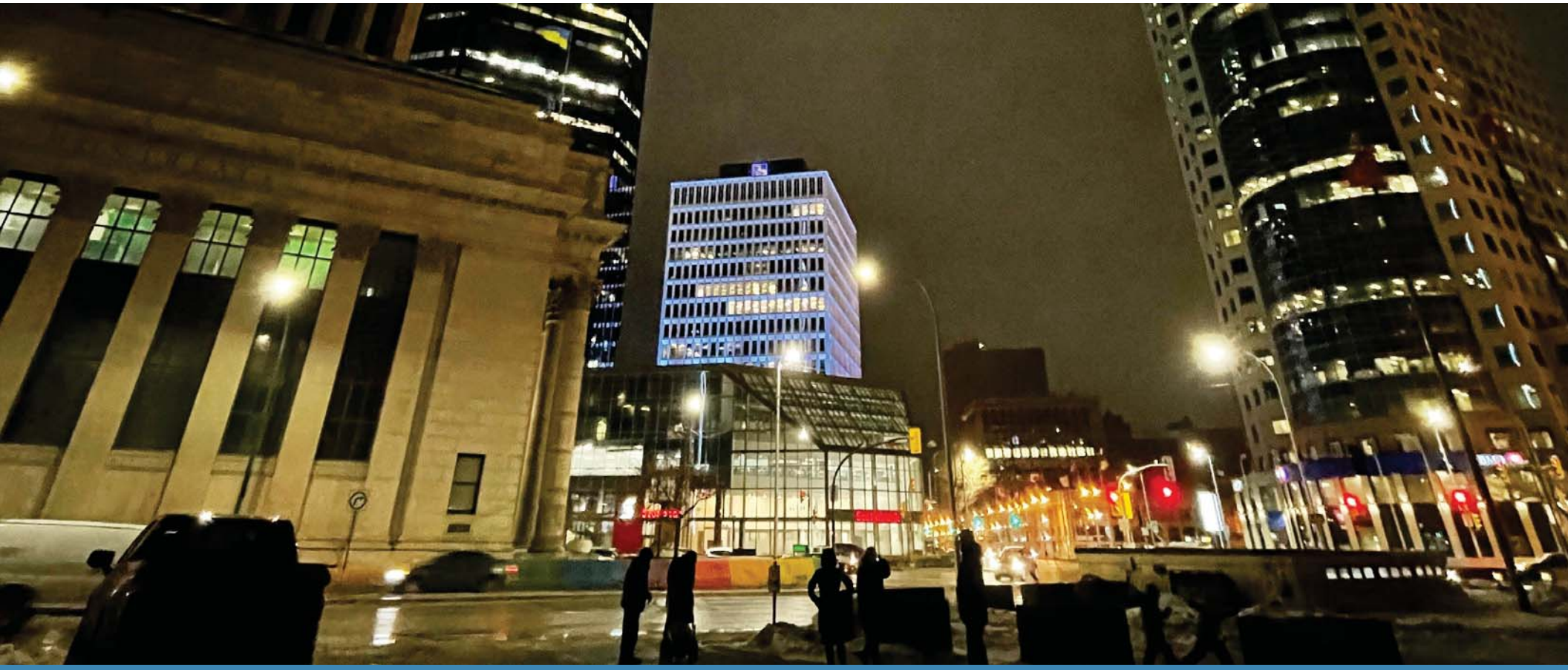
Appendix 4: Lighting Vision (Ombrages)



Revalue the Heart of the City at Night

A Lighting Vision for the Portage & Main intersection of Winnipeg

Phase 1: Diagnosis

Presented by: Ombrages Group
Presented to: HTFC & City of Winnipeg
Project #: 0305.001
November 2021 - April 2022

OMBRAGES

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1.0 Executive Summary

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1.1 Mandate & objectives

The mandate aims to create a nocturnal urban design vision – known as Lighting Masterplan – for Portage and Main intersection in the heart of Winnipeg downtown. The goal is to provide design direction and unification of the four corners by using an urban design and placemaking approach to connect people and places, that considers the complexity and the importance of this place in the city.

1.2 Context & Approach

As a major and highly symbolic intersection of Winnipeg, Portage and Main concentrates many concerns and potentials for the development of the downtown area. The intersection generates many challenges given the importance of traffic, the presence of monumental buildings and institutions, the in-progress residential development and the lack of vegetation. Therefore, the project is also an opportunity to provide better quality of life for residents, a more welcoming environment for pedestrians in a context of a rise of the new multimodal culture and to develop more sustainable infrastructures.

Night-time represents specific challenges for this area in terms of safety, attractiveness, inclusion and durability. Creating a Lighting Master Plan is a potential to improve the image of this emotionally charged sector to impact positively to the vitality of the downtown, ensure a safe and comfortable environment, and to generate economy and attractiveness. Lighting also participates directly to the general atmosphere of the place and impacts on users' experience. It is important that users can build and create place attachment and pride looking at what will become this symbolic intersection for Winnipeg.

1.3 Methodology

1.3.1 Study steps

The study to elaborate the nocturnal urban design vision is composed of 2 phases:

1. A diagnosis of Portage & Main at night and the state of play of lighting for the intersection.
2. The elaboration of the lighting approach and vision for Portage & Main.

1.3.2 Advantages & limits

This study is limited to available documents on lighting and on Portage and Main intersection. Note that research have been done to find documents from public institution like the City of Winnipeg or Manitoba Hydro, unfortunately documents regarding lighting are relatively limited and ones about night-time seem inexistant. However, this situation might be a good opportunity to create specific lighting guideline for the intersection that could be the first step to establish local standards for future interventions in Winnipeg.

1.4 Workplan

This first document presents the first phase of the study, it presents the diagnosis of the Portage & Main intersection regarding night-time aspects and lighting. To elaborate this diagnosis, we propose the following workplan:

1. A literature review of the existing documents.
2. A nocturnal site report.
3. Synthesis and recommendations.

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2.0 Literature Review





Extracted from Portage and Main Vision

The literature review gathers various documents from the City of Winnipeg, Exterior Lighting Building Program, Street Lighting study, Transit Master Plan, previous Lighting Master Plan of Portage Avenue, and Indigenous history of Portage and Main. All these documents participate in providing a better understanding regarding lighting and night-time with purpose to acknowledge the actual situation and to take it into account for the elaboration of the Lighting Vision for Portage and Main intersection.

2.1 City of Winnipeg Vision for Portage and Main Intersection

First, some documents from the City of Winnipeg present the vision for Portage and Main Project. The main idea of this document [1] is to restore the sense of place of Portage & Main intersection by creating a welcoming and vibrant public realm. We note that there is no mention of lighting nor nocturnal aspects of the intersection. However, some elements can help in the understanding of concerns and possible orientations to take. In that way, the document relates essentially 4 approaches to orient the future design of Portage & Main: - Celebrate the history and heritage, - Restore the vibrancy of Portage & Main, - Enhance: the connectivity; - Transform: the intersection beyond just movement.

Various changes are proposed as removing the physical barriers, enhancing the street level activity, activating street edges, and connecting concourse to street. Some ideas are to remove the existing barrier, introduce crosswalk, to widen and plant on the median, to connect pavilion to concourse below or to reduce traffic lanes.

