa to the National War Memorial.

Urban furnishings were specifically designed for Confederation Boulevard in the mid-1990s. One of their key features is the use of spherical (globe-type) light fixtures that create a chain of highly visible lighting from adjacent streets and sidewalks, known as the “string of pearls.”

Confederation Boulevard can be considered to have two identities. It is both:

- A symbolic route, rich in destinations and experiences that reflect the wealth of diversity in the Capital;
- A major traffic corridor. As a right-of-way largely belonging to the City of Ottawa or the Ville de Gatineau, its lighting is designed in collaboration with the municipalities in order to ensure conformity with their respective criteria.

The Capital Illumination Plan seeks to strengthen the route’s legibility, promote a nighttime scenography that reinforces the Boulevard experience, and ensure that the two identities of Confederation Boulevard co-exist within the same space.

**Guidelines**

- Favour lighting that is high-quality, soft and consistent along the entire Boulevard.
- Favour white tones for both public and architectural lighting.
- Favour visual continuity between the illumination of façades and park elements, to avoid overly abrupt light contrasts.
- Maintain the primacy of national symbols and the official, ceremonial character of the Boulevard.

The “pearl necklace” effect of Confederation Boulevard has faded due to the proliferation of globe-style light fixtures.
### Public lighting

- Renovate the lighting system. Promote an option that maintains the visual signature of lighting masts in good condition:
  - In the short- and medium-terms, favour retrofits using filters, reflectors, etc. to minimize excess light spill toward the sky.
  - In the long term (beyond the lifespan of this plan), evaluate an option of globe-type light fixture replacement for the roadway lighting that:
    - Promotes a line of “signature” light fixtures that are both elegant and timeless, respecting the heritage values of Confederation Boulevard.
    - Maintains compatibility with urban furnishings.
    - Allows for better lighting control and management (e.g., power modulation).
    - Facilitates maintenance.
- While awaiting the long-term aesthetic selections to be made for the Boulevard’s visual signature, revamp the lustre of its “pearl necklace” effect, which has faded due to the proliferation of globe-style light fixtures in the study area. Consider a comprehensive planning approach with partners to identify areas where a replacement of globe-type fixtures may be appropriate, taking into account their heritage character.
- Favour colour temperatures between 3,000K and 3,700K, favouring warmer tones for pedestrian lighting.
- Coordinate building facade lighting with street lighting.
- Ensure a high degree of uniformity, particularly by ensuring regular maintenance of the light fixtures.
- Ensure that responsibility for maintaining light fixtures is coordinated between municipal and federal authorities, or by a single entity.
- Perform lighting diagnostics to identify redundant or unnecessary lighting.
- Favour a “permanent functional lighting” curfew mode (see Table 1 for parameters).

### Architectural lighting

- Prioritize and encourage the illumination of building facades along Confederation Boulevard.
- Ensure that architectural illuminations respect the symbolic character of Confederation Boulevard.
- Ensure that individual building illumination does not dominate the overall impression. Encourage visual continuity and homogeneity.

### 5.2.2.2 KEY NODES

The Capital Illumination Plan identifies the following major intersections as nighttime landmarks:

- Confederation Square (Elgin/Wellington intersection, in Ottawa)
- Sussex/Wellington and Rideau intersection, in Ottawa
- The Peacekeeping Monument (St. Patrick/Sussex intersection, in Ottawa)
- Alexandra Bridge/Laurier intersection, in Gatineau
- Laurier/Taché intersection, in Gatineau
- Wellington/Portage intersection, in Gatineau
- Rideau Hall intersection, in Ottawa

To date, two of the seven key nodes contain major commemorative monuments: Confederation Square, site of the National War Memorial, and the St. Patrick/Sussex intersection, site of the Peacekeeping Monument. These two intersections are referred to as “developed commemorative nodes”. Although the final development of the other intersections includes the siting of major commemorations, in their current form they serve as key points of entry to Confederation Boulevard. The completion of all seven key nodes is identified as a milestone project in the Plan for Canada’s Capital 2017-2067 (NCC, 2017).

### Guidelines

- Showcase the key nodes through illumination that reinforces their structuring role and their function as landmarks.
- For each key node, develop a comprehensive lighting project that takes account of the overall site, including public lighting and the treatment of built components.
- Coordinate the illumination of key nodes with the Confederation Boulevard lighting approach (Section 5.2.2.1).
• Take into consideration the conditions specific to each key node in the lighting design, while ensuring an overall uniform reading of all seven intersections. If possible identify one shared, strong element at the key nodes.
• Take into consideration the character of key nodes as high-density, mixed traffic (motorized vehicles, pedestrians and cyclists) urban intersections. Pay special attention to crossings and conflict areas.
• Promote close-range and long-range views.
• Minimize sources of light pollution in the vicinity of key nodes to avoid dampening their visual impact.

Developed commemorative nodes

• Encourage dramatic illumination that helps recognize developed commemorative nodes as major nighttime landmarks.
• Coordinate public lighting with architectural lighting.
• Refer to the sectors for detailed guidelines applicable to each developed commemorative node (Section 5.3) and to guidelines for commemorative monuments (Chapter 6).

Roadway nodes

• Promote the illumination of features located at the edges of these intersections (e.g., public art, commemorative monuments, buildings, and key access points to adjacent lands) in order to reinforce the visual presence of the intersections.

5.2.2.3 FEATURE SITES

The Capital Illumination Plan proposes to showcase the following sites and structures along the Ottawa River that are of importance for their symbolic and historical character:

• **Rideau Falls**: The Rideau Falls are an essential part of the cultural landscape and an outstanding river tourism destination.
• **Chaudière Dam and Falls**: A significant element of the cultural landscape and the Capital’s industrial heritage.
• **Rideau Canal**: Designated as a national historic site, and inscribed as a UNESCO world heritage site, the Rideau Canal is a jewel of the nighttime landscape. The Ottawa Locks are a particularly important tourist attraction.
• **Alexandra Bridge**: Completed in 1901, this steel truss cantilever bridge crosses the Ottawa River, connecting the cities of Ottawa and Gatineau. Initially a railway bridge, it was converted to handle vehicle and pedestrian traffic in the 1950s.
- **Nepean Point**: Nepean Point is famous for its scenic view of Parliament Hill and the core of the National Capital Region. At its peak sits a statue of Samuel de Champlain. The redevelopment of Nepean Point is a milestone project in the Plan for Canada’s Capital 2017-2067 (NCC, 2017).

- **Victoria Island** (eastern section): In the eastern part of Victoria Island is an ancient portage and meeting place for Indigenous peoples. The former Carbide Willson mill, a recognized federal heritage building, is the only remaining building on this part of the island, the remainder of the area left primary as open space. A seasonal attraction, “Aboriginal Experiences”, features cultural and culinary programming. An Indigenous welcome centre on Victoria Island is identified as one of the milestone projects in the Plan for Canada’s Capital 2017-2067 (NCC, 2017).

- **Richmond Landing**: The Royal Canadian Navy Monument sits at Richmond Landing.

- **E.B. Eddy Company Digester Tower**: West of the Canadian Museum of History, the E.B. Eddy Digester Tower, built in 1901, a vestige of a vast industrial complex and a reminder of the major industrial activity in the local and regional economy.

### Guidelines

- For each feature site, develop a comprehensive lighting project that takes account of the overall site, including public lighting and the treatment of built elements.
• Favour a subdued and soft illumination approach that respects the memory of each site and evokes a presence, rather than ostentatious illumination.
• Ensure that illumination does not compromise the visual prominence of the buildings within the central capital landscape.

• Minimize light pollution around the feature sites to avoid dampening the visual impact of their illumination.
• Refer to the sectors for detailed guidelines applicable to each feature site (Section 5.3).
5.2.2.4 BUILDINGS

Buildings are the most visually prominent component of the built environment of the Capital core area. Several important buildings currently have noteworthy architectural lighting. However, a global observation of the study area reveals that the overall nighttime architectural scenography fails to do justice to the National Capital Region’s rich built environment.

Not every building should be illuminated, nor illuminated in the same way. Types of buildings to prioritize for architectural lighting are listed in Table 2 (Section 5.1). Based on these criteria, a selection of buildings to prioritize for illumination is identified below. Given the size of the study area and the fact that cities are in constant change, this list is not exhaustive and does not preclude other buildings from being illuminated.

**GUIDELINES**

- Prioritize the illumination of the following buildings:
  - Centre Block
  - East Block
  - West Block
  - Confederation Building
  - Justice Building
  - Supreme Court of Canada
  - Library and Archives Canada building
  - Kruger Plant
  - Canadian Museum of History
  - Château Laurier
  - Connaught Building
  - Gatineau Courthouse
  - Maison du citoyen
  - Wellington Street facades
  - Government Conference Centre
  - East and West Memorial Buildings
  - Servantes de Jésus-Marie Convent
  - Maison Charron
  - National Gallery of Canada
  - Notre-Dame Cathedral
  - Embassy of the United States
  - Global Centre for Pluralism
  - Royal Canadian Mint building
  - Ottawa Rowing Club
  - Lester B. Pearson Building
  - National Research Council Canada building
  - Former Ottawa City Hall
  - Canadian War Museum
  - Rideau Hall
  - 24 Sussex Drive
  - Canadian Museum of Nature
  - National Arts Centre
  - Ottawa City Hall
  - ByWard Market Square
  - Sussex Courtyards
  - Sussex Drive facades
  - Rideau Street facades
  - Portage Complex
  - Fonderie building
  - Théâtre de l’île
  - Wright-Scott House
  - Refer to the sectors for detailed guidelines applicable to each of the above-noted buildings (Section 5.3).
Figure 5.4
Structuring Elements
Nightlife Areas

Nightlife Areas
- Art and Innovation Districts
- Nightlife Districts
- Sparks Street Corridor
5.2.3 NIGHTLIFE AREAS

The Capital Illumination Plan seeks to reveal special nightlife areas. These locations are currently or are planned to become pedestrian-oriented, liveable, mixed uses areas with lively street activity. They have a major role to play in the city’s night life and underscore the study area’s vitality. Light, whether public or private, affects nighttime social behaviour and can help reinforce this important role.

