



# Towards an **Online** Building Permitting System

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## Introduction

Many planning departments across North America can be considered by the fire department, as hazardous places as most of these offices have hundreds of acres in papers that contain drawings, reports, plans, and building permit applications. Moreover, planning departments have an enormous pressure to improve customer service and to reduce the number of days that a building permit takes to be approved. Also, it is not a surprise to realize the critical role that computer and information technologies in our daily life. Nowadays, we can have access to information by using an electronic device connected to the internet. Therefore, by including computer and information technologies in the planning world, planning offices can improve customer service and reduce processing times (U.S. Department of Housing and Urban Development 2002, 1).

# Background & Context

## Importance of Building Permits

Building permits are important to property owners for so many factors. For example, building permits are documents that guarantee that any construction is safe, as they assure that the construction produces a safe environment to the owner, renters, tenants or business clients. By following building code requirements, the owner guarantees that the project meets minimum standards of safety and will be less likely to create health or environmental issues for its occupants.

Also, building permits protect property values. Since home or business properties are considered one of the most significant investment for people and real estate companies, obtaining a building permit means that the building satisfies the building code and thus, the investment is protected into the future. From a legal perspective, constructions that are built without a building permit are considered illegal and consequently, legal actions such as fines, and even the demolition of the structure could be considered by city officials. As a result, building a structure without considering the necessary building permits could result in extra expenses for the owner.

### Why are Building Permits Important?

- Guarantee that the construction is safe for all.
- Meet minimum construction standards
- Protect property values.

## Winnipeg's Building Permits

In Winnipeg, building permits have their legal grounds in several documents. According to the Manitoba Planning Act, a building permit is a document “issued by an authority having jurisdiction to authorize the construction or alteration of all or part of any building” (Government of Manitoba, Section 151.1(5)). Moreover, the Winnipeg Charter gives authority to the council to pass by-laws “respecting property adjacent to the street, whether the property is public or private owned” (Government of Manitoba, Section 129c). Furthermore, the Department of Property, Planning, and Development defines a building permit as a document that “provide(s) legal authorization to begin construction of a building project” (City of Winnipeg 2019).



## Who is Responsible for Obtaining a Building Permit?

The person who is registered as a property owner at the Registry Office is the person who should apply and pay for any building permit. Therefore, if contractors are hired to build, add, renovate or alter any part of a property, or perform work on electrical, plumbing and/or mechanical systems, property owners are still responsible for ensuring that all required permits have been obtained before starting the construction work (City of Winnipeg 2019).





## Who Approves Building Permits in the City of Winnipeg?

In the City of Winnipeg, the Zoning and Permits Branch which is under the Department of Property, Planning, and Development is the authority that approves all building permits within City boundaries.

## Winnipeg's Building Permit Classification

The City of Winnipeg classifies building permits into two broad categories. These categories are listed in Table 1.

Residential Building Permits	Commercial Permits
Temporary structures larger than 900 square feet	Commercial electrical permit
Detached accessory buildings (garages, shed, gazebo) over 108 square feet	Commercial plumbing permit
Demolitions (partial or full)	Commercial mechanical permit
Swimming pools (excluding hot tubs, fish ponds)	Commercial alteration design
New houses	Occupancy permit
Attached garage or carport	Commercial development permit
Additions (including sunrooms, enclosed decks)	New construction and additions
Home based business	Staged building permit
Change of use housing permits (secondary suites)	Interior/Exterior alterations and other
Wheelchair Ramps	Demolition
Foundation repairs	Special events
Decks over 2 feet in height	Fire Paramedic Services
Plumbing (including sump pits, sump pump, back water valves)	Testing life safety systems
Electrical (including air conditioners)	Signs, awnings, and canopies
Wood stove/fireplace	

Table 1: Categories of Building permits in the City of Winnipeg.