Overall, this document gives an idea of the wishes for the future of Portage & Main intersection, trying to make this stressed and anxiety space a new welcoming and inviting space, where buildings are connected to the street and roads impact less on the landscape. The document mentions ideas to accommodates all travel modes, prioritize, and improve pedestrian experience ensuring more safeness on the crossroads, making activities and services accessible on the street level. It reveals the desire to create a safe, friendly, and lively space.

A video[2] completes the previous document, it deals with the geography of Portage & Main and its place in history. Considered as an iconic heart of the city, the intersection is a meeting point for gathering during important moments of the history. They mention about restoring the place and restore the connection of people to their historic heart.

2.2 Transit Master Plan

The Transit Master Plan[3] is proposed to redesign the transit network to address the city's current and future transportation needs. This plan sets a 25-year-vision for transit service and infrastructure in the city. The vision is to enhance customer experience, increase ridership, improve downtown and multi-modal mobility, and ensure transit is inclusive.

We observe that Portage and Main intersection is at the crossroads of various rapid and frequent lines which means that they provide whether a very high frequency or high frequency of transit services within the intersection.

Also, we note that there is no information regarding lighting, ambiences or night-time hourly schedule for buses and transportation. However, this document validates the wish to make the intersection to respond to the multi-modal mobility of the sector and to be more pedestrian friendly and inclusive. It also validates the area as a place where people gather and are waiting for the bus. It will be important to consider these elements to make the bus waiting experience more enjoyable at night, but also to harmonize signage and urban furniture, as very often buses' information panels are installed on light pole.

1 City of Winnipeg (September 2017). Portage + Main, 26p.
2 Video Portage & Main
3 City of Winnipeg (2021). Winnipeg Transit Master Plan. 92p.
Link to the document: https://winnipegtransit.com/assets/2794/Winnipeg_Transit_Master_Plan-reduced.pdf
Link to Winnipeg Transit website: https://winnipegtransit.com/en/major-projects/transit-master-plan#tab-documents

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Extracted from the Building Exterior Lighting Program

2.3 Building Exterior Lighting Program

A specific document presents a building exterior lighting grant program[1] that is part of downtown public safety strategy. It supports the integration of exterior architectural lighting on downtown building facades. It encourages building owners to invest in exterior building lighting to create a more inviting and safer pedestrian environment downtown especially for people working, living, and visiting Winnipeg's downtown. The applications are reviewed by the Urban Planning and Design Division, Planning Property and Development Department (the City). The buildings must be located within the boundary of the downtown as described by the Downtown Winnipeg Zoning By-law 100/2004, which Portage & Main seems to belong.

This document helps understand the efforts made by the City of Winnipeg to include lighting as a strategical element in the revitalization process of Portage & Main area. The lighting must enhance pedestrian comfort and safety and improve the appearance of the building with the emphasis of the primary facade at ground level and second storey where architectural lighting will have a greatest impact. The program insists on the necessity for the overall lighting design cohesiveness.

The grant program also put the emphasis on the impact that lighting can have on security and safety of the place. It questions the importance of who will be attracted to the area depending on the kind of lighting. The purpose of the exterior lighting is to beautify and enhance environments. It promotes the improvement of safety giving watching opportunities or "eyes in the street" that lighting can provide. In fact, they give key concept on Crime Prevention Through Environmental Design (CPTED) like following:

- Avoid creating blind-spots and miss critical areas, ensure that potential problem areas are well lit: pathways, stairs, entrances/exits, parking areas, ATMs, dumpster, and recycling areas.
- To design security lighting efficiently, not necessarily increasing lighting levels.
- Avoid light trespass or glare and include shielding.
- Use shield or cut-off luminaires.
- Reduce spill light.
- Place lighting at proper heights for lighting the faces of the people in the space.
- Light areas where needed.

Another element is the building facade lighting to enhance architecture of buildings to contribute to the creation of a more welcoming pedestrian environment:

- The lighting should complement the overall design and beautify the building and the streetscape.
- It should draw the attention to architectural details, building entries, shop windows and signage.
- Lighting design should be cohesive and not piecemeal.
- Coordinate exterior and interior lighting.
- Orient facade lighting downward and toward the building.
- Consider to dramatically illuminate the nocturnal landscape.
- Privilege white light source.
- Recommend LEDs for ease of maintenance.

The lighting grant program also promotes the illumination of historic building considering the challenge to balance technology with existing architecture to generate impactful effects, the exterior lighting should follow the Standards and Guidelines for the Conservation of Historic Places in Canada. The idea is to ensure positive and minimal impact on historic resources:

- Limit the impact on the exterior fabric.
- Ensure good locations for luminaires.
- Consider light containment and how to provide power and control to the luminaires.
- Easy access for maintenance.

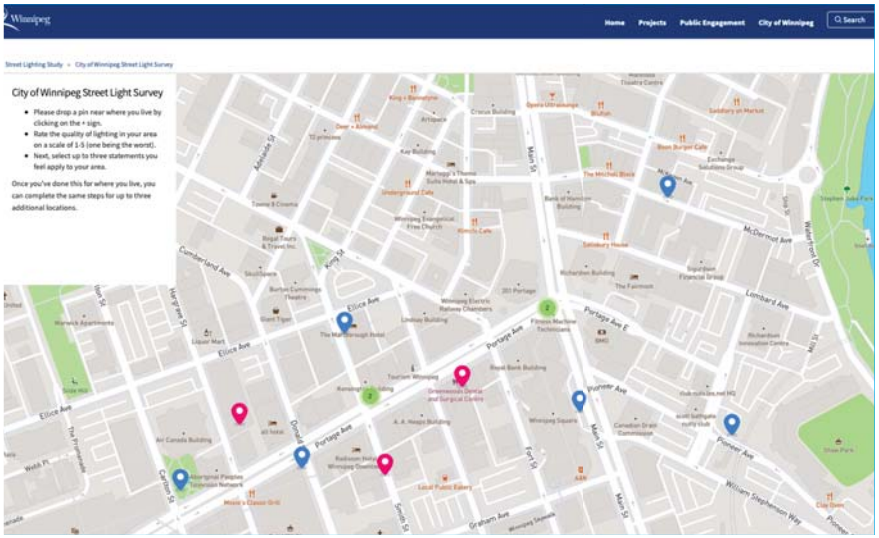
The luminaires, its style modern or ancient replica should be compatible with historic documentation and enough knowledge.

Finally, white, and warm colour temperature are recommended (3000K).

This document provides interesting criteria that could be used for design principles in the future design of the Portage & Main intersection. It demonstrates the importance of topics such as feeling of safety, cohesiveness, identity, environment preservation and the enhancing of heritage in the future development of this area.

1 City of Winnipeg (2020). Building Exterior Lighting Program. 16p.

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Extracted from Street Lighting Survey

2.4 City of Winnipeg Street Lighting Study

Looking for more information on lighting in Winnipeg, we could find a street lighting study that has been directed by the City[1] . In 2019, the Standing Policy Committee on infrastructure and public work directed the Public Service to report back on how this service fee compare to what other Canadian cities pay for lighting, to know what level of service they are providing and the standards they utilize to determine street lighting levels.

The City of Winnipeg led a Street lighting study to compare its system to others Canadian cities. The objective is to learn how Winnipeggers feel of how their streets are lit through a benchmark survey, it determines how streetlights are performing to know whether any areas are under or over services and what Winnipeggers feel are priorities in terms of lighting. The survey present public opinion which rates the quality of lighting on a scale of 1-5 (one being the worst)[2] .

