Mapping Archival Architecture Records: Interdisciplinary Research and Approach with GIS Technologies

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Abstract

The Murphy Moore Collection comprises over 2000 architectural plans, drawings, and correspondence with individuals involved in John M. Moore's work and the firm's various iterations, as well as material from other London-based architects. The plans are primarily focused in London, Ontario, but expand across Southern Ontario and include illustrations of residential, industrial, commercial, and ecclesiastical buildings– some of which are still present. Traditionally kept as text-based metadata records, this catalogue was transformed using ArcGIS program Dashboards to create an interactive user interface that encourages active discovery. However, to connect these records to their geographical location, various archival research methods such as the use of city directories, fire insurance plans, maps, and historical photography were used to accurately display these records.

Introduction to the Murphy Moore Collection

The Murphy Moore Collection is a series of architectural drawings, plans, and correspondence by various London-based architects beginning from the 1840s, showcasing the firm's multiple incarnations and evolution of those involved (Western Archives, 2013). The collection focuses on the work produced by John M. Moore but also features architects such as George F. Durand, John V. Munro, and Frederick Henry, with minor additions from Thomas H. Tracy, Hubert C. McBride, and William Robinson. The collection was donated in phases to Western University by Ronald E. Murphy on January 15, 1988, and David R. Murphy on October 25, 1999; Phase I, and partially Phase II, of the donation, is the focus of this project and contains approximately 2000 individual records (Murphy, D.R. et al, 1922-2009). These illustrations include various plans for commercial, ecclesiastical, and residential buildings, some of which remain significant structures in London and Southern Ontario. The architectural records provide insight into the design, construction, approaches, and trends in buildings and the development of styles through Georgian, Gothic Revival, Italianate, Beaux Arts, to Ontario Cottages. John M. Moore contributed to the development of London and designed many of the churches, schools, public buildings, and factories within the evolving city–eventually becoming a short-lived but successful mayor by popular demand before passing away in 1930 (Tausky, N. & DiStefano, L., 1986, p. 359). Within her acquisition report, Nancy Z. Tausky (1999) emphasizes the comprehensiveness of the collection and how the records supply the opportunity to interact and engage with

structures of regional and national importance (Murphy, D.R. et al, 1922-2009, p. 3). The collection allows researchers, students, and the public to explore architectural plans of archival buildings through invaluable primary source material.

Considerations and Purpose

Due to the size of the collection, there are minimal finding aids that accurately and effectively reflect the contents of the architectural records, and so locating individual records for patrons can be laborious, relying on archivists to navigate the collection. However, as part of the Western Libraries Strategic Plan of 2022 to 2028, the goal is to build and enhance the ability of others to access materials and empower users to find information as contributors to their research (Western Libraries, 2022). Therefore, to increase the accessibility, visibility, and usability of the collection, this project introduces an access point into the architectural drawings and provides users with greater agency when navigating this specific collection. This project utilizes ArcGIS' Dashboards to offer an interactive map and user interface that can help users locate information on particular drawings and allow exploration of other nearby building sites and structures. It is hoped that users can explore the contents of the collection and contact the archivists at Western to submit requests that can then be fulfilled efficiently and effectively. Tatomir and Durrance (2010) note the issues within academic libraries and accessibility to collections, especially online available collections, and propose the Tatomir Accessibility Checklist (TAC) to counteract inaccessibility (p. 581). Within this checklist, it was suggested that alternative text is available for screen-reading technologies, navigational links are provided, page elements are clearly labelled, and captions are provided for tables, charts, and graphs. Western University also supplies resources on creating accessible web pages and interfaces, and suggests that creators follow AODA guidelines to ensure all users can have equitable access (Western University, 2021). As such, when creating the user interface through ArcGIS' Dashboards and providing instructions through StoryMaps, TAC and the AODA Guidelines were considered to ensure the user interface and discovery layer would be accessible for guests, researchers, and patrons when combining mapping with archival material. This is demonstrated through the conscious decisions to use high contrast, legible font, alternative text, and a colour legend to distinguish the types of buildings within the collection.