# Facts

## Benefits of an Online Permitting System

According to the US Department of Housing and Urban Development (2012), “an electronic permitting (system) is a set of computer-based tools and services that automate and streamline the building permit process” (U.S. Department of Housing and Urban Development 2002, 1). The primary goal with an online permitting system is that it reduces processing times, improves customer service, staff efficiency, and reduces the amount of paper that planning departments use (U.S. Department of Housing and Urban Development 2002, 1). Therefore, before the implementation of an online permitting system, municipalities should evaluate their processing times and customer service satisfaction to comprehend the need for implementing an online permitting system.

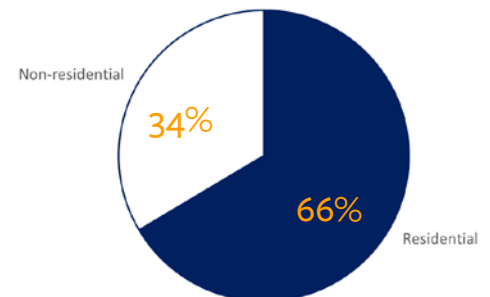
However, an online permitting system does not only allow city officials to approve building permits without printing any document. Instead, an online permitting system is a group of task-specific tools that help to improve communication across city departments while reducing processing times and improving the customer service experience. By incorporating an online permitting system and using project management tools, city officials can create workflows for any process. This workflow will allow city staff to establish best practices that guarantee the quality and efficiency of their job.

## Increasing Number of Building Permits

In recent years, the City of Winnipeg has seen a growing number of building permit applications (see Graph 1). In 2017, the City approved 10859 building permits applications. 3641 of these concern to non-residential projects that include the alteration or modification of commercial project such as hotels, motels, institutional and public buildings. The other 7218 permits were approved for residential projects, mostly extensions and renovations to houses (City of Winnipeg 2018).

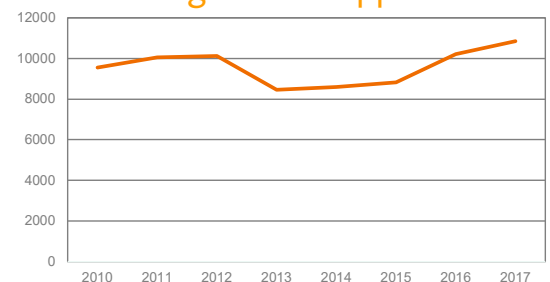
The growing number of building permits approved has put pressure to the Winnipeg’s planning department for maintaining reasonable processing times and delivering an excellent customer service (see Graph 1 and Graph 2). Also, paper submissions for building permits are time-consuming, as businesses or property owners are required to go physically to the building permit branch to deliver several documents and fill out forms associated with the application. Moreover, paper applications are considered environmentally unfriendly, as building permit applications demand several copies of plans, drawings, and reports that most of the time have to be reprinted or adjusted by applicants. The process of re-printing plans and reports is something that most applicants and planning officials give for granted as most of the time these costs are not considered or budgeted before the application.