Looking at the results, the study mentions a specific section for Portage and Main intersection as following "Hotspots of respondents who noted their lights were not bright enough appear in the Downtown core (focused on the area of Portage and Main)". If we look directly on the comments on the map, specifically for Portage and Main area, out of 4 comments only, 3 are negative. It appears that lights are qualified as "poor" or "very poor", "lights are not bright enough", "the location has too few lights" or that "lighting is unreliable". People are dissatisfied with the light. Negative comments are coming for the north-west and south-west corners of the intersection and for the west side of the street of Main St. at the corner of Pioneer av. Also, we note a positive comment on south side of Portage av. close to Garry St.

This survey gives a general point of view of the quality of lighting perceived by the residents on the city scale; however, it would have been great to be able to have more details on Portage & Main area.

1 City of Winnipeg: Street Lighting Study (consulted March 2022).
Link: https://www.winnipeg.ca/PublicWorks/transportation/projects/streetlighting.stm
2 City of Winnipeg map survey (consulted March 2022):
Link: https://engage.winnipeg.ca/street-lighting-study/maps/city-of-winnipeg-street-light-survey#

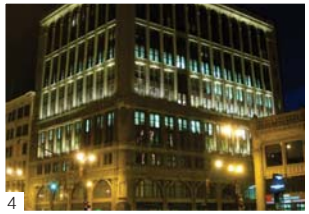
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Extracted from Portage Avenue Lighting Master Plan by Éclairage Public: 1. Map including Golden Trail and heritage buildings; 2 & 3 Renderings; 4. Architectural illumination

2.5 Previous Lighting Master Plan for Portage Avenue

An important document for this study is the previous Lighting Master Plan for Portage Avenue[1] . This document proposes a conceptualization of the aesthetic and technique of a Lighting Master Plan. In a context of downtown Winnipeg revitalization urban design and the Lighting Master Plan for Portage Avenue is considered a key element. The aim is to create a gathering for the eclectic mix of use, activities, and places to form an identifiable environment, comfortable, safe, and secure ambiences.

The Lighting Master Plan is based on three levels of complexity of lighting scheme: street lighting, general ambience, and architectural lighting. The first level is about the pedestrian and vehicles on the ground of the urbanscape. The second level deals with general ambiences according to urban functions and vertical planes for users' perception. The third is the most sophisticated and reach the regional scale with festive lighting that light up the nocturnal silhouette of the downtown.

An important element is the wish to consider Winnipeg's Exchange District as an historic district because of its significance as centre of grain and wholesale trade, finance, and manufacturing center. It represents historically important periods in western development: between 1880 and 1900 when Winnipeg became the gateway to Canada's West; and between 1900 and 1913, when the city's growth made it the region's metropolis."[2] It corresponds to the golden age of Winnipeg's architecture. Considering the density of the heritage buildings, the lighting strategy proposes the creation of The Golden Trail, celebrating the golden age of architecture. In that sense, a map depicts the heritage buildings and other kind of institutions on the sector.

The lighting strategy presents various types of lighting as road and pedestrian lighting (proposition of a lighting column for Portage Av.), lighting for secondary streets, parks and private plazas, weather protected walkways, Graham Street, and parking lots (parkade and surface lots).

Also, the strategy presents an architectural composition for the Lighting Master Plan that could be supported eventually by historical visits of downtown Winnipeg. The Lighting Master Plan list presents buildings of interest such as heritage buildings, urban structures and high-rise buildings that can enhance the ambience and the nocturnal silhouette of Winnipeg. Some of them mentioned are part of Portage and Main intersection as the Paris building, the Curry & Lindsay buildings, the Richardson building and Fairmont Hotel, the Canwest Global Place, The Royal Bank and MTS Tower, and the Bank of Montreal Building, among others.

The study presents an evaluation of some existing architectural illuminations that are part of Portage and Main intersection – or close to – such as the Paris Building. It also includes propositions with renderings of some buildings as the Birks building, the Curray & Lindsay buildings, the Canwest building, and the Richardson building.

Globally, the strategy envisions various scales of interventions, from the pedestrian point of view to the illumination of high-rise buildings that would contribute to the distinctive look of Winnipeg's downtown area. Also, it is mentioned the presence of flags masts on building tops that could be illuminated to celebrate the windy city in a consistent manner.

This document presents information of great interest for the Lighting Master Plan for Portage and Main intersection because it deals with existing lighting conditions and propositions for the area of Portage Avenue. It offers some avenues to think about for the selection of architectural and urban elements of interest and the elaboration of a vision of the place at night.

1 Éclairage Public (2007). Downtown Winnipeg. Portage Avenue Lighting Master Plan. IG Investors Group, CanWest Global Communications Corp. The Winnipeg Chamber of Commerce, Winnipeg Partnership Agreement, Downtown Winnipeg BIZ, Manitoba Hydro. 35p.

2 Going Downtown A history of Winnipeg's Portage Avenue, Russ Gourluck, Great Planes Publication

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2.6 Indigenous Histories of Portage & Main

Considering the importance of reconciliation, a document relating the Indigenous Histories on Portage and Main have been consulted[1]. This document is based on various archives as Archives of Manitoba, City of Winnipeg Archives, Hudson's Bay Company Archives, Library and Archives Canada, Manitobia, NewspaperArchive.com, Newspaper.com and Peel's Prairie Provinces.

From what we do understand of this document, is that Portage and Main is an iconic intersection that reaches back more than six thousand years located at the northern end of the area known as The Forks. The place has an history of indigenous occupation and land use, linked by river corridors and trails to the other regions, it has history of interchange and exchange and of trade that define the area. Portage and Main exists at the crossroad at what was created by indigenous carters, on land that has been a center of Indigenous gathering, of Indigenous knowledge, relationship with the land and its ecologically resources, and its culturally diverse groups.

The intersection has its evolution from the first occupation by Indigenous people, where they camp, trade, hold ceremonies and bury their dead, to the cohabitation with traders (e.g. McDermotts) and of hospitality, the construction of shops and trade stores, hotels and meeting places (e.g. Monchamp's) but also with some tragedies known as the Reign of Terror and also the relocation of an Indigenous group pressured to move to a distant reserve.

Today, the Manitoba Métis Federation (MMF) prepares to open a heritage center in the former Bank of Montreal building. If there is no information about nocturnal rites nor about lighting, still this document seems important because it explains the origin of the place. It presents the Indigenous history of the place and its evolution through its different occupations that is important to consider building reconciliation and identity in the creation of the future design of Portage and Main intersection.

Pictures

1. Map reproduced by the CBC in Darren Bernhardt, "Ghost creeks: Winnipeg buried many waterways that could have changed city's shape," 2 September 2018. Available at https://www.cbc.ca/news/canada/manitoba/creeks-streams-winnipeg-history-1.4641823, accessed on 29 November 2021.
2. Plan of Winnipeg in 1872. From: George Bryce, "The Illustrated History of Winnipeg," Manitoba Daily Free Press, 6 May 1872, 17.
3. Main Street from Graham Avenue, looking toward Portage, 1870. Image reproduced in: Lara Schroeder & Lauren McNabb Gallery: Portage and Main through the years. Available at https://globalnews.ca/news/771585/gallery-portage-and-main-through-the-years/, accessed on 29 November 2021.
4. Library and Archives Canada, Corner of Portage Avenue and Main Street, 1872. Item number 3192799. Available at https://www.bac-lac.gc.ca/eng/CollectionSearch/Pages/record.aspx?app=fonandcol&IdNumber=3192799&new=-8585633791789800014, accessed on 29 November 2021.