Methodologies

Extracting metadata from each unique drawing was necessary to provide a user interface and discovery layer for the archival architecture records. Initially, this involved a visual analysis of each illustration to determine the architect, collaborative or independent firm, type of building, patron, and location of the proposed building site. However, many of the drawings did not include a written address and only provided associated street names, areas, neighbourhoods, or, in most cases, no indications of location. In other instances, certain plans did not contain exterior side elevations, and only contained pieces of detailed plans, electrical layouts, or heating, preventing certain methods from being useful in application. Therefore, a combination of archival research methodologies were implemented to determine the proposed, existing, or previous location of these structures, including references to city directories, fire insurance plan maps, or other archival documentation in the form of newspapers and photographs. Through a

brief analysis and discussion of these approaches, it can be determined that using multiple methods was beneficial, imperative, and necessary when attempting to determine accurate geographic location on these archival materials.

The dashboard (depicted in figure below) can be viewed at:

https://www.arcgis.com/apps/dashboards/5acbbb94482d4340b102a4329305e815

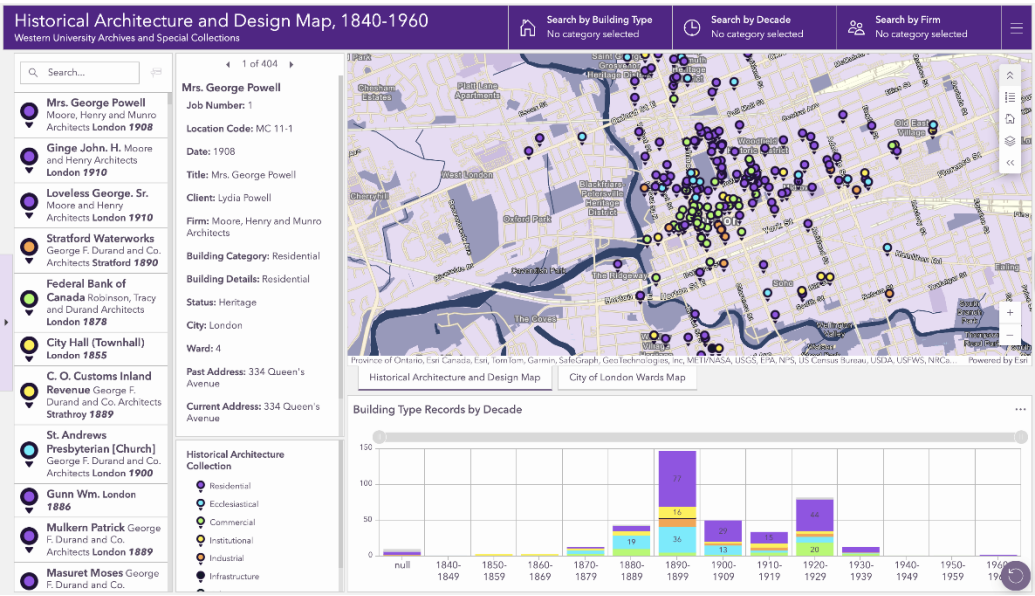

Figure: Screenshot of Western Libraries Historical Architecture Map Dashboard

City Directories

City directories, such as Vernon's City Directories, produced comprehensive books that list information about residences, businesses, street addresses, and miscellaneous organizations to aid in locating and finding places and people within a defined location. These directories are often divided into sections, including street names, numerical addresses, surnames, businesses and advertisers, and miscellaneous locations, including churches, schools, legal, and integral service buildings. As discussed by Rayfield (1991), city directories were initially intended for business use but offer tangible examples of population growth and mobility, occupational distribution, and the rise and fall of industries. Upon examination of the physical architectural plans, the name of the client or business was, in most cases, present on the record, which allowed an opportunity to use city directories to find potential addresses related to the structure or individual.