### Percentage of Building Permit Types in 2017



Graph 1: % of Building permit application types in 2017

### Building Permits Approved



Graph 2: Building permits approved from 2010 to 2017



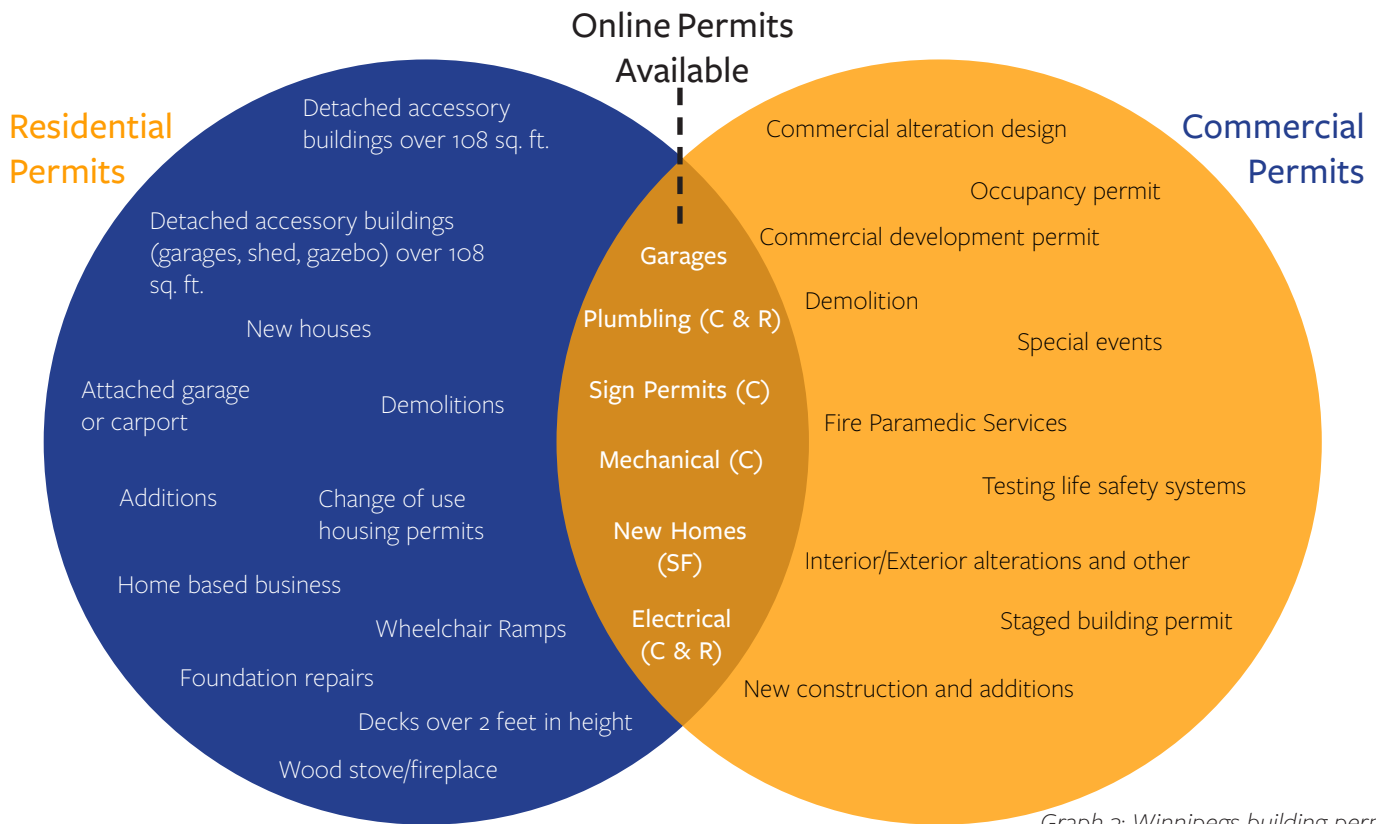
# Winnipeg's Online Permitting System

The online permitting system started in Winnipeg, as a result of a growing number of building permit applications processed by City staff. The City of Winnipeg decided to implement an online building permit application process for specific permits that are listed in Table 2. By creating an account on the department website, customers will be able to apply for building permits listed in Table 2, track the status, submit documents and make payments.

Residential Permits	Commercial Permits
New Single Family Detached Dwelling Construction	Plumbing
Garages	Electrical
Plumbing	Mechanical
Electrical	Sign Permits



Table 2: Online permits available



Graph 3: Winnipeg's building permits

## Hours of Operation of the Online System

Winnipeg's online building application system operates from Monday to Friday from 5:15 a.m. to 2:45 a.m. and Saturday and Sunday from 5:15 a.m. to 12:45 a.m. The City decided to create a brief shutdown of the system each day for maintenance of the website. Also, the City established that City staff will process the Permits Online applications from Monday to Friday between 8:30 a.m. and 4:30 p.m.