1 Lindsay Anne (2021). Indigenous Histories at Portage and Main's. 35p.

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3.0 Night Walk



Map that present the route of the Night Walk made by Ombrages Group

3.1 Nocturnal Site Report

A nightwalk was conducted with the professional team on March 16th, 2022 from 7:38PM to 8:45PM to better understand the impact of the existing lighting as well as to identify key opportunities of improvement and revitalization to accomodate the vision. Two other observations were done by Ombrages Group from 6:30- 7:30 of the same day and 9:00AM to 10:00 AM the next morning at the interesection, west and north of the intersection.

Route

- Portage and Main Intersection
- Portage Ave East - Bank of Montreal
- 360 Main - Winnipeg Square
- Corner Notre Dame Avenue - Corner Mc Dermot Avenue
- Hamilton Building Main St. - Richardson Building

Public lighting is composed of a series of 'layers of light' that are designed, delivered and controlled by a wide variety of stakeholders; from architectural, road and pedestrian lighting, landscape, parks, and parking lot lighting, even the opportunity to use the intersection for seasonal events and sports activities. Each makes its own contribution to the image and identity of Portage and Main after dark. The exploration enabled on-site team discussion on perceptual qualities of the night, collect data such as photos and notes that help to provide site context, support observations, supplement analysis and report recommendations.

A checklist was prepared and a set of qualitative evaluation criteria to establish the analysis and to be used as a parameter to critique the site based on the best practices of architectural and urban lighting design. This qualitative data is beyond the traditional quantitative approach; the goal is to open up a conversation to re-think the night for a more holistic design approach with its recommendations of good practice lighting design guidelines to provide to different stakeholders.

Qualitative Evaluation Criteria[1]

- Identity and Heritage - Place Attachment and Meaning/Pride.
- Safety and Security - Lighting that can produce unsafe conditions by failing to properly illuminate hazards such as crosswalks, curbs, stair edges. Good lighting provides sufficient light levels without glare, which can be irritating or even impair vision.
- Light Pollution - SkyGlow and Intrusive Lighting.
- Aesthetic Judgement (Colour, Continuity, Distribution, Clarity, Form, Dominance, Verticality, etc.) - Within spaces, patterns of light and the appearance of lighting equipment itself convey vital information to people such as scale, function and wayfinding while emphasizing points of interest such as artwork. Light patterning can articulate architecture and reinforce mood and atmosphere. Light and shadow are tools that lighting designers use to make faces, objects and spaces more visible or more attractive.
- Technical Installation.

Note: Night walk pictures have been taken by the Ombrages Group. We also thank Robert Kurylko for lending us some of his photos for this study.

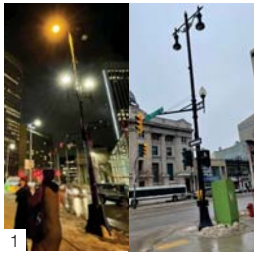
1 International Association of Lighting Designers: Quality of Light (Advocacy).

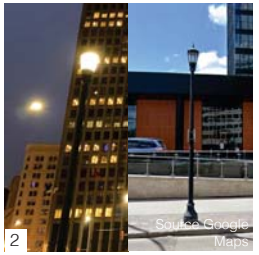
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3.2 Light Sources & Setting



Light Pole Setting on Portage & Main Intersection based on Google Maps observations


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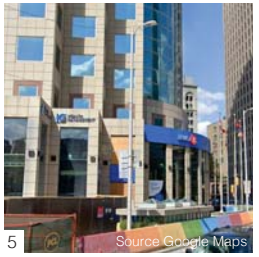


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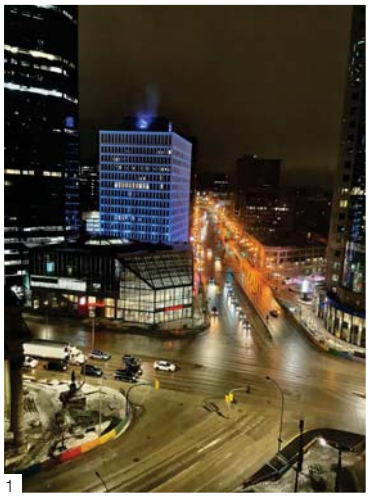


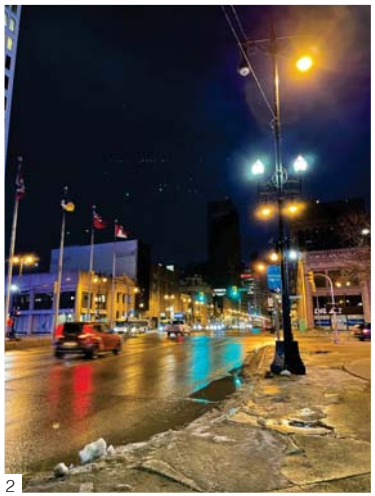
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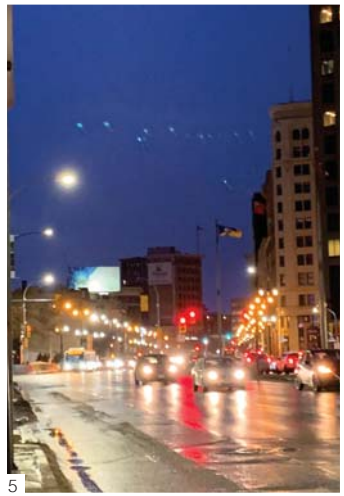
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3.3 Street Lighting

Portage and Main is dominated by street lighting with each space designed lighting in isolation.

1. Aerial of the Intersection looking from Portage Ave.: Continuity: problem with transition between the new LED and heritage streetlighting.

2. West of the intersection on Portage Ave. looking from TD Building: Variety: there is considerable inconsistency and variety born out of piece by piece replacement and upgrading. 2200K CCT HPS and 5000K CCT LED are two major colour temperatures, thus, affect continuity, motion awareness and navigation in West of Portage and North of Main. Some light sources are not working.

3. South of the intersection on Main St. in front of Goodlife Fitness: LED Cobra LED have good uniformity, but some areas are brighter due to luminaires competing and conflicting with one another.

4. Aerial of the East side of the intersection in front of Fairmont Hotel Building:
- Colour: white light does not reflect appropriately the character and history of Portage and Main.
- Hierarchy and Safety Problem: street lighting is uniformly lit but does not respect hierarchy, particularly in areas like the heritage parks and/or plaza, pedestrian, or even spilled on the facade.

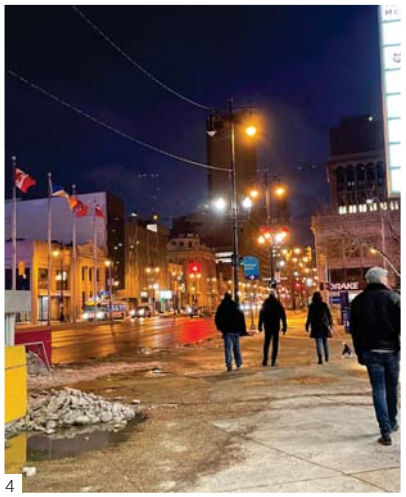
5. Sky Glow: uncontrolled optics of heritage posts.