While the heritage and symbolic character of the central capital landscape must be preserved, other spaces offer opportunities for advancing the innovative and social qualities of the Capital through projects that encourage artistic explorations in urban lighting. In most cases, nightlife areas do not have a direct visual impact on the central capital landscape, allowing for more creative and bold approaches.

The Capital Illumination Plan identifies the following nightlife areas:

- **Art and innovation districts**
  - National Arts Centre/Arts Court
  - Montcalm
- **Nightlife districts**
  - Vieux-Hull
  - ByWard Market
- **Sparks Street Corridor**

The illumination objectives of nightlife areas are as follows:

- Recognize the important role that certain locations play in the Capital’s nightlife.
- Create nighttime atmosphere that are conducive to discovery and a dynamic social life.
- Identify locations suited to more creative, bold lighting approaches.
- Support economic development.
- Improve the nighttime pedestrian experience.

**Guidelines**

- Underlines the cultural authenticity of each nightlife area;
- Favours the human scale;
- Fosters a pedestrian atmosphere and encourages walking;
- Enhances businesses and storefronts.
- In nightlife areas, encourage:
  - The illumination of storefronts until midnight;
  - The illumination of meeting places such as patios, public plazas, etc.;
  - The illumination of public artwork and commemorative monuments;
  - Lighting continuity and consistency, including for commercial lighting. Avoid uneven lighting or “black holes” (where particularly dark spaces cause the eyes to have to adjust).
- Give specific priority to art and innovation districts for the following:
  - Enabling creative, bold lighting statements;
  - Installing “light art”-type installations;
  - Installing innovative, creative, high-quality temporary lighting, such as art projects or event-based lighting;
  - Encouraging pilot projects that feature new technologies or innovative lighting approaches.
- Refer to the sectors for detailed guidelines applicable to each nightlife area (Section 5.3).

**Public lighting**

- Favour homogeneous public lighting within each nightlife area.
- Favour pedestrian lighting over road lighting.
- Adjust lighting levels to the uses on each street. These may change depending on the season.
- Consider special high-quality, designer-driven lighting concepts, for example special colours or effects, for the Sparks Street corridor and the art and innovation districts.
NIGHTLIFE DISTRICTS - INSPIRATIONAL IMAGES

Commercial continuity (Lyon, France)  
Photo credit: see Appendix A – 1

Covent Garden (London, England)  
Photo credit: see Appendix A – 2

The Nyhavn district (Copenhagen, Denmark)  
Photo credit: see Appendix A – 3
ART AND INNOVATION DISTRICTS – INSPIRATIONAL IMAGES

Quartier des spectacles (Montreal, Canada)

Raadhuisplein Emmen (Emmen, Netherlands)

Broadgate (London, England)

Photo credit: see Appendix A – 4

Photo credit: see Appendix A – 5

Photo credit: see Appendix A – 6
Figure 5.5
Structuring Elements
Evolving Areas

Evolving Areas
- The Islands and LeBreton Flats
5.2.4 EVOLVING AREAS

The Capital Illumination Plan identifies two evolving areas:

- **The Islands** (site of the Zibi development project)
- **LeBreton Flats**

Nightlife in these new neighbourhoods will depend on how they evolve. Given their location and scale, they play a prominent role in the Capital core area landscape and will have a major impact on the nighttime scenery. They provide an excellent opportunity to incorporate high quality and environmentally appropriate exterior illumination components into their development plans and make them exemplary projects.

**Guidelines**

- Encourage the development of a comprehensive public and private lighting master plan for each evolving area. Consider in particular their prominent role as the background to the nighttime scenery of the central capital landscape.
- Refer to the sectors for detailed guidelines applicable to each evolving area (Section 5.3)
Note: This plan provides a conceptual illustration of the Illumination Concept’s structuring elements. It is not meant to indicate aerial visibility of the lighting or any specific type of illumination.
5.2.5 ALL STRUCTURING ELEMENTS

Figure 5.6 illustrates all the structuring elements on a single map, allowing a better understanding of the links between them.
Note: Some sites located in proximity to a sector boundary have an influence on more than one sector. It is recommended that the guidelines for the adjacent sector be reviewed, as they may be applicable.
5.3 SECTORS

Sectors are identified in order to allow a more detailed treatment of parts of the study area and provide more specific direction.

For each sector, illumination objectives are identified in order to guide future lighting initiatives. Guidelines are also provided for individual sites that are of specific interest. Their intent is to point to certain key elements that should be considered in the design of future illumination schemes for each site, offering clues as to how each project may support the proposed Illumination Concept. They are not prescriptive and focus on objectives to attain rather than the precise ways in which each site may be lit, leaving those artistic choices to the professional design teams. These guidelines must be read in conjunction with the other guidelines in this plan.
SECTOR 1 – CENTRAL CAPITAL LANDSCAPE

As an emblematic tourist area of high nighttime use, this sector constitutes the historic and cultural heart of the National Capital Region. The buildings in this sector constitute the nighttime foreground presented earlier in the Illumination Concept. This sector also benefits from the strong influence of natural features (escarpment, shoreline areas, and watercourses) and constitutes the starting point of tours and cruises with a high potential for nighttime development.

The illumination objectives for this sector are as follows:
- Consolidate the notion of a nighttime foreground.
- Showcase the exceptional beauty of the landscapes, symbols and heritage.
- Strengthen the continuity of the Confederation Boulevard ring.
- Support nighttime activities.
- Strengthen connections to nightlife areas.

The Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015) must be considered as the primary reference for the illumination of the Parliamentary Precinct and certain areas to the east and south (Sparks, Metcalfe, O’Connor and Bank streets, as well as the Government Conference Centre), focusing on buildings, monuments and the landscape.

GUIDELINES

Buildings

Interior of Confederation Boulevard Ring

A – Parliamentary Precinct
- Follow the detailed recommendations in the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015).
- Showcase the cooper roofs in a similar manner.
- Given the timeline for rehabilitation of buildings in the Parliamentary Precinct, several illumination projects within the central capital landscape will be completed prior to those in the Parliamentary Precinct, making it more challenging to anticipate the global interaction between the various projects. It is therefore recommended to implement lighting designs that can be adjusted, if required, without altering the quality of the original concept.

B – Judicial Precinct
- Develop a detailed exterior lighting master plan for the Judicial Precinct.
- Ensure coherence with the nighttime scenery of the Parliamentary Precinct.
- Treat the Supreme Court of Canada as the dominant and brightest element within the Judicial Precinct.
- Showcase the cooper roofs in a similar manner.
- Integrate the West and East Memorial Buildings in the nighttime landscape of the Judicial Precinct.

C – Kruger Plant
The Kruger plant occupies a very important location within the central capital landscape, both in terms of embodying the industrial history of the region but also for its role in regards to the visual continuity of the foreground. The Kruger plant does not have a recognized architectural value. However, it holds cultural value and its walls can be used for the projection of historical images showcasing the history of the area.
- Consider projecting images paying vibrant homage to the industrial heritage of the region, favouring black and white or sepia photographs.
- Favour a discrete lighting for the plant chimney so that it does not conflict with the E.B. Eddy digester tower (identified as a “feature site” in the Illumination Concept).

D – Canadian Museum of History
- Showcase the cooper roofs.
- Showcase the entrance plaza and the surrounding landscape.
- Assist with the legibility of the different terraces.
- Facilitate a better understanding of the access routes toward the shoreline.

E – National Gallery of Canada, F – Notre-Dame Cathedral, G – Peacekeeping Monument, H – Embassy of the United States
- Treat the buildings as being part of a single illuminated landscape in which the Peacekeeping Monument acts as the central node.
- Favour a lighting concept that is coherent where no single building overwhelms the others.
• Use a warmer tone of white for the Peacekeeping Monument to allow it to stand out, and highlight the landscaping around the site.

I – Château Laurier
• Harmonise the lighting colour of the old and contemporary sections of the building, while emphasizing the heritage building, revealing its romantic architecture.
• Consider means of softening the lighting that emanates from the interior (e.g., blinds).
• Ensure that lighting does not spill into Major’s Hill Park or the Rideau Canal.

J – Connaught Building
• Consider its important role along both the Mackenzie Avenue and Sussex Drive segments of Confederation Boulevard.
• Ensure that lighting of the façade facing the York Steps remains subtle in order to reinforce the pedestrian perspective toward Parliament Hill.

K – Portage Complex
See the Portage sector (Section 5.3.8).

L – Gatineau Courthouse
• Showcase, through a subtle illumination, its general volumetry and reveal its terrace structure.

M – Maison du citoyen
• Favour an intimate lighting treatment that will make the building appear at a distance, strengthening its role as a welcoming element.
• Consider a lighting treatment that invites people to discover the park located behind the building.

N – Government Conference Centre
• Follow the detailed recommendations in the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015).

O – East and West Memorial Buildings and Lyon Street Arch
• Coordinate the illumination of both buildings and the Lyon Street Arch.
• Establish a soft lighting treatment that seeks to preserve, from a distance, the legibility of the Judicial Precinct.
• Showcase the commemorative monument (Canadian Phalanx).

P – Alexandra Bridge
• Consider a renewed architectural illumination of the bridge.
• Favour illumination of the interior structure above the road and minimise lighting below the bridge.
• Ensure visual continuity with Confederation Boulevard public lighting. However, if Alexandra Bridge receives an architectural illumination, promote a visual link with Confederation Boulevard at both ends of the bridge rather than along its full length.
• In addition to permanent illumination, consider temporary artistic, high-quality and subtle lighting projects.