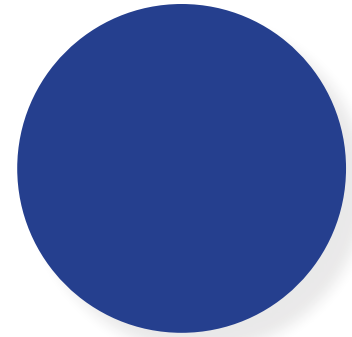
# Conclusions and Outcomes

As living entities, cities are always reinventing themselves to satisfy political, social and economic systems. An example of this fact is that most Canadian municipalities have been reinventing the way they process building applications by creating an online permitting application. Moreover, an online building permitting application is a response to a growing demand for building permits, by creating an online process, municipalities try to maintain or improve customer service and reduce processing time.

For example, City of Hamilton's officials launched in 2019 an online building permit application process called ePLANS and aims to provide a better service for private investors while getting a building permit. The "ePLANS is a web-based service allowing customers to initiate a building permit application and submit associated digital design drawings and documents online" (City of Hamilton, 2019, p. 1). Also, the ePLANS system creates other positive effects as it reduces the time that each applicant spends on a regular building application process. Furthermore, ePLANS minimizes the amount of paper used in design drawing and allows the City to move on step closer to being paperless (City of Hamilton, 2019, p. 1).

In contrast, the City of Winnipeg is implementing an online building permit application process by stages, in that portal clients can apply for eight different building permits. With just eight different types of buildings permits to apply, it seems to be that Winnipeg's implementation of an online permitting application is more a pilot project than a final stage of a project. Moreover, this study did not find any information that could explain why city officials decided to start with these permits; they believe that the online building application system is the first step to move forward a paperless building application system in the future. Nonetheless, implementing an online permitting application is a great example which shows how city officials can innovate in other aspects of planning.

## Holistic Approach: City of Hamilton



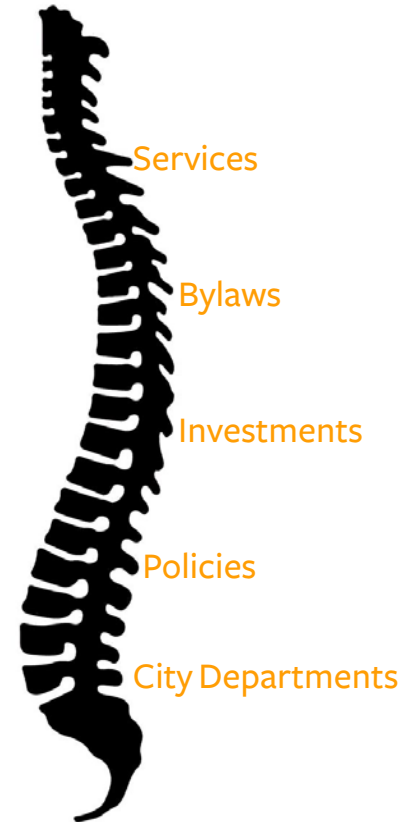
## Stages Approach: City of Winnipeg





## Lessons Learned

Online permitting systems are a common practice in North American municipalities. In general, the electronic permitting systems is an answer for cities' increasing number of building permit applications as they aim to provide better customer service, reduce processing times and even could be considered a step closer to achieve paperless processes. However, the online permitting system is not only an online portal to upload information and then get a building permit. The online permitting system is an arrangement of processes that involve all city departments. The U.S. Department of Housing and Urban Development (2002) argues that the most sophisticated permitting system is called an enterprise system. This system helps to coordinate and to align as many city departments as needed while linking a range of activities such as building safety, planning, taxation, finances, public works, and social services. Therefore, by implementing an online permitting system, city officials are creating an entire procedural scheme that aims to align all city departments into a clear city vision that includes corporate values and best practices to guarantee client satisfaction.



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