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2 Credit : Robert Kurylko


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3.4 Pedestrian Lighting

There are a few scenarios observed during the night walk for pedestrian lighting.

1. North of Main St. looking From Corner of McDermot Avenue : LED in 5000K Streetlighting spill too bright and too cold for pedestrian with heritage buildings around. Lack of consistency in colour appearance and colour rendering.

2. South of Main St. looking from MTS Building: Some pedestrians are dark and not lit properly.

3. West of the intersection on Portage Ave. : Sky Glow: uncontrolled optics of heritage lights. The amber light produced by the high-pressure sodium (HPS) and LED streetlights uniformly illuminates the public street for vehicle use. However, the 360° wide spread of illumination produced by these lamps interferes with the pedestrian-scale luminaires lining the public sidewalk. As a result, the sidewalk appears over lit.

4. West of the intersection on Portage Ave. looking from TD Building & West of the intersection on Portage Ave. looking from RBC Buidling: Uncontrolled spill from building, building lobbies, building media signs, and street signages overlap pedestrian and streetlighting.

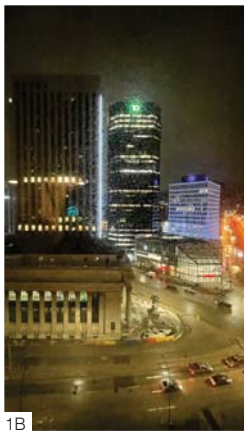
5. Hierarchy: some areas particularly east of intersection no differentiation of street and pedestrian lighting, thus, affect way-finding and navigation within pedestrian level.

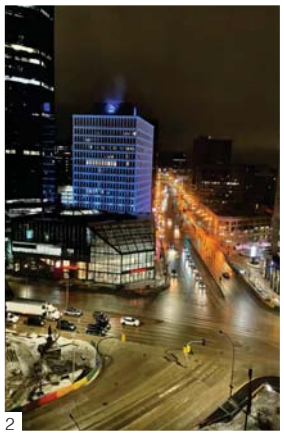
6. Height: the mounting height of fixture create an inappropriate scale for pedestrians resulting to uncomfortable walk and perception of safety issue.

7. Safety maybe problem due to lack of contrast at the crosswalks which may affect both driver's detection of the user crossing and the user's perception of vehicle distance while crossing the street.

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1B


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3A


3B


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3.5 Architectural Lighting and Ambiences

1. (A) Intersection looking from Commodity Exchange Tower & (B) Intersection looking from Fairmont Hotel East Side of the Intersection:
- Isolated Lighting Design: No memory by dominance or no big visual impact due to lack of lighting design coherence on the corner buildings.
- Branding and Image: lighting does not always appropriately reflect the image of the building.
- Logos are lit on towers that serve as way-finding at night.

2. Commodity Exchange Building/ Scotia Bank : Commercial Lighting (Ex. Scotia Bank) : no time series designed to lower the use of light on frontages/lobbies inside the building; over lit and spill light into the environment and left the lighting on.

3. (A) Bank of Montreal (MFF Building) & (B) North of Main St., from right: National Bank Building, Millenium Centre, and Hamilton Building
- Identity and Heritage : No proper or no architectural lighting on facades, lack latent components or characteristics on heritage facades; architectural elements are not properly lit.

4. Fromt left: TD Building, Royal Bank Building: Coloured lighting on facades may not be appropriate for a historic and heritage place

5. North of Main St.: Legibility: No vertical lighting on a lot of facades and some beautiful-interesting buildings disappear at night. Problem with way-finding and orientation.

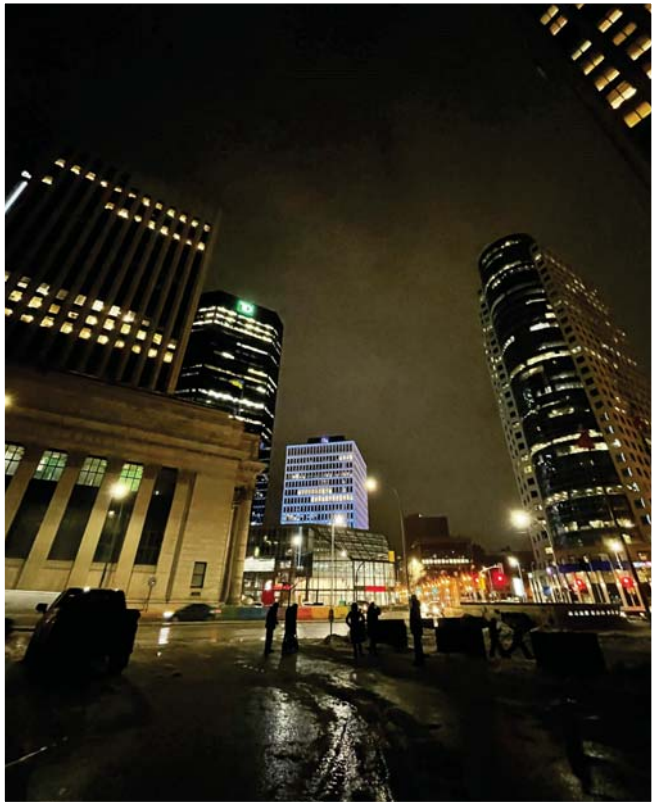
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Exterior lighting of the Manitoba Métis Federation (Bank of Montreal)



Example of colour temperature having a direct impact on the appearance and character of an area



Example of extreme contrasts of dark and light between spaces and lack of vertical illumination and human-scale lighting resulting to space can be perceived as uncomfortable and unsafe