Q – Nepean Point
• Integrate a global lighting concept as part of the redevelopment project for the site.
• Favour a lighting concept that encourages nighttime use of the site as an observation point, rather than a beacon of light.
• Preserve the integrity of the view of the site from a distance, including by favouring the use of low, full cut-off lighting for access pathways.
• Depending on the nature of the Nepean Point redevelopment project, consider a subtle lighting treatment between Nepean Point and the National Gallery of Canada, in order to highlight the entrance to Confederation Boulevard on the Ottawa side. The illumination of the cliff
must not overwhelm the legibility of built form components.

**R – Victoria Island (eastern section)**
- Work in close collaboration with the Anishinabeg Algonquin Nation in order to explore potential illumination concepts for the site.

**S – Richmond Landing**
- Favour a lighting concept that enriches the visitor experience, creates a visual interest and showcases distinct physical elements such as the ceremonial landing and the grand staircase.
- Underline the presence of architectural elements that have a link with the river, including bridges.

**T – E.B. Eddy Company Digester Tower**
- Favour a lighting concept that acts as an invitation to discover the Quebec shorelines.
- Favour a soft lighting concept that respects the simple architectural massing of the structure.

**U – Rideau Canal**
- Place priority on the nighttime scenery of the locks area, including the Bytown Museum and access areas. In particular:
  - Reconsider the existing public lighting elements along the pathway that produce strong glare. Favour the use of low lighting at human scale and full cut-off.
  - The Rideau Canal protected views have been studied extensively. Consider these important daytime views when developing illumination strategies.
  - For the locks, favour a lighting treatment that creates an intimate atmosphere using warm colour temperatures, maintaining the locks as an important element in the views from across the river.
  - Keep adjacent areas in darkness (Château Laurier retaining wall and Parliament Hill escarpment) to underscore the idea of a passage.
  - Minimize the impact of lighting of the dock.
  - In close collaboration with Parks Canada, consider the development of a long-term overall illumination concept for the full length of the Rideau Canal in Ottawa.

**V – Confederation Square**
Confederation Square, and more specifically the National War Memorial, represents in importance visual landmark from the Wellington Street and Elgin Street axes. The current illumination underlines with delicacy the sculpted bronze elements as well as the lower portion of the monument. The current surrounding environment does not support the quality of this setting and has diluted its perception from a distance.
- Maintain the high quality and integrity of the National War Memorial’s current illumination scheme.
- If further reinforcement of this scheme is sought, favour low-level lighting for the plaza in order to open views to the monument and avoid interfering with its legibility.
- Continue to reinforce the site’s subtle and welcoming ambiance.
- Consider showcasing vegetation in order to enhance the legibility of the site from a distance and create links with the surrounding.

**W – Major’s Hill Park**
- Illuminate main pathways, main pedestrian access points, key built elements, and a few border elements.
- Encourage a more creative lighting treatment in proximity to the National Gallery of Canada in order to create visual links.

**X – Parliamentary Precinct and Judicial Precinct Escarpment**
- Follow the detailed recommendations of the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015).
- Maintain darkness on the Parliamentary Precinct and the Judicial Precinct escarpment, not including the multi-use pathways along its edge.

**Y – Garden of the Provinces and Territories**
- Favour a subtle lighting concept that focuses on key built elements and does not overwhelm the legibility of religious buildings in the background.
- Use illumination to strengthen the pedestrian connection between Sparks Street and LeBreton Flats.

**Z – Portage Bridge**
- Ensure continuity with the Confederation Boulevard public lighting.
- Avoid overwhelming the industrial heritage or the landscape characteristics of Chaudière and Albert islands.
• Avoid lighting underneath the bridge in order to minimize impact on natural ecosystems.

**AA – Visual continuity along the shorelines**

The nighttime visibility and legibility of Confederation Boulevard’s route as a whole is low. Through lighting, it could be symbolically extended along the shorelines of the central capital landscape, thereby increasing the understanding of its route from a distance. This illumination concept could take one of various forms. It could for example be achieved using a specific type of luminaire; the use of an amber colour temperature that would only be present along the shoreline within the central capital landscape; or the illumination of specific trees along the pathways.
SECTOR 2 – JACQUES-CARTIER PARK AND SUSSEX NORTH

This sector is set along the Ottawa River, to the north of Alexandra Bridge. The Gatineau shoreline is characterized by accessibility to generous public open space, including Jacques-Cartier Park. In contrast, the Ottawa shoreline underscores the prestige of the capital. Characterized by the presence of Confederation Boulevard, it benefits from the presence of exceptional buildings, institutions and embassies.

The illumination objectives for this sector are as follows:

- Support and maintain the pleasant and authentic character of the shorelines on the Gatineau side.
- Support the development of nighttime cruises by offering a soft illumination of shoreline landscapes.
- Reinforce the symbolic and ceremonial status of Confederation Boulevard and maintain a visual continuity.
- Preserve the authentic character of the escarpment on the Ottawa shoreline.

The illumination objectives for this sector are as follows:

- Support and maintain the pleasant and authentic character of the shorelines on the Gatineau side.
- Support the development of nighttime cruises by offering a soft illumination of shoreline landscapes.
- Reinforce the symbolic and ceremonial status of Confederation Boulevard and maintain a visual continuity.
- Preserve the authentic character of the escarpment on the Ottawa shoreline.

### Guidelines

#### Buildings

A – Servantes de Jésus-Marie Convent
- Consider a traditional architectural illumination on the Laurier Street façade that highlights the heritage character of the building and acts as a welcoming element.
- Favour an artistic lighting concept for the river side, allowing for a progressive discovery of the building.

B – Maison Charron
- Favour a soft architectural illumination that showcases the heritage character of the building.

C – Global Centre for Pluralism, D – Royal Canadian Mint Building
- Favour visual continuity of the facades along Confederation Boulevard and the river.
- Harmonise and coordinate the colour tones of the facades, favouring white tones.

E – Ottawa Rowing Club
- Highlight the intimate and authentic character of this site along the water.
- Showcase the building architecture and the docks.

F – Lester B. Pearson Building
- Consider a minimal lighting intervention that would permit light to act as a visible signal.

G – National Research Council Canada Building
- Favour the illumination of the Sussex Drive facade.
- On the river side, use lighting to suggest a discrete presence.

H – Former City of Ottawa City Hall
- Coordinate the lighting concept with that of the Rideau Falls.
- Illuminate the facades, the tower and the bridges at the back.

### Feature Sites

I – Rideau Falls
- Favour the view from a distance, while minimizing glare from close-up.
- In addition to permanent illumination, consider a seasonal, temporary illumination in connection with river cruises.
- Consider the use of blue-green tones, evoking the theme of water.

### Dark Zones

J – Macdonald-Cartier Bridge
- Favour discrete street lighting that minimises glare and light spill beyond the bridge.

K – Jacques-Cartier Park
- As a priority, light the edges of the park and its access areas.
- Link the park to the Canadian Museum of History through common illumination elements.
- Favour strolling, discovery and events through the creation of special lighting ambiances. In particular, add illumination to public art.
- Favour the creation of multiple types of illumination ambiances along the Ottawa River axis and begin a progressive return to darkness, decreasing lighting levels north of the Macdonald-Cartier Bridge.
- Improve the lighting of parking lots by using full cut-off light fixtures that do not produce glare.
• Showcase the Hull Marina as an access point to the water and an important observation point.
SECTOR 3 – THE ISLANDS AND LEBRETON FLATS

The Islands and LeBreton Flats sector is evolving and will undergo major transformation over the course of the next decade due to new mixed-use urban redevelopment projects. The nightlife of these new neighbourhoods will depend on their evolution. The sector occupies a key location in the nighttime scenery of the Capital, participating as a background element.

The illumination objectives for this sector are as follows:

- Propose exemplary external lighting approaches in terms of ecological impact and technical innovation.
- Reinforce the legibility of the Capital Illumination Plan’s foreground and background.
- Create welcoming and friendly lighting ambiances along the shorelines, maintaining the river itself as a dark zone.
- Preserve the primacy and integrity of the industrial heritage.

GUIDELINES

Buildings

A – Canadian War Museum
- Favour a lighting treatment that solidifies its role as a major visual landmark in this sector.
- Showcase the roof and underline the unique the terraced architecture.

Feature Sites

B – Chaudière Dam and Falls
- Work in close collaboration with First Nations to develop an illumination concept for the site.
- Favour views of the site from a distance, for example from Nepean Point, while minimizing glare from close-up.
- In addition to permanent illumination, consider a seasonal, temporary illumination installation.

Dark Zones

C – Eddy Bridge
- Favour discrete street lighting that minimises glare and light spill beyond the bridge.

- Integrate the illumination of the Eddy Bridge with a comprehensive exterior lighting master plan for the development of the Islands.

Evolving Areas

D – The Islands
- Recognize the environmentally sensitive location of this evolving area. Encourage innovative lighting approaches that seek to reduce lighting pollution (e.g., a “migratory bird lighting curfew”) and support experimentation with regards to ecological lighting.
- Support connections with downtown Gatineau and the pathway network.
- Showcase gathering places and encourage sustainable modes of transportation.
- Consider the critical role of this area as part of the nighttime background.

E – LeBreton Flats
- Ensure that any lighting concept complements the Canadian War Museum and the National Holocaust Monument and does not compete with their visibility, particularly from the Sir John A. Macdonald Parkway and Booth Street.
- Favour lighting interventions that face the existing urban areas rather than the river.
- Favour a progressive decrease of lighting toward Lemieux Island.
- Consider the critical role of this area as part of the nighttime background.
SECTOR 4 – NORTH RIVER AND RIDEAU HALL

This sector features a low level of nighttime activity. On the Ottawa side, it is characterized by the easternmost segment of Confederation Boulevard; Rideau Hall, the Governor General of Canada’s official residence; and 24 Sussex Drive, the Prime Minister’s official residence. On the Gatineau side, the area features the natural landscapes of the shorelines. Given the relative darkness of this area, lighting only requires a low intensity in order to stand out.