While these directories are helpful, the development of the city and growing population resulted in an increasing number of houses or buildings, streets, and neighbourhoods. Due to both the development of the city, and the movement of people, several directories would need to be consulted to determine the address of the architectural record. Using multiple approaches, these directories provided preliminary addresses that could be confirmed using Google Maps and Street View if the house was present or had been demolished, and the Register of Cultural

Heritage Resources could verify the structure's authenticity. For instance, the *Residence of John Weld*, does not provide many indicators of the structure, such as address or architect, but it does provide the client John Weld's name (Figure 2). Using *The London City and Middlesex County Directory of 1895*, his name can be located, his job position is listed, and the address of 1 The Ridgeway, London is documented as his home address (Figure 1). When finding this address, it is determined that the home is still standing; however, when using Google Maps and Street View, it can be seen that the address has slightly shifted, making the current address 2 The Ridgeway. Knowing the past and current address is beneficial, as this information can help users acknowledge the changes in street names and numbers and allow multiple ways of searching for these locations. The use of city directories for archival research presents an opportunity to recognize that the information within these directories is unstable, flexible, and strictly dependent on the time of publication– they should be used as a starting point and foundation, but not an end-all determinator.

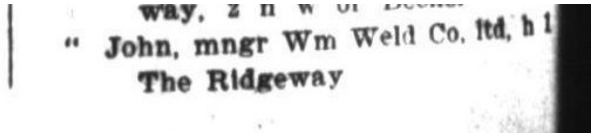

Figure 1. Image of John Weld's address in the city directory. From "London City and Middlesex County Directory," 1895, https://www.canadiana.ca/view/oocihm.8_00135_10/341

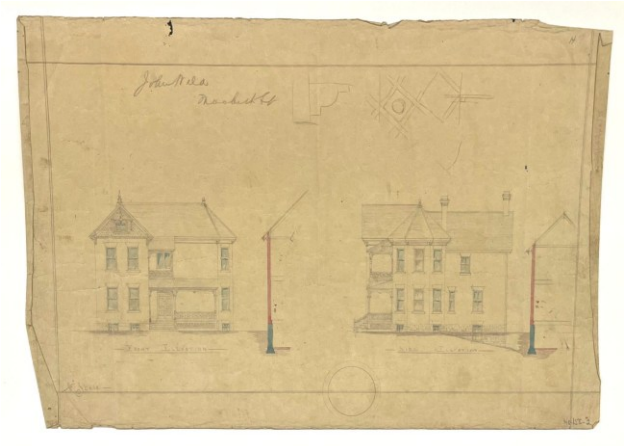

Figure 2: Image of architectural plan for John Weld's residence, 1890. From "Murphy Moore Collection," Western University, Archives and Special Collections, Job Number 158.

Figure 3: Image of 2 The Ridgeway, London, Ontario. From "Google Street View", 2021, Google.

Fire Insurance Plans and Maps

In some instances, city directories can be vague in their addresses, or in certain locations, such as at crossroads or unofficial roads, they do not provide fixed or numerical addresses. Fire insurance plans (FIPs) and maps can be beneficial when attempting to locate approximate residential addresses and larger businesses that are not included in

directories. FIPs are an urban map and provide a physical snapshot into the status and development of the city at the time of creation demonstrating both the subtle or dramatic changes as the population grows. Gilliand and Novak (2006) discuss London FIPs, positioning these historic items as "reliable sources of evidence on natural and built environments" which can allow reconstructions of the city as they often include detailed dimensions, capacities, and material information on the structures (p. 137). While not updated as frequently as the city directories, they offer similar value in understanding the changes in new construction, demolitions, and environmental influences on city development. *St. Peter's Parish House* was designed by Moore, Henry, and Munro Architects in 1920, but the record does not supply a numerical street address (Figure 4). Although the plan indicates the location was near St. Peter's Cathedral at the corner of Princess Avenue and Richmond, the presence of Victoria Park complicates this, leading to uncertainty about whether the parish house was a built structure or a proposed plan that did not materialize. Upon investigation of the FIPs available at Western University in the Map and Data Centre's digitized collection, the parish house can be seen on the 1912, revised 1922 edition *Fire Insurance Plan of London*, on Sheet 9. There, in the upper left-hand corner of the sheet, is the St. Peter's Parish Hall, located behind the cathedral on the corner of Richmond Street. An exact location on this structure provides a broader context to the surrounding buildings, as well as the history of St. Peter's, and is greatly beneficial to understanding the city's layout in the late 19th and early 20th century, especially for community-focused buildings.