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2A Credit : Robert Kurylko

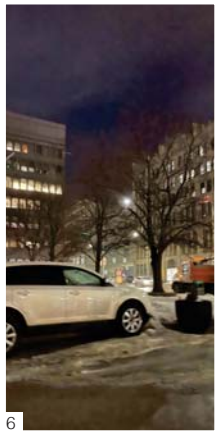

2B

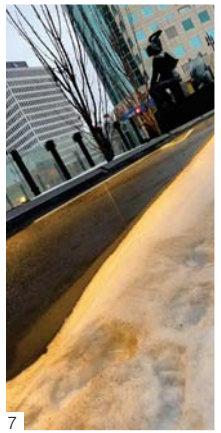

3 Credit : Robert Kurylko


4



5


6


7

3.6 Urban Elements and Ambiences

1. Flags- blends with the environment lit by luminaire next to it or with streetlight; others remain in the dark.

2. Public Arts and Monuments - Some are well lit and some are not.

3. Human scale and ambient lighting.

4. Gateways: all gateways have adequate lighting but blends with the environment.

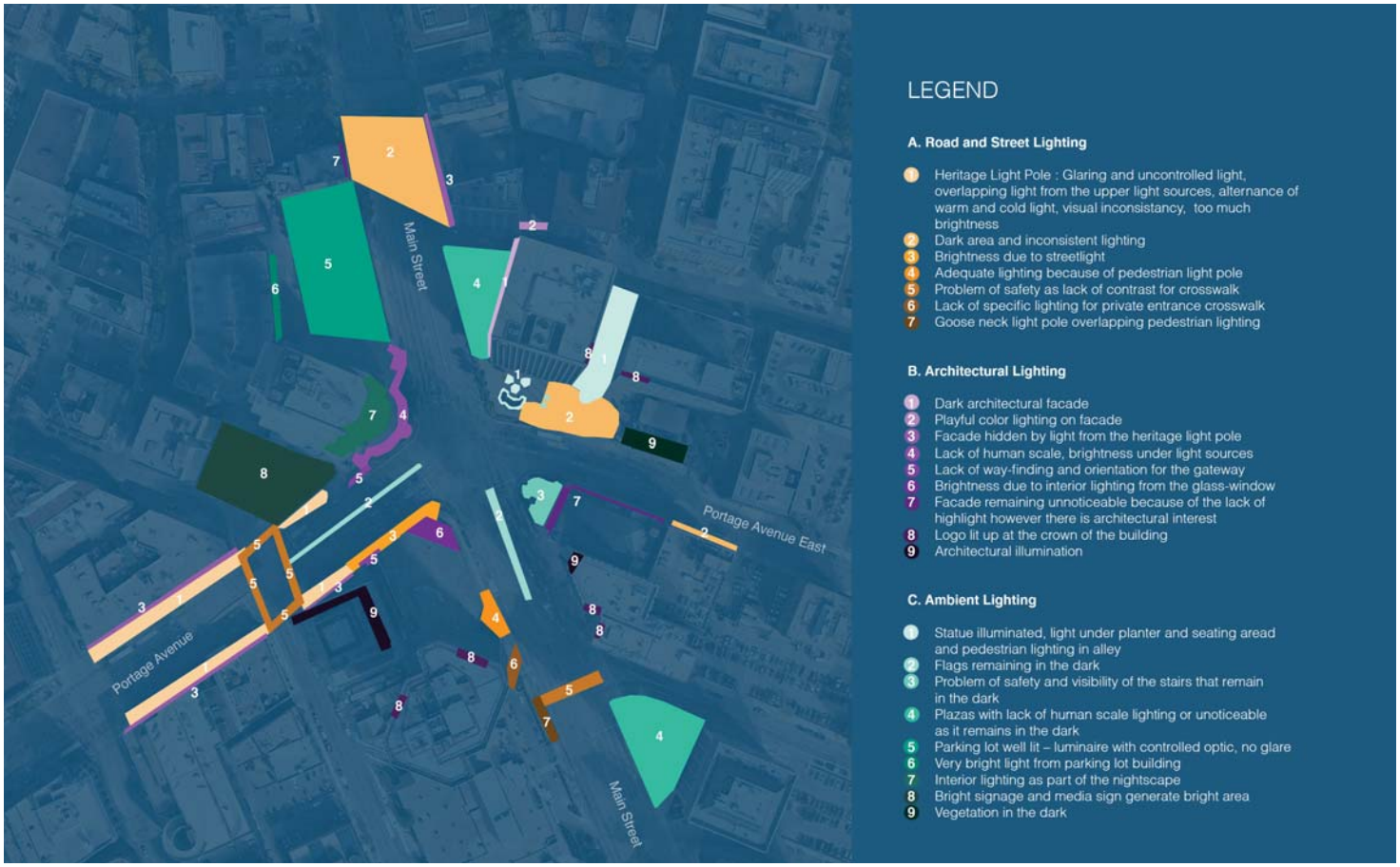
5. Winnipeg Square: Entrance well lit but blends with the environment.

6. Trees and some plaza vegetations are not lit (Ex. in front of Fairmont Hotel) and trees beside Richardson building.
7. Richardson benches: some bench underlighting are hanging.

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3.6 Geolocation of night-walk observations

This map presents a synthesis of the various observations made on Portage and Main intersection during the night-walk.



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4.0 Synthesis & Recommendations

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4.1 Synthesis

This analysis provides an understanding of Portage and Main lighting and nocturnal environment. Globally, the literature review informs about official studies and actions taken by the City and local stakeholders whereas the night walk offers observations on lighting made on site at night.

4.1.1 Literature review

First, the literature review reveals the interest that the City of Winnipeg and local stakeholders like the Business Improvement Zone (BIZ) has towards lighting. The Street Lighting Study considers local perceptions, the Previous Lighting Master Plan for Portage Avenue and the Exterior Lighting Program demonstrate the interests in strengthening downtown's image and attractiveness. The Previous Lighting Master Plan provides information's notably on the importance to consider highlighting heritage buildings and buildings of interest in the area. The Exterior Lighting Grant Program gives some clue with CPTED criteria that there might be problem of safety in the sector; the Program also put the emphasis on the interest of highlighting heritage buildings and to provide a more welcoming area for pedestrians. However, we regret that this program is limited to architectural lighting and the first floor. To create attractiveness, facade, top of buildings and temporary lighting during festivities, commercial lighting, signage, among others, can also increase attractiveness creating animation and adding in visibility for local activities. Various scales of interventions can be developed to optimize the strategy of revitalization with lighting. Unfortunately, the results remain mixed, it seems that neither the Lighting Master Plan of Portage Avenue has been realized, nor the Lighting Grant Program met success, and we do not know what happened with the data collected from the Street Lighting Study of the City of Winnipeg. We also regret the lack of documentation on recommendations or guideline regarding lighting from the City of Winnipeg.

On another hand, City's vision of Portage and Main for the future project, and Winnipeg Transit Plan do not mention lighting and night-time. However, they inform their intentions to provide a more human scale and multi-modal intersection to answer traffic and create a more positive image of the area. Precisely, lighting as perceptual effects and as urban furniture have an important impact on human scale and image of urban places, at night but also during the day. Finally, the Indigenous Histories of Portage and Main reveal the intersection as a cultural place, symbolic of trade and gathering. Moreover, the moving in of Manitoba Métis Federation (MMF) in the previous Bank of Montreal Building located in the middle of the intersection is an opportunity to reconciliate with past and give Indigenous Histories its centric place.

4.1.2 Night walk

The night walk offers a better understanding of the actual state of lighting in Portage and Main intersection.

Generally, the observations reveal considerable inconsistency for road and street lighting in terms of color temperature – 2200K CCT vs 5000K CCT – and rendering, uniformity and contrast, lighting control, hierarchy, lighting furniture and scales. This situation is in part due to a variety of piece replacement and upgrading, but also a lack of coherence between the different interventions. We note for example the interferences between HPS and LED streetlights on the heritage pole and the presence of various type of lighting heads in the area. Also, the night walk reveals lighting pollution problems, light spill on facade, some areas are too bright and others remain largely in the dark creating disorganization and feeling of unsafety.

From an architectural point of view, most of the buildings suffer from light pollution or remain in the dark. We note that it is difficult to have a representation or memory of the intersection because of the lack of visual impact, some existing lightings do not reflect the shape and volume of building in an appropriate way, other building like Scotia Bank over lit and spills into urban environment whereas others like the National Bank remain in the dark. In general, the lack of vertical illumination and human-scale lighting participates into creating uncomfortable and unsafe environment. Also, there is no proper lighting for identity and heritage buildings that would reveal architectural characteristics. Finally, some element like logos at the top of buildings help in way-finding and orientation.

At the urban level, there are certain intentions to create lighting atmospheres more on a human scale, such as the lighting of the benches and the sculpture at the northwest corner and the creation of lighting animation in a counter alley at the bottom of the Fairmont Hotel. However, there are some difficulties in terms of way-finding and orientation, the underground entrances to cross the intersection are difficult to see. On the other hand, some areas remain in the dark and the lack of lighting of the vegetation contributes to that darkness. Some lighting installations, such as the lights installed under the benches, deserve to be reviewed. Finally, elements of identity such as the flags placed in the middle of the street remain in the shadow.