The illumination objectives for this sector are as follows:

- Preserve the authentic character of natural landscapes.
- Implement a gradual return to darkness, accompanying the exit from the Capital core area.
- Minimise lighting on the Gatineau shoreline, while ensuring user safety and visual comfort.
- On the Ottawa side, with the exception of Rideau Hall, favour the illumination of facades visible from Confederation Boulevard and from the river to support the development of nighttime cruises.

GUIDELINES

Buildings

A – Rideau Hall

- Develop a comprehensive exterior lighting master plan for the site, including the built components, entrances, access routes, site perimeter, gardens and public spaces.
- Favour lighting that is focused on views at close range and underscore the copper roofs that will be seen when the vegetative cover is diminished.

B – 24 Sussex Drive

- Encourage an intimate illumination on the river side and an illumination of the roofs.
- Illuminate a selection of remarkable trees in order to anchor the residence within its surrounding context.
- Avoid excessive illumination and preserve the authentic character of a private residence.

Key Nodes

C – Rideau Hall intersection

- Favour a comprehensive lighting approach for buildings located in the vicinity of the key node, underlining its importance.
- Harmonise the lighting tones among the different buildings.
- Illuminate the forecourt of 7 Rideau Gate. Favour soft and homogeneous human-scale lighting, and reduce glare. Favour a discrete illumination of the building and showcase a few remarkable trees.
SECTOR 5 – BYWARD MARKET AND LOWERTOWN

This sector is characterized by mixed residential and commercial uses. The southern section consists of the ByWard Market, a busy nightlife district with a variety of patios, retail establishments, bars and restaurants. The northern section consists of Lowertown, a primarily residential neighbourhood with low nighttime activity.

The illumination objectives for this sector are as follows:

- Strengthen the attractiveness of the ByWard Market as a nightlife district.
- Avoid excessive illumination in the ByWard Market. Maintain a lighting treatment that is adapted to the scale of the area and its architecture.
- Maintain relative darkness in the Lowertown residential neighbourhood.

**Guidelines**

**Buildings**

A – ByWard Market Square
- Illuminate all four facades of the ByWard Market Square building and showcase its important role as a landmark.

B – Sussex Courtyards
- Develop a comprehensive exterior lighting master plan in order to showcase this unique architectural ensemble, including the courtyards and the Sussex Drive facades.
- Highlight the courtyard entrances.
- Preserve the intimate setting of the space.

C – Sussex Drive Facades
- Support the heritage character and elegance of the facades as an ensemble.
- Maintain uniformity and visual coherence along the various buildings.
- Systematically light the ground floor facades. Encourage a sober and distinguished illumination of ground floor shop windows.
- To the north of the Notre Dame Cathedral, only illuminate remarkable facades.

D – Rideau Street Facades
- Encourage the illumination of facades and commercial spaces.
- Highlight the presence of overpasses through artistic lighting, thereby orienting visitors from Parliament Hill.

**Nightlife Areas**

E – ByWard Market Nightlife District
The various commercial establishments in the ByWard market actively contribute to generate the unique ambiance of the area. Windows, shop windows, display counters, patios and signs help reveal the architecture of the area consisting of a variety of facades, forms and colours. This significant diversity provides the area with a distinct signature that must be preserved. Moreover, the area is characterized primarily by low-rise buildings and relatively narrow streets, and the use of red brick is one of its key architectural features. These characteristics increase its distinction from the whiteness and size of surrounding buildings and reinforce its status as a jewel to be discovered.

- Avoid using a wide variety of lighting approaches or artistic interventions in order to preserve the natural expression of the area.
- Use colour sparingly in order to preserve the natural colour of facades.
- Allow commercial and residential lighting to lead the way. Limit architectural lighting to remarkable facades and sites of particular interest.
- Encourage business owners to illumination their shop windows and to maintain them lit until midnight to preserve commercial continuity.
- Favour human-scale lighting that supports pedestrian activity.
• Consider suspended lighting for streets that are particularly narrow to create the illusion of an illuminated ceiling and clear the circulation areas.
• Avoid lighting residential portions of buildings to minimize intrusive light.
• Highlight views toward Parliament Hill.
• Encourage artistic illumination of connection elements.
• Establish a specific and festive illumination strategy for winter.
SECTOR 6 – OTTAWA ARTS DISTRICT AND CITY HALL

An art and innovation district is identified in this sector based on the presence of the National Arts Centre, the Ottawa Art Gallery and the Arts Court, which have the potential of generating a high nighttime use and support a more creative and innovative use of light. The Ottawa City Hall, located directly south of Confederation Park, is also a key site in this sector.

The illumination objectives for this sector are as follows:

• Promote the creation of a vibrant, creative and innovative nighttime setting in the art and innovation district.
• Showcase the City Hall site as an important civic and gathering space.

GUIDELINES

Buildings

A – National Arts Centre

• Use lighting to enhance the pedestrian environments around the building, including along Confederation Boulevard, Mackenzie King Bridge, and the Rideau Canal.
• Use lighting to enhance protected views along the Rideau Canal and views looking down Queen Street toward the building.
• Given the building’s role in the Arts and Innovation District, its lantern component is anticipated to feature projections and arts content. Any commercial content should be limited in nature and scale.
• The lantern component and the overall building illumination should not overpower the site of the National War Memorial, allowing that space to remain solemn and distinct.

B – Ottawa City Hall

• Harmonise the lighting colour of the old and contemporary sections of the building, while emphasizing the heritage building.
• Highlight key access points.
• Showcase the Marion Dewar Plaza as a key gathering place.

Nightlife Areas

C – National Arts Centre/Arts Court Art and Innovation District

• Encourage a creative and innovative use of light, the installation of light art and the use of temporary lighting.
• Encourage the creative use of light in shop windows and transparent spaces of cultural establishments.
• Ensure that illumination approaches do not adversely impact the legibility of nearby heritage places, including the National War Memorial and the Rideau Canal.
• Encourage a spirit of dialogue and discussion between local actors to avoid any competition with regards to lighting, focusing instead on a harmonious lighting approach and a global neighbourhood aesthetic.

Dark Zones

D – Confederation Park

• Support the ongoing development of an overall lighting concept.
• Use lighting to highlight the Elgin Street and Confederation Boulevard corridor and promote a reading of the Park as a gateway to national symbols.
• Create a visual link to the Rideau Canal via lighting.
• Improve the illumination of the Colonel By fountain, commemorative monuments and public art.
• Highlight the park’s main access points.
SECTOR 7 – CENTRAL BUSINESS DISTRICT AND SPARKS STREET

This sector is characterized by the presence of office towers and hotels, a variety of ground floor retail, and the Sparks Street pedestrian mall. Based on the height of its buildings, the Central Business District constitutes the visible background to the central capital landscape, in particular as experienced from the Gatineau shoreline.

The illumination objectives for this sector are as follows:

- Strengthen the legibility of the central capital landscape and the notions of foreground and background.
- Support the creation of an animated nighttime setting along Sparks Street.

GUIDELINES

Buildings

A – Canadian Museum of Nature

- In addition to the illumination of the lantern, favour the illumination of all facades.
- Consider the museum’s location in a primarily residential area.

Nightlife Areas

B – Sparks Street Corridor

Sparks Street can be approached in a contemporary manner and become an attraction in itself. The low residential density and its low visual impact on Confederation Boulevard favours more flexibility in regards to lighting approaches, while respecting the heritage value of buildings. Sparks Street offers the opportunity for a creative axis, parallel to Confederation Boulevard.

- Follow the detailed recommendations in the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015). These apply to the segment between Bank and Metcalfe streets, but many of them are applicable to the full stretch of Sparks Street.
- Take special care to respect Spark Street’s intersection with Confederation Boulevard at Confederation Square, prioritizing the delicate ambiance of this area.
- Consider the installation of signature-type lighting that supports the use of special lighting effect to animate the street.

- Favour a lighting approach that is homogeneous and at a human scale.
- Work in collaboration with local business owners to encourage the lighting of window shops and limit the impact of commercial signs.
- Indicate both extremities of the street via an illuminated landmark element that respects Confederation Boulevard and the delicate ambiance of Confederation Square.

C – Central Business District

The Central Business District forms the visible background from the central capital landscape and peripheral areas. In this way it acts as a visual landmark. It is characterized by a high concentration of tall, contemporary buildings. A majority of these buildings are privately owned; as such, this plan does not call out specific buildings but suggests guidelines that could accompany any future lighting projects. Moreover, the presence of the Sparks Street Corridor and several hotels suggests the possibility of increasing its nighttime use.

Lighting projects should:

- Support and reinforce the legibility of the background through the use of neutral to cool white tones in the upper portions of the buildings (see Table 2);
- Favour the illumination of buildings with a heritage designation or an architectural recognition;
- Favour the notion of the Central Business District as an agglomeration of buildings as viewed from a distance, rather than showcasing individual buildings.
SECTOR 8 – PORTAGE

This sector is characterized by a mix of residential, commercial, administrative and cultural uses and acts as a transition area from Confederation Boulevard to the Vieux-Hull nightlife district. This sector has significant visual influence on the central capital landscape scenery. Its high-rise edge simultaneously encloses the Vieux-Hull nightlife district, but also prevents its visibility from the central capital landscape.

The illumination objectives for this sector are as follows:

- Strengthen the legibility of the central capital landscape and the views of the foreground and background.
- Guide visitors toward nightlife areas and create visual connections.
- Provide the Vieux-Hull nightlife district with a strong nighttime signature that creates a contemporary, creative and welcoming ambiance.

GUIDELINES

A – Portage Complex

The various high-rise facades of the Portage Complex are visible and play different roles depending on the angle of observation. They are integral parts of the central capital landscape but also of the Vieux-Hull nightlife district. That being said, pedestrian connections between Confederation Boulevard and the nightlife district are difficult to see.

- Reinforce the idea of a built street wall formed by these buildings along Confederation Boulevard.
- Improve the pedestrian experience along the lower portion of these buildings, especially along Confederation Boulevard, using lighting as an interpretive element.
- Favour the illumination of the heritage designated buildings.