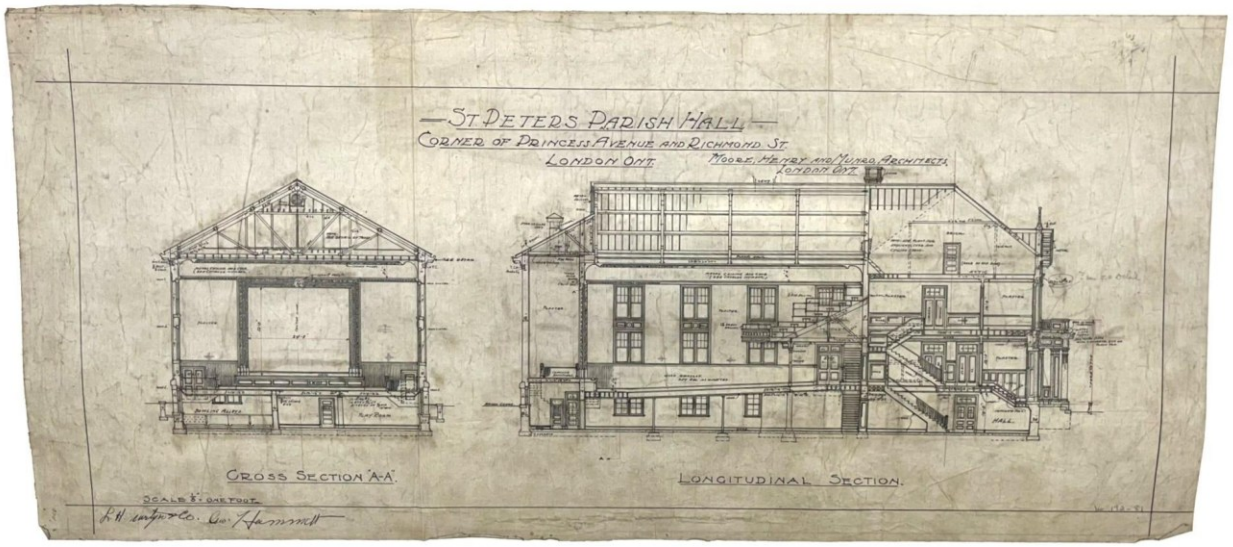

Figure 4: Image of architectural plans of St. Peter's Parish House by Moore, Henry, and Munro Architects, 1920. From "Murphy Moore Collection," Western University, Archives and Special Collections, Job Number 192.

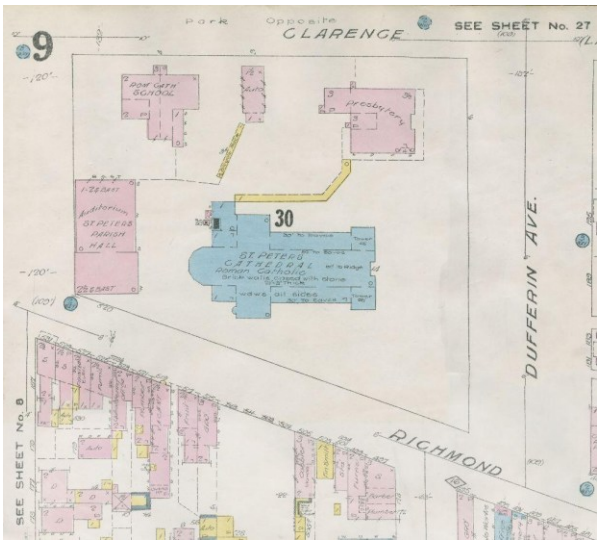

Figure 5. Image of Fire Insurance Plan of London, Sheet 9, Ontario, 1922. From Western University, https://www.lib.uwo.ca/madgic/projects/fips/london_fip_1922/index.html