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Attractiveness

Hierarchy & Coherence

Culture & Identity

Heritage & Architecture

Safety

Human scale

Environment

Policy

Regulation & Engagement

4.2 Recommendations

With unprecedented urbanization within Portage and Main, becoming a 24hr city, with more than 6 months spent longer dark hours during winter, it is necessary to re-think the night to make it more livable by creating safe and vibrant urban downtown at night. Before this can be achieved, it requires an investment for a holistic approach hand in hand with policy, architecture, and urban design. The safer and welcoming urban nightscape is, the more residents and tourists will enjoy it; proper lighting could participate in enhancing tourism and nightlife, generating activities and attractiveness for the sector.

The recent night walk is the first step of a visual survey to understand the current and real situations of the night at the four Portage and Main corners to strengthen urban lighting strategies and future applications. The study of Portage and Main provides insight into the strengths and weaknesses of public lighting policy in Winnipeg. It also recognizes the opportunities to create a new identity and destination; a night-time character that Winnipeggers can be proud of.

4.2.1 Lighting Hierarchy

It is evident during the night walk that there are inconsistencies and conflicting issues of lighting within Portage and Main; too bright or too dark, too warm, or too cold, etc. First and foremost, there is a need to create lighting hierarchy that caters the urban fabric; to uniquely visualize skyline, essential and important places, buildings, landmarks, artwork, and the importance of a human-scale pedestrian lighting within Portage and Main. The human eye can only adapt to one level of illumination at a time, so a well-developed lighting hierarchy renders positive information and provides visual guidance for spatial identification resulting to great experiences. By defining a lighting hierarchy and differentiate lighting interventions based on the typology of streets, walkways, traffic intensity, gathering places, etc., the city would provide coherence, organization, improve way-finding and orientation, reduce energy and light pollution.

4.2.2 Character Areas

There is a need to develop an appropriate lighting strategy in consideration to identity, culture, human perception, environmental impact, and the vision of Portage and Main. Hence, one of the important concerns is therefore the definition of a nocturnal identity for Portage and Main as a place of trade and the heart of the city, but also to develop means/tools to apply and maintain that identity. Thus, it is to think of using lighting to reinforce the attractiveness of the sector, to increase cultural and commercial visibility, to re-invent a relationship on a human scale in a sector difficult to access for pedestrians and with a strong presence of road infrastructures. It is to think about nocturnal routes by creating visual links at night, helping to restore a pedestrian scale to encourage people to come and visit the sector. It is also to think about temporality of Portage and Main, to work on the intersection as a living and an evolving area; new technology can offer adaptive lighting that change depending on needs and activities on the intersection such as celebration or commemoration.

4.2.3 Heritage and Architectural Lighting

In general architecture is not valued, it suffers from light pollution, light spill or remains in the dark. The heritage architecture is not identifiable even though it represents an important element to highlight identity and culture. Architectural lighting can be used to highlight different elements of the intersection such as heritage facades, modern buildings/towers, building and gateways entrances. It can be used on different levels, from street levels with commercial windows to sky-crappers' crown and facades to help identify the intersection. Architectural lighting represents significant potential for identifying the sector, but even more, with vertical lighting, it is a safety asset around certain circulation areas.

4.2.4 Policy, Regulation & Engagement

One of the main issues with the heritage street and pedestrian lighting is inconsistency and variety in colour temperature for example born out of piecemeal upgrading. There is a need of careful planning and management to promote best lighting practices and to improve communication between key stakeholders regarding functional and aesthetic outcomes. To develop a clear policy of the long-term procurement, upgrading and repair of new lighting systems.

To regulate and make coherent the lighting interventions, the engagement of the community and the stakeholders remains important. Indeed, A social approach on lighting and night-time studies with citizen engagement would offer a comprehensive understanding on the nocturnal urban context, activities, perceptions, needs and expectations. On the other hand, to ensure the regulation of private lighting – that plays an important role in the character and identity of the district –; the implementation of a charter and the engagement of buildings' owners, businesses and shopkeepers, would be an interesting avenue to ensure the long term and coherent development of the sector at night.

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6.0 Inspirational Images

Bank of Montreal Building - Square d'Armes, Montreal, Canada

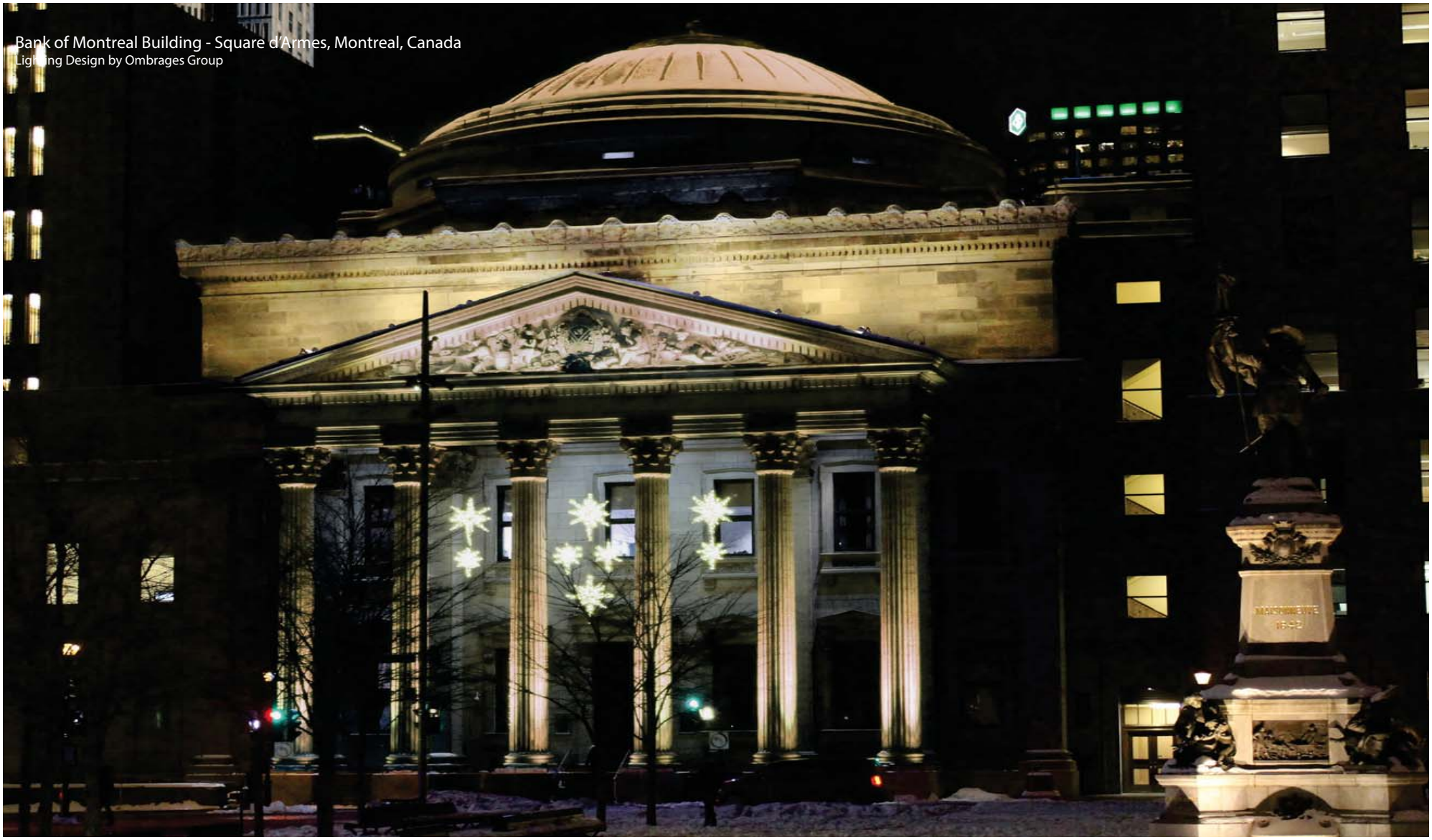
Lighting Design by Ombrages Group





Various Lighting Scenarios

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Bank of Montreal Building - Square d'Armes, Montreal, Canada
Lighting Design by Ombrages Group