B – Vieux-Hull Nightlife District

The complexity of this sector and of the interaction between its various architectural elements requires the development of a detailed exterior lighting master plan in order to provide a global and coherent approach, avoiding the juxtaposition of multiple and diverse lighting approaches.

- Prioritise the Portage complex, St. James Church and the triangle formed by Kent, Laval and Aubry streets.
- Encourage lighting projections and artistic illumination of connections elements such as overpasses, tunnels and walls.
- Illuminate key access gateways.
- Improve the visual continuity of commercial establishments and allow visibility within lobbies after opening hours.
- Encourage temporary lighting projects in vacant commercial spaces.
- Strengthen key views by illuminating vegetation.
- Favour creative illumination at a human scale and the subtle and limited use of colour in contemporary areas that do not have influence on Confederation Boulevard and the central capital landscape.
- Encourage respectful illumination of the designated heritage facades along Promenade du Portage.

C – Quartier du Musée

This neighbourhood is residential in nature and does not require any architectural illumination. However, the “Plan particulier d’urbanisme du centre-ville de Gatineau” identifies potential intensification projects along Maisonneuve Boulevard and facing the Canadian Museum of History. Should this occur:

- Create links between open spaces and the Canadian Museum of History’s public plaza.
- Contribute to the visual continuity of the background and avoid over-illumination that would undermine the legibility of the Canadian Museum of History and the central capital landscape from a distance.
D – Terrasses de la Chaudière

The Terrasses de la Chaudière is a major visual landmark given its scale. It should connect the future development of the island with the downtown Gatineau nightlife areas.

- Encourage the illumination of ground floor commercial uses.
- The buildings are monumental and in red brick. As such they do not particularly lend themselves to a major architectural illumination. Minimal interventions should be considered.
Photo to come
**SECTOR 9 - MONTCALM AND DOWNTOWN**

This sector is divided into two distinct areas. The first is the primarily residential area of downtown Gatineau. It connects the nightlife areas and includes Eddy Street, a commercial mainstreet. The second area includes the Montcalm art and innovation district. With the emergence of an artistic quarter including workshops and exhibition spaces, as well as the natural beauty of the site, it is bound to become a strategic destination.

The illumination objectives for this sector are as follows:

- Maintain relative darkness in the residential neighbourhood.
- In the art and innovation district, support the development of an innovative artistic and cultural node and showcase the greenspaces as meeting places.

### GUIDELINES

#### Buildings

**A – Fonderie Building**
- Favour a creative illumination of the building, making it a key visual landmark and demonstrating real innovation.

**B – Théâtre de l’Île**
- Favour a creative illumination of the building, while respecting its heritage character.
- Focus illumination on the eastern façade of the building, visible from Montcalm Street.

#### Nightlife Areas

**C – Montcalm Art and Innovation District**
- Highlight the pathway and dock along the Ruisseau de la Brasserie (east side) and support the connection between the water, its shoreline and the adjacent streets.
- Create a visual link between the different built components including the Fonderie building, the Chateau d’eau, the Théâtre de l’Île and the various bridges.
- Encourage a creative use of light.
- Showcase the Montcalm Rapibus station in a similar innovation manner.
- Create a global nighttime scenery uniting the Montcalm Street bridge, the Rapibus station and the Fonderie building.

- Avoir glare toward the Hanson-Taylor-Wright neighbourhood.
- Favour the installation of signature-type lighting.
- Given the mixed use along Montcalm Street, highlight the ground floor animation and avoid glare toward residential uses in the upper portions of buildings.

#### Other

**D – Eddy Street**
- Encourage the illumination of shop windows along Eddy Street until midnight.
SECTOR 10 – HANSON-TAYLOR-WRIGHT

This sector consists primarily of a residential neighbourhood that has been granted heritage recognition. It should constitute the backdrop of views from Montcalm and counterbalance the illumination of the Montcalm art and innovation district.

The illumination objectives for this sector are as follows:

- Favour intimate lighting that is coordinated with the bolder lighting of the east side of the ruisseau de la Brasserie.

GUIDELINES

Buildings

A – Wright-Scott House

- Showcase the Wright-Scott House and a selection of notable trees.
SECTOR 11 – MAISONNEUVE

This sector is a residential neighbourhood of relatively low nighttime activity that acts as the background to the Hull Marina and Jacques-Cartier Park. This sector is important in terms of the views it offers.

The illumination objective for this sector is as follows:

• Remain in harmony with the darkness of the natural landscapes.

GUIDELINES

A – Laurier Street Facades

• Ensure that the illumination of any future redevelopment of the built façade contributes to the notion of a background, in a soft and subtle expression.

• Minimise the intensity of private lighting and avoid any light reflections on the river.
NIGHTTIME PANORAMAS

The panoramas provide a visual demonstration of one way the guidance provided in the Illumination Concept could transform the nighttime views of the central capital landscape. The Capital Illumination Plan is a high-level document. As such, the intent of the panoramas is not to illustrate individual lighting projects or concepts, but to support the understanding of the Illumination Concept and its guidelines, including:

- The creation of an elegant and timeless foreground.
- The role of copper roofs as a signature nighttime feature.
- The simple background composition.
- The impact of reducing interior office lighting.
- The limited lighting within dark zones.

NIGHTTIME PANORAMA OF THE CENTRAL CAPITAL LANDSCAPE – OTTAWA

Existing conditions.

Conceptual future nighttime panorama.
NIGHTTIME PANORAMAS

The panoramas provide a visual demonstration of one way the guidance provided in the Illumination Concept could transform the nighttime views of the central capital landscape. The Capital Illumination Plan is a high-level document. As such, the intent of the panoramas is not to illustrate individual lighting projects or concepts, but to support the understanding of the Illumination Concept and its guidelines, including:

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- The role of copper roofs as a signature nighttime feature.
- The simple background composition.
- The impact of reducing interior office lighting.
- The limited lighting within dark zones.

NIGHTTIME PANORAMA OF THE CENTRAL CAPITAL LANDSCAPE – GATINEAU

Existing conditions.

Conceptual future nighttime panorama.
CHAPTER 6

GUIDELINES BY TYPE OF USE

This chapter provides guidelines for the following key types of uses found within the study area:

- Buildings
- Heritage sites
- Commemorative monuments
- Public art
- Special projects
- Roads

The guidelines apply both to sites identified in the Illumination Concept, but also more generally to any new lighting project within the study area. Their purpose is to identify elements to consider in order to support the global nighttime image, while fostering creativity and originality. They are neither prescriptive nor exhaustive. Each site and built environment component is unique; each lighting approach must therefore be developed on a case-by-case basis.

Each lighting project must also refer to the other guidelines in this plan.
6.1 BUILDINGS

The Illumination Concept (Chapter 5) identifies the types of buildings to prioritize for illumination, guidelines based on the building location (foreground, transition or background zone), and detailed guidelines for specific buildings acting as landmarks. The following guidelines provide complementary guidance for the illumination of all buildings, irrespective of their type or location.

**Guidelines**

- As a first step, determine the relevance of providing architectural lighting. Consider the types of buildings to prioritize for lighting in the foreground, transition and background zones (Section 5.1).
- Design illumination to achieve the following key objectives:
  - Accentuate the architecture of the building or reveal new aesthetic dimensions.
  - Contribute to social nightlife and nighttime experience.
  - Contribute to user comfort and safety.
  - Guide and orient residents and visitors at night, from near or from far.
- Calibrate the illumination of each building according to its characteristics and its position in the urban space. Use lighting quality and appropriate distribution to achieve the desired effect and avoid over lighting.
- Ensure that illumination serves to reveal the building’s architecture, rather than existing as a lighting effect of itself.
- Showcase significant architectural features of a building, especially:
  - Shape and textures;
  - Characteristic materials;
  - Decorative elements;
  - Commemorative plaques and other interpretive elements;
  - Details that contribute to a heritage character;
  - Other important construction details.
- Optimize the colour of materials (brick, concrete, wood and metal) through good colour rendering. Favour a colour rendering index of 80 or over.
- Pay particular attention to the illumination of remarkable roofs, in particular copper roofs whose green colour contributes to a strong signature and which is a common feature of buildings along the Confederation Boulevard ring.
- Give priority to the overall view of the facade. Avoid illuminating too many details, making information difficult to read.
- Avoid motifs such as points or lines.
- Promote a comprehensive approach that considers the building and its surrounding context. For a suite of buildings, determine the relevance of connecting them together with a unifying element.
- Take into account ambient lighting from lampposts and neighbouring buildings.
- Deploy event-type lighting only at clearly identified times and avoid making them appear as part of the building’s normal illumination.
- For museums, art and performance locations, and other buildings with a cultural and artistic vocation:
  - Create exceptional lighting concepts capable of honouring the artistic and cultural values of each building;
  - Encourage bold and respectful treatments that contribute to the Capital’s international influence;
  - Create a user-friendly, warm atmosphere that promotes gatherings;
  -avour the use of white tones. However, given the role of these building types as cultural ambassadors, consider the use of colour as per the parameters identified in Section 4.2.3.
• Favour the following curfew modes (see Table 1 for parameters):
  ▪ For the majority of buildings: “illumination lighting” mode.
  ▪ On a case-by-case basis for buildings that serve as nighttime landmarks: “illumination lighting” mode with “night mode”.
  ▪ For indoor office lighting: “indoor office lighting” mode.

BUILDINGS – INSPIRATIONAL IMAGES

Hamburg City Hall (Hamburg, Germany)  Photo credit: see Appendix A – 8

La Grande Place (Brussels, Belgium)  Photo credit: see Appendix A – 7

Hermitage Museum (St. Petersburg, Russia)  Photo credit: see Appendix A – 9

Place du Château (Strasbourg, France)  Photo credit: see Appendix A – 10
6.2 HERITAGE PLACES

The study area is characterized by an outstanding built heritage that bears witness to the National Capital Region’s rich history. A heritage place is defined as a structure, building or group of buildings, a district, landscape, archeological site or other place formally recognized for its heritage value by a competent authority in a given jurisdiction (federal, provincial and/or municipal).