Newspapers and Photographs

Photographs and newspapers offer visual insight and evidence of buildings that are no longer present or have been altered to accommodate structural integrity or modern tastes. An extensive collection of photographs of London taken by the London Free Press has been assembled into a repository of images and information. Jennifer Grainger's book, *London Free Press: From The Vault*, has proven incredibly useful during this project as it draws from the photography collection held in Western University's Archive and Special Collections. This collection is "one of only a few large photographic collections from major Canadian newspapers available in publicly accessible archives" and captures the architectural, cultural, industrial, technological, and everyday changes that occurred (2017, p. 9). The Customs House, located at the corner of Richmond Street and Queens Avenue, was a prominent yet no longer present building. Although this address could be confirmed through FIPs and city directories, demolition prevented a direct comparison of the architectural plans with the building to determine its use; however, photo documentation provided an opportunity to establish validity. Through these images, it can be confirmed that the plans reflect the ones created by William Robinson and the additions by George F. Durand, which would not be possible without photographic evidence (Figure 6 and Figure 7). Combining multiple approaches and archival research practices is beneficial to defining a clear image of the possibilities and information, and helps when determining if a structure existed, or was simply a proposal.

Figure 6: Image of Customs House, alterations designed by George F. Durand, 1910. From "Murphy Moore Collection," Western University, Archives and Special Collections, Job Number 18.

Figure 7: Image from Grainger's book, From the Vault, of the Customs House in London, Ontario. Originally published in the Free Press Newspaper in 1875. From "London Free Press: From the Vault", Jennifer Grainger, 2017.

Cross-disciplinary Technologies to Communicate Information

ArcGIS and its comprehensive geospatial applications allow users to visualize and access metadata from archival collections in a more interactive approach. Using ArcGIS to create a geospatial rendition of the metadata will enable users to search the records by various methods that can help account for the flexibility and changes of the city, including streets, addresses, and wards, as it developed rapidly over the late 19th and early 20th centuries. Tom Belton (2019) notes how, while users can benefit from interdisciplinary methods of research, archives and libraries continue to rely on text-based approaches (p. 22). While text-based methods may be the traditional and straightforward approach, especially for large collections, GIS applications such as Dashboards, supply a system to adapt and map archival records interconnected to time and location and present them in a way that is tangible, accessible, and adaptable to user needs. A survey conducted by Belton documented that many users generally agree that mapping interfaces enhance their ability to search information. The survey also suggested that searching and browsing using map interfaces are a significant feature, inviting the opportunity to acknowledge gaps or patterns in the collection (pp. 31-35). Developing the user interface for the archival architecture discovery layer emphasizes and upholds the concept of discovery for users. It transforms metadata into a visual representation, enabling users to find records based on year, architecture firm, or building type, and explore other records with greater ease. Combining GIS applications and archival material is beneficial for collection management, user discovery, and accessibility of the collection; however, when determining the location associated with the records, multiple approaches should be considered to ensure the provided contextual information is accurate. GIS technology marries the concepts of location, record, and metadata, which is especially useful for geographically dependent structures such as the Blackfriars Mill and helps users and researchers understand the developments of architecture within the city and the region's physical geography. This is evident in the examination of a bridge designed for The Waverly in 1890, a prominent and historical retirement home and institute within London (Figure 8). Upon initial investigation of this item, it was unclear as to where this bridge resided on the property, however with consultation of other historic records such as the Geodetic Survey of 1926, a river and bridge can be visible (Figure 9). Understanding the contexts and previous histories of the landscape is important to researchers and academics, including those involved in city planning, architectural development, and environmental consultants.