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Christ Church, Montreal, Canada

Lighting Design by Ombrages Group



Before



After

Champigny College, Montreal, Canada

Lighting Design by Ombrages Group



Before



After

Place d'Armes, Montreal, Canada

Lighting Design by Ombrages Group



Daytime



Nighttime

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Revalue the Heart of the City at Night
A Lighting Vision for the Portage & Main intersection of Winnipeg

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Plaza Saint-Hubert, Montreal, Canada

Lighting Design by Ombrages Group



Daytime



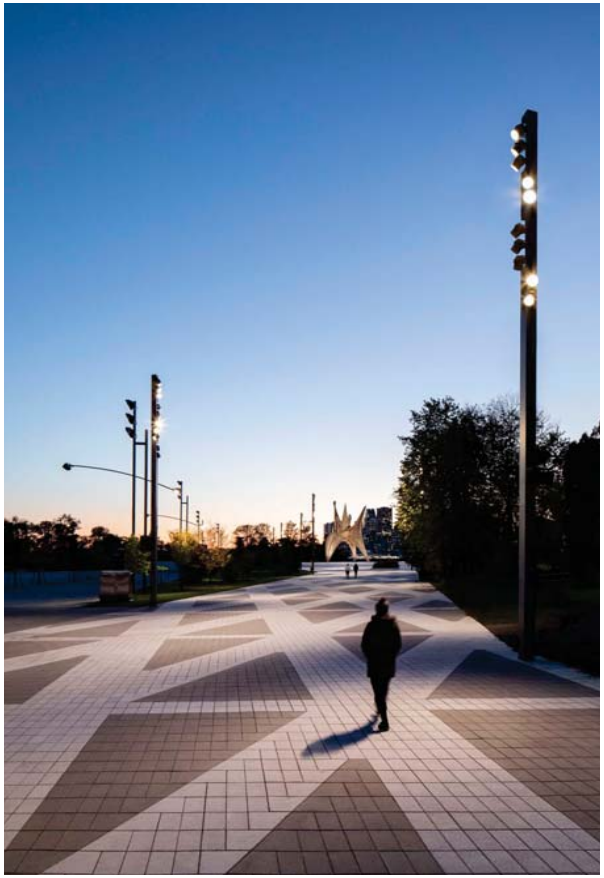
After



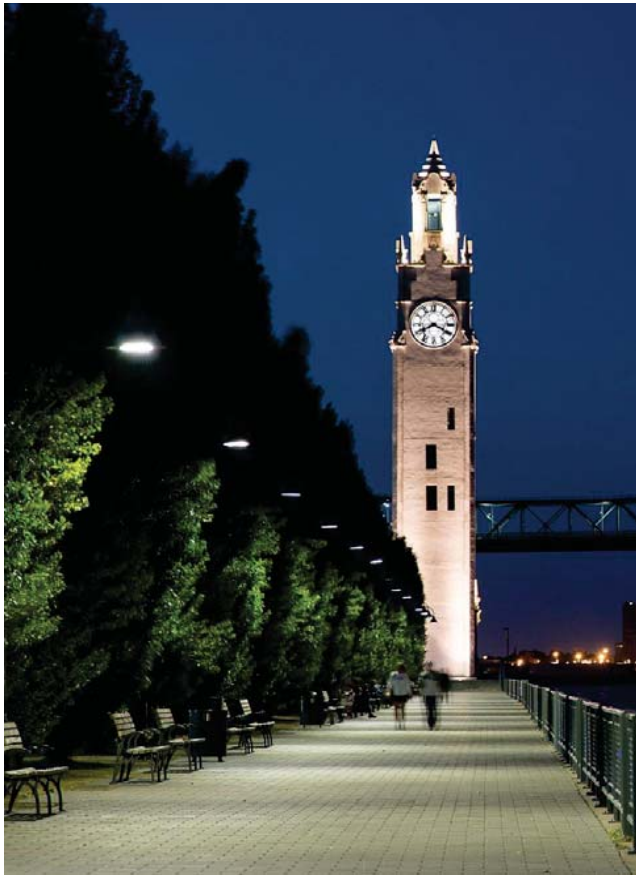
Street/Pedestrian Lighting
by Ombrages Group



Quartier des Spectacles, Montreal, Canada
Lighting Design by Ombrages Group



Parc Jean-Drapeau, Montreal Canada
Lighting Design by Ombrages Group



Clock Tower Pier, Montreal Canada
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Facade Lighting
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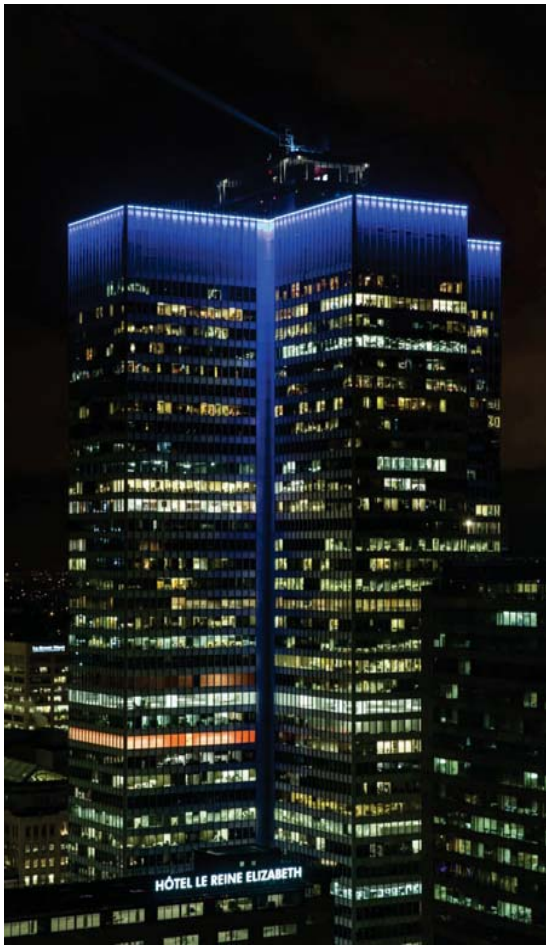
Canadian Olympic Committee Buliding
Temporary Lighting Installation by Ombrages Group



La Maison Symphonique
Lighting Design by Ombrages Group



Place Bonaventure
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Place Ville Marie Tower
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