GUIDELINES

• Prior to developing the lighting design, ensure a thorough understanding of the place’s heritage values and the character-defining elements that convey these values.

• Avoid creating confusion about the heritage place’s historical evolution or characteristic components (i.e., creating a false impression of the building's history by installing faux-historical lighting).

• Avoid illumination that overwhelms, outshines or devalues the special character of a place in whole or in part.

• Avoid installing light sources and related parts (wires and conduits) on character-defining elements. If such installation is unavoidable:
  • It must be designed to prevent damaging the element itself or adjacent elements, to allow water drainage, and to prevent the build-up of snow, ice or other deleterious materials;
  • The installation method should be designed to allow for removal of the equipment leaving no significant trace or conditions likely to cause the character-defining element to deteriorate.

• Maintain lighting equipment in a way that prevents its deterioration from affecting the components and materials of character-defining elements of the place, and that maintains the lighting features (intensity, colour, sequence or continuity in space and time, etc.).

• Keep full and up-to-date records on the equipment in use and its maintenance.

• Ensure that all new structures required for lighting equipment installation (masts, bases, etc.) remain low-key and are designed to avoid overtaking, outshining or devaluing the place in whole or in part. If a contemporary design is chosen, the contrast with historical components of the site must result in good compatibility through the choice of appropriate materials, finishes, scale and shape and through positioning of the structures.

• Work in collaboration with the Federal Heritage Buildings Review Office and the Heritage Conservation Directorate for any lighting project on a federal heritage structure or building.
6.3 COMMEMORATIVE MONUMENTS

The Capital core area features a large number of commemorative monuments. Monuments of national interest in the National Capital Region are the responsibility of Canadian Heritage, whereas the NCC is responsible for their land use and design approval. Canada’s Capital Commemoration Strategic Plan (NCC, 2006) provides a framework for developing monuments of national interest and establishes a hierarchy of sites:

**Order 1**

Key sites which are suitable for the installation of major commemorations and capable of accommodating large crowds (Figure 6.1). These include:

- **Landmark Node**: Monuments occupy two of the seven intersections: Canada’s National War Memorial and the Peacekeeping Monument. Completion of these seven key intersections is one of the milestone projects identified for the Plan for Canada’s Capital 2017-2067.
- **Gateway Node**: Two of the seven locations are currently occupied: the Canadian Tribute to Human Rights Monument and the National Holocaust Monument.

**Order 2**

Key sites along pathways, urban intersections, bridges, observation areas and lookouts designed to accommodate mid-scale monuments.

**Order 3**

Sites more removed, suitable for commemorations of more limited scope.

The City of Ottawa and the Ville de Gatineau are also responsible for managing commemorative monuments. Projects under municipal authority typically focus on subjects of local or regional interest located on lands under municipal ownership.

Lighting can strengthen our understanding of the character and meaning of commemorative monuments. Lighting can also evoke a very different perspective of the monument given its ability to refocus the observer’s attention; elements that dominate during the day can sometimes recede, while others can be brought to the fore. Finally, lighting establishes a safe and comfortable environment by creating an attractive night ambiance and allowing events and ceremonies to be held at night.

**Guidelines**

- Encourage the illumination of commemorative monuments based on the following criteria:
  - Major commemorative monuments (including all monuments located on Order 1 sites) should systematically be illuminated.
  - Illumination is encouraged for smaller-scale installations. However, various factors should be considered, including:
    - Location – in locations that are inaccessible or not visible after dark, illumination is discouraged.
    - Ambient lighting – ambient lighting from lampposts and surrounding buildings may suffice.

- Design illumination to achieve the following objectives:
  - Ensure that the monument remains recognizable at night.
  - Highlight sculptural aspects of the monument or reveal new aesthetic elements.
  - Help make these locations welcoming, user-friendly and safe after dark.
  - For monuments located on landmark nodes, help them become major visual landmarks.

- Ensure that illumination, especially in terms of its amount and intensity, reflects the relative importance of each monument.

- Adapt the design of each illumination to the following considerations:
  - The intent of the artist, designer, and/or landscape architect;
  - The commemorative theme;
  - The design, including its form and materials;
  - The location;
  - The anticipated use after nightfall.

- Ensure that the installation will be able to provide the necessary power and specific technical needs to support events on the site.

- Favour illumination that preserves the official character of monuments.

- Focus illumination on sculptural and artistic components of the monument rather than its base.

- For monuments located along Confederation Boulevard, inside the central capital landscape and on Gateway
Nodes, favour a lighting treatment that underscores and promotes elegance, universality and timelessness.

- Treat monuments visible from Confederation Boulevard as integral parts of the commemorative route. Promote continuity with and respect for the spirit of Confederation Boulevard.

- Given their importance as major visual landmarks, the illumination of monuments located on Order 1 sites should include two distinct lighting designs:
  - A lighting design to create night ambiance during high-traffic periods;
  - A more minimal lighting design for low-traffic periods of the night ("night mode").

- Favour the following curfew modes (see Table 1 for parameters):
  - Commemorative monuments located on an Order 1 site: “illumination lighting” mode with "night mode."
  - Other commemorative monuments: “illumination lighting” mode, except in dark zones where “dark zone lighting” mode is recommended.
6.4 PUBLIC ART

The Capital core area boasts some magnificent works of art. The federal public art program of the National Capital Region is governed by Canadian Heritage, while the NCC is responsible for federal approval of the land use and design of these works. The City of Ottawa and the Ville de Gatineau each have their own municipal public art program.

There are three separate types of common uses for lighting in relation to public art:

- **Public artwork illumination**
- **Light art**
- **Artistic illumination**

Although commemorative monuments are also works of art, given their specific status they are addressed separately in Section 6.3.

6.4.1 PUBLIC ARTWORK ILLUMINATION

Lighting public artwork at night contributes to the nighttime legibility of these important artistic elements of the urban landscape and can provide a unique interpretation of the work.

**Guidelines**

- Encourage the illumination of public artwork based on the following criteria:
  - Public art that contributes to the signature identity of its location and that performs an important artistic, social or cultural function.
  - Public art that contributes to the visual comfort of an urban route, and that may help overcome a sense of darkness.
  - Public art that can help reduce the need for public lighting when illuminated at night, particularly in parks, along shorelines and along recreational pathways.
  - Public art that represents one of the outstanding elements of a site to be illuminated.
  - Public art located in art and innovation districts, nightlife districts or along the Sparks Street corridor.
  - Consider the following factors when deciding to illuminate a work of art:
    - Location – if the work is located in a place that is not accessible or visible at night, illumination is discouraged.
    - Ambient lighting – ambient lighting from nearby street lights and buildings may be sufficient.
    - Design illumination to achieve the following objectives:
      - Ensure that the work remains recognizable at night.
      - Highlight the sculptural aspects of the work or reveal new aesthetic elements.
      - Help make the site welcoming, friendly and safe at night, if making the site accessible at night is planned.
    - Design each lighting approach based on the following considerations:
      - The intent of the artist;
      - The theme;
      - The design, including its form and materials;
      - The location;
      - The anticipated use after nightfall.
    - Focus the illumination on sculptural and artistic elements of the work rather than its base.
    - For works located along Confederation Boulevard and inside the central capital landscape, promote a lighting treatment that underscores and fosters elegance, universality and timelessness.
• Treat monuments visible from Confederation Boulevard as integral parts of the commemorative route. Promote continuity of and respect for the spirit of Confederation Boulevard.

• For works located in areas that have no impact on Confederation Boulevard or the central capital landscape, consider using light in a more creative, innovative way.

• Favour an “illumination lighting” curfew mode, except in dark zones where “dark zone lighting” mode is recommended (see Table 1 for parameters).

6.4.2 LIGHT ART

Light art, increasingly widespread, is a type of visual art that relies primarily on light as its medium. Rather than simply illuminate a traditional work of art, the light becomes the primary component of the work. This type of art is intended to be mainly experienced at night.

Guidelines

• Favour art and innovation districts for the siting of permanent light art.

• Consider the work’s visual impact in a daytime setting.

• Favour an “illumination lighting” curfew mode, except in dark zones where “dark zone lighting” mode is recommended (see Table 1 for parameters).
6.4.3 ARTISTIC ILLUMINATION

One of the major features of this type of installation is that light is both the material and the product of the work. Invisible by day, these works are intended exclusively for dark spaces. They allow the discovery of low-profile spaces, or the enhancement of urban routes that are perceived as unsafe.

Guidelines

- Encourage artistic illumination of low-profile spaces or urban routes that are perceived as unsafe (i.e., tunnels, underground passageways, public transit stations, etc.).
- Favour low-profile integration, day and night, of lighting devices.
- Adapt curfews according to the type of project. Typically favour the “illumination lighting” mode (see Table 1 for parameters), but in some cases longer illumination may be relevant, depending on use of the site.

6.5 SPECIAL PROJECTS

6.5.1 TEMPORARY ILLUMINATION PROJECTS

During special events, temporary illumination projects can underscore the rich cultural life of the National Capital Region.

The intent of the Capital Illumination Plan is to encourage temporary lighting associated with festivals, special public events, official celebrations and artistic experiences. These projects provide an opportunity to explore more creative, artistic, experimental, coloured and innovative illuminations, given their temporary nature. This type of lighting should be considered a laboratory for experimentation with unique lighting approaches, whether in technological, ecological or aesthetic terms. Current examples include the Christmas Lights Across Canada program and the Sound and Light Show on Parliament Hill (Canadian Heritage).

Nevertheless, the built environment of the Capital core area is characterized by its architectural elegance and the importance of its heritage. Lighting approaches must remain respectful of the built environment.

Guidelines

- Encourage high-quality temporary illumination projects, giving priority to the following applications:
  - Temporary installations related to festivals, special public events or official celebrations;
  - Temporary installations designed to showcase points of interest along Confederation Boulevard, particularly Parliament Hill, national museums, monuments, embassies, and other important institutions and national symbols;
  - Temporary installations in art and innovation districts, nightlife districts and along the Sparks Street corridors, intended to create an artistic presence at night.
  - Encourage creativity, technological, aesthetic or environmental innovation, and high artistic value.
  - Ensure that the size of the installation and intensity of the lighting relates to the importance of the event and the subject of the illumination (theme or built component).

Artistic illuminations can allow for the discovery of low-profile spaces and urban routes, such as this tunnel in Ottawa.
Discourage projections of commercial content, except for messages by commercial partners, which must remain low-key (limited size and duration).

Apply a curfew according to the type of project (see Table 1 for parameters).

6.5.2 PERMANENT DECORATIVE ILLUMINATION PROJECTS

In the Capital Illumination Plan, types of permanent illuminations that extend beyond classic architectural lighting are referred to as “decorative.” Decorative illumination can actively contribute to tourist, social and cultural activity in the Capital. These permanent installations can become powerful identity-building symbols and generate strong feelings of belonging and pride. These sites are memorable and easily identifiable. As such, they hold potential as visual landmarks and attractive nighttime routes. For example, a trend with multimedia or projection displays, called “media facades,” has been developing for several years now, transforming some walls into truly interactive screens.

However, the line remains thin and very subjective between what might be seen as cultural and artistic, and what might be perceived as an advertising installation or message that conflicts with the desired nighttime environment. Assessments can only be done on a case-by-case basis.

GUIDELINES

- Encourage high-quality decorative illuminations that are integral components of public art installations or artistic or cultural-themed components of the built environment, such as cultural institutions and performance, art and exhibition spaces.

- Encourage creativity, technological innovation and high artistic value.

- Take the following considerations into account when designing illumination:
  - Ensure that the size of the installation and intensity of the lighting relate to the importance of the subject of the illumination (building or other).
  - Take account of the potential problem of driver distraction and develop appropriate solutions.

- Discourage projections of commercial content, except for the messages of commercial partners, which must remain low-key (limited in size and length).

- Favour the “illumination lighting” curfew mode (see Table 1 for parameters).
Christmas Light Across Canada Program.

The Senators Rink of Dreams.

An event at the Canadian Museum of History.
6.5.3 CONSTRUCTION SITES

Construction sites require temporary lighting for worker safety and productivity, and to maintain the quality of work performed. Although necessary, this type of lighting can have several negative effects on adjacent uses and the environment. In some cases, construction sites provide an excellent opportunity for artistic creativity.

**Guidelines**

- Limit lighting to the minimum required to meet safety and productivity requirements.
- Favour lighting that is of high quality, of a consistent colour, and carefully arranged on scaffolding.
- Encourage creative, artistic approaches to illuminating scaffolds, protective tarps and other elements associated with construction sites that have a medium- and long-term (months or years) visual impact and for construction sites where high quality decorative tarping is employed.
- Turn off work lighting during non-working hours. For artistic lighting of work sites, favour the “illumination lighting” curfew mode (see Table 1 for parameters).

In Montreal, a creative approach for the illumination of a protective tarp on a construction site.  
Photo credit: Saranaz Mohammadi
6.6 PUBLIC ROADS

Most public roads in the study area come under the jurisdiction of the municipalities. However, some roadways are held and administered by other public authorities, or subject to their design criteria, including the NCC, PSPC, and Parks Canada as well as provincial departments of transportation. These roads include Confederation Boulevard, Colonel By Drive, Queen Elizabeth Driveway, Sir John A. Macdonald Parkway, Chaudière Bridge, Portage Bridge, Alexandra Bridge, Macdonald-Cartier Bridge, Mackenzie King Bridge and Laurier Avenue Bridge.

The Capital Illumination Plan does not seek to implement a full update of public lighting approaches, and is not intended to replace the expertise of the each partner. However, analysis of the public roadway lighting system underscores a few items that warrant improvement to strengthen the nighttime image of the Capital core area. The Capital Illumination Plan raises a discussion to engage partners in developing a common, harmonized and coherent approach to public roadways.

The main objective of public lighting is user safety. However, it also provides a backdrop to the nighttime scenery and must facilitate its legibility and promote intuitive orientation. It can also help showcase important sites or special atmospheres.

The Capital Illumination Plan therefore targets three major objectives for public roadways:

1. Standardize
2. Rationalize
3. Support human-scaled cities

6.6.1 STANDARDIZE

6.6.1.1 LIGHTING LEVELS

Roadway lighting must meet various criteria based on parameters including traffic speed, density and types of traffic. Better standardization of lighting levels by road category would help identify them more clearly and strengthen the user’s sense of safety and visual comfort. Lighting level adjustments also provide an opportunity to achieve energy and maintenance cost savings.

Guidelines

- Establish a joint planning process (NCC, federal partners and municipalities) to define needs in terms of lighting levels (including maximum lighting levels, dimming levels, etc.).

6.6.1.2 COLOUR TEMPERATURES

The Capital Illumination Plan suggests standardizing the colour temperature of public lighting.

White light is a natural choice for the following reasons:

- It provides very good colour rendering and an appealing light quality that contributes to the visual comfort of all users (drivers, pedestrians and cyclists).
- It provides a better perception of the urban landscape and renders secondary buildings more visible without necessarily relying on architectural illumination.
- It respects the natural tones of materials and vegetation.

Guidelines

- Establish a joint planning process (NCC, federal partners and municipalities) to develop a comprehensive and common approach in terms of colour temperature.

Favour the colour temperatures suggested below:

- Confederation Boulevard
  - Refer to the Confederation Boulevard section of the Illumination Concept (Chapter 5).
- Structuring roads (limited to a small selection of major arteries that carry the largest volumes of motorized traffic (e.g., Des Allumetières Boulevard, Alexandre-Taché Boulevard, Rideau Street, King Edward Avenue, Macdonald-Cartier Bridge)),
  - White 3,500K to 4,000K.
  - White 2,000K to 2,200K in the periphery of the study area, indicating a return to darkness.
- Other roads
  - White 2,700K to 3,000K.
- Special cases
  - Maisonneuve Boulevard has the features of a structuring road. However, to mitigate the sense of urban partitioning cause by its location, the Illumination Plan recommends a 2,700K to 3,000K lighting treatment.
On a case-by-case basis in support of the creation of special ambiances, consider high-quality special lighting concepts for the Sparks Street corridor and the art and innovation districts, for example special lighting tones or special effects.

6.6.2 RATIONALIZE

Lampposts are like urban furniture and must complement each specific ambiance. Whether they are low key or prominent features of city architecture, they play a major role in the legibility of the urban landscape and in physical orientation by day and by night.

The Capital Illumination Plan recommends reducing the number of models to achieve a more uniform range of lamppost styles. The purpose of this reduction is to:

- Improve the urban aesthetic and provide a more visually unified urban landscape;
- Simplify operations and reduce procurement, stocking and maintenance costs;
- Eliminate redundant lighting no longer needed as urban redevelopment projects unfold.

**Guidelines**

- Establish a joint planning and design process (NCC, federal partners and municipalities) to develop a comprehensive and common approach in terms of lamppost types.
- Favour an area-based approach. The following family of fixtures serve as a basis to consider:
  - **Functional lighting:** This lighting type is primarily used to support the movement of motorized vehicles. Usually, the intended effectiveness of this type of lighting takes priority over its design, and this type of fixtures is primarily designed to keep a low daytime profile. All light beams aimed at the sky must be prohibited, and steps taken to limit light spill.
  - **Urban:** Associated with major roads at the periphery of nighttime activity areas (e.g., King Edward Avenue and Macdonald-Cartier Bridge). It must be as plain as possible.
  - **Style:** Associated with major roads that extend Confederation Boulevard (e.g., Rideau and Elgin streets). It contributes to and introduces Confederation Boulevard’s unique signature. A shared design would make it easier to read and would reinforce the role of the connecting force of these roads between the Capital realm and the civic realm.
- **Ambiance lighting:** This lighting type is used to generate a specific nighttime mood. The qualitative aspect of light is more elaborate. Feelings of safety and visual comfort are more central to concerns. The design of product lines will be chosen on the basis of its daytime and nighttime integration.
  - **Contemporary:** Associated with more modern, urban and architectural treatments, and urban development projects.
  - **Style:** Associated with nightlife districts. It is designed to enhance the unique identity of each and must harmonize with other urban design elements. The design can be modern or traditional, depending on the identity of each location. Lantern-type fixtures that cast a broader light can help awaken a general ambiance in these neighbourhoods. They can promote a sense of commercial continuity by lighting the lower sections of facades, while keeping installation heights to a human scale.
  - **Heritage:** Associated with heritage sectors, such as the Parliamentary and Judicial precincts or Rideau Hall. Adaptation proposals should be favoured where possible. Any retrofit, adaptation or relocation proposal should retain the basic characteristics of the original lamps. The physical and siting characteristics, when possible, should be backed by historical and photographic research.
  - **Residential:** Associated with primarily residential areas. Its design must be kept plain, elegant and timeless. It must prohibit any light beams aimed at the sky and limit intrusion into dwellings.
  - **Signature lighting:** This lighting is used to create unique ambiances. To prevent weakening its distinctive look, it is important that this specific type of treatment be used sparingly across the area. This lighting is recommended for the following locations:
    - Confederation Boulevard.
    - Specific design and urban furniture projects allowing the Capital core area to embark on a true journey of creativity and innovation. These treatments, each to be determined on a case-by-case basis, could be used on Sparks Street and in art and innovation districts, for example.
6.6.3 SUPPORT HUMAN-SCALED CITIES

By prioritizing the human scale, roadway lighting offers the potential to improve safety and visual comfort and to foster active transportation. Artificial light has a direct impact on the real and perceived safety of pedestrians, cyclists and drivers, and this must remain a fundamental consideration in roadway lighting design. Safe lighting must take account not only of intensity levels, but also notions of ambiance, spatial coherence, visibility, visual comfort, uniformity and glare. The presence of “dark holes” accentuates the perception that an area is unsafe, more than softer but more uniform lighting. A safe city stands out more by its ambiances and the quality, not the quantity, of its lighting.

**Guidelines**

- Prioritize the creation of pedestrian ambiances through soft, homogeneous, human-scaled lighting.
- Use specific lighting to identify self-serve bicycle stands, the main public transit stations, and points of access to recreational pathways.
- Favour the selection of light sources with a colour rendering index adapted to the type of space where the lighting is installed.
- Avoid major lighting contrasts. Install transitional lighting between areas that contrast in terms of lighting intensity.
- Encourage lighting in areas perceived as unsafe, such as underground passageways and tunnels.
- Achieve a high degree of uniformity in mixed-use and high pedestrian traffic areas.
- Pay special attention to so-called “conflict zones” (i.e., crossings, intersections, school exits).
This chapter identifies recommendations for implementing the Capital Illumination Plan. The implementation objectives are as follows:

- Identify priority public illumination projects.
- Encourage consideration of illumination in project design and assessment.
- Clarify the application of the plan.
- Establish a governance structure for implementing the plan.
- Ensure the plan is effectively communicated.
- Ensure monitoring of the plan.

### 7.1 Priority Projects

The Capital Illumination Plan is intended to stimulate and guide the creative process of illumination and, at the same time, launch projects that are exemplary by their approach and procedure. Such projects will help set high lighting standards for future projects.

**Recommendations**

- The following NCC lighting projects are to be considered priorities for completion in the coming five years:
  - Richmond Landing
  - Rideau Hall
  - Nepean Point
  - Sussex Courtyard and Sussex Drive facades (between Rideau and St. Patrick Streets)
7.2 TOOLS

To support the NCC and its partners as they advance toward shared objectives, the Capital Illumination Plan recommends developing specific tools.

**Recommendations**

- Develop the following tools:
  - A computer database, ideally geo-referenced: This database would include all light points in the area and related information (type of fixture, power, type of source, colour temperature, height and type of assembly, installation date, etc.). This information, combined with a map, would make it possible to draft an accurate light map of the area, and precisely determine the existing condition of particular areas. This database and its systematic update would provide vital tools for managing the public lighting system. It would serve as a starting point for all centralized lighting management. It would foster lighting modulation measures. It could be combined with objective data (traffic density, right-of-way reflection coefficient, etc.).
  - A simple and shared classification system: Each key player currently uses its own classification criteria, lists and language. It can be daunting to identify similar models, categories or typologies since they are often placed in different categories. A shared classification system would effectively support any standardization and rationalization initiative.
  - A shared map, preferably in 3D: Since map-based illustrations do not accommodate the vertical component of lighting, a 3D map is recommended as a relevant and effective tool for framing and standardizing lighting levels.

7.3 DESIGN PROTOCOL

To encourage a consistent approach and high-quality outcomes, a design protocol is recommended for all lighting projects.

**Recommendations**

Apply the following design protocol:

1 • Analysis

- Identify the work team. Include at least one lighting designer and, for building illuminations, an architect with urban design expertise. For heritage buildings, a built heritage expert should be part of the team. To illuminate urban and landscape compositions, a landscape architect is recommended.
- Identify the project area.
- Establish an understanding of the site, building, monument or landscape and its surroundings.
- Understand the direction set in the Capital Illumination Plan and any other applicable document.
- Consult the stakeholders.

2 • Design

- Identify the important elements to illuminate.
- Identify elements around the site not to be illuminated (e.g., the sky and natural ecosystems).
- Develop lighting details in accordance with the Capital Illumination Plan and any other applicable document.
- For major projects, use digital modelling (in 3D if necessary) in order to evaluate various lighting options.
- Initiate federal design approval through the NCC, including a federal environmental review (federal lands and projects only).
- Conduct on-site testing.
- Complete the design development phase.
- Complete federal design approval through the NCC, including the federal environmental review (federal lands and projects only).

3 • Execution

- Monitor the lighting to ensure its compliance with the Capital Illumination Plan and the design intent.
7.4 Project Review

The Capital Illumination Plan constitutes a common framework for reviewing lighting projects. The project approval process plays a vital role in ensuring that new interventions conform to the plan.

The Capital Illumination Plan should be an integral part of any new project review. For federal lands and projects, this review is completed under the NCC’s Federal Land Use, Transaction and Design Approvals process, pursuant to Section 12 of the National Capital Act. For non-federal lands and projects, municipal authorities are responsible for approving projects.

Recommendations

- Formally incorporate the review of lighting into the NCC’s Federal Land Use, Transaction and Design Approvals process. Specifically:
  - Require that approval requests for new projects include project illumination details. A plan, a written description of the project and detailed lighting specifications provide a basis for determining project compliance.
  - Encourage the proponents of larger scale projects, such as public buildings, office towers, commemorations, public art and projects located on sites identified as important in the Illumination Concept, to submit visual representations of their proposed illumination.
  - Encourage "mock-ups" of the main components to be illuminated.
  - Encourage municipalities to integrate an illumination review in their respective approval processes.
  - Require applicants to demonstrate how their illumination project meets the five following criteria:

1. Feasibility and environmental sustainability
   Implement a feasible environmental approach that mitigates the impacts on human health and the environment, supports night sky conservation principles, provides a good cost-effectiveness ratio and limits maintenance over the long term.

2. Design excellence
   Demonstrate design excellence.

3. Compatibility
   Reflect a deep understanding of and sensitivity for the site. Ensure that the illumination is compatible and harmonized with the site context, including symbolic elements, views protection, the heritage value of buildings and landscapes, the architectural features of the built environment, and adjacent land uses.

4. Contribution to the public realm
   Support the region's general image as the national capital. Enhance the quality and character of public spaces and give priority to the needs of pedestrians and to site experience.

5. Conformity with the Capital Illumination Plan
   Ensure that the lighting project supports the vision, principles and guidelines of the Capital Illumination Plan.

7.5 Application of the Plan

The Capital Illumination Plan is a planning tool designed to serve as a common framework for guiding the illumination of the Capital core area over a ten-year timeline.

The NCC will use the Capital Illumination Plan in its role as the organisation responsible for planning and developing federal lands in the National Capital Region. The plan will guide the planning and development decisions it makes or influences.

As the first plan intended to showcase the nighttime landscape of the Capital core area, and given the significant size of the study area, the Capital Illumination Plan provides high-level guidance. A more detailed analysis and recommendations for certain specific areas is recommended through individual exterior lighting master plans. To date, one of these plans has been completed: the Parliamentary Precinct Exterior Lighting Master Plan (PSPC, 2015). These master plans should conform to the framework established by the Capital Illumination Plan, while offering more detailed lighting recommendations about buildings, landscapes, streets and other individual elements.

The Capital Illumination Plan must be consulted in conjunction with other plans, guidelines and applicable regulations. The principles, guidelines, recommendations, illustrations and photographs in the Capital Illumination Plan should not be viewed as requirements, but rather as a guide to developing new lighting projects in the study area. When more detailed guidelines are identified for specific uses or sites, they take priority over more general guide-
The Capital Illumination Plan takes effect immediately upon its approval by the NCC Board of Directors. Such approval confirms the date that the Capital Illumination Plan comes into force, and specifies the conditions for approvals involving federal lands. Since the Capital Illumination Plan study area extends beyond federal lands, the City of Ottawa and the Ville de Gatineau are encouraged to undertake steps to have the Capital Illumination Plan take effect in their respective areas of jurisdiction.

7.6 GOVERNANCE AND PARTNERSHIP

The success of the Capital Illumination Plan’s implementation depends on the involvement of all key players. The NCC, the City of Ottawa, the Ville de Gatineau, federal departments and agencies will have to work together to implement this plan. Developers, private owners and business owners also have a vital role to play in the illumination of the Capital core area. Artists, politicians, community groups and residents also all have a role to play. Moreover, it is vital to involve lighting designers, who are ultimately responsible for the creative lighting process.

The creation of partnerships with other cities is also beneficial when it comes to sharing best practices and keeping in step with the latest developments in the lighting field.

**Recommendations**

- Draft a “Lighting Charter,” a symbolic document signed by key partners of the Capital Illumination Plan confirming their endorsement in principle of the plan’s recommendations.
- Create a nighttime landscape governance committee including representatives of the NCC, the City of Ottawa, the Ville de Gatineau, PSPC and other key stakeholders as needed. The committee’s mandate would be to ensure the ongoing participation of key stakeholders and to coordinate the nighttime landscape based on Capital Illumination Plan principles. This committee would also provide a forum for resolving major Capital core area illumination issues.
- Encourage the engagement of the National Capital Region, the City of Ottawa and the Ville de Gatineau in international networks of cities of light.

7.7 COMMUNICATION

Sharing information about the Capital Illumination Plan with the public is vital to rally the various actors and stakeholders, including developers, private property owners, business owners, politicians, community groups and residents. Effective communication also generates positive spinoffs for the National Capital Region’s visibility, making it a North American and international illumination showcase.

**Recommendations**

- Ensure that the NCC continues its leadership role in the National Capital Region to promote illumination as a basis for the Capital’s ongoing embellishment.
- Ensure that the content of the Capital Illumination Plan is made available to all developers, government agencies, urban planners, landscape architects, engineers and lighting designers.
- Ensure a continuous presence on the NCC website and social media to feature recent illuminations carried out under the Capital Illumination Plan.
- Encourage the development of annual lighting awards in the National Capital Region.

7.8 MONITORING AND ASSESSMENT

Plan monitoring and assessment are vital elements of the planning process.

**Recommendations**

- Prepare an implementation plan.
- Prepare a Capital Illumination Plan implementation report every three years to assess its success.
Appendix A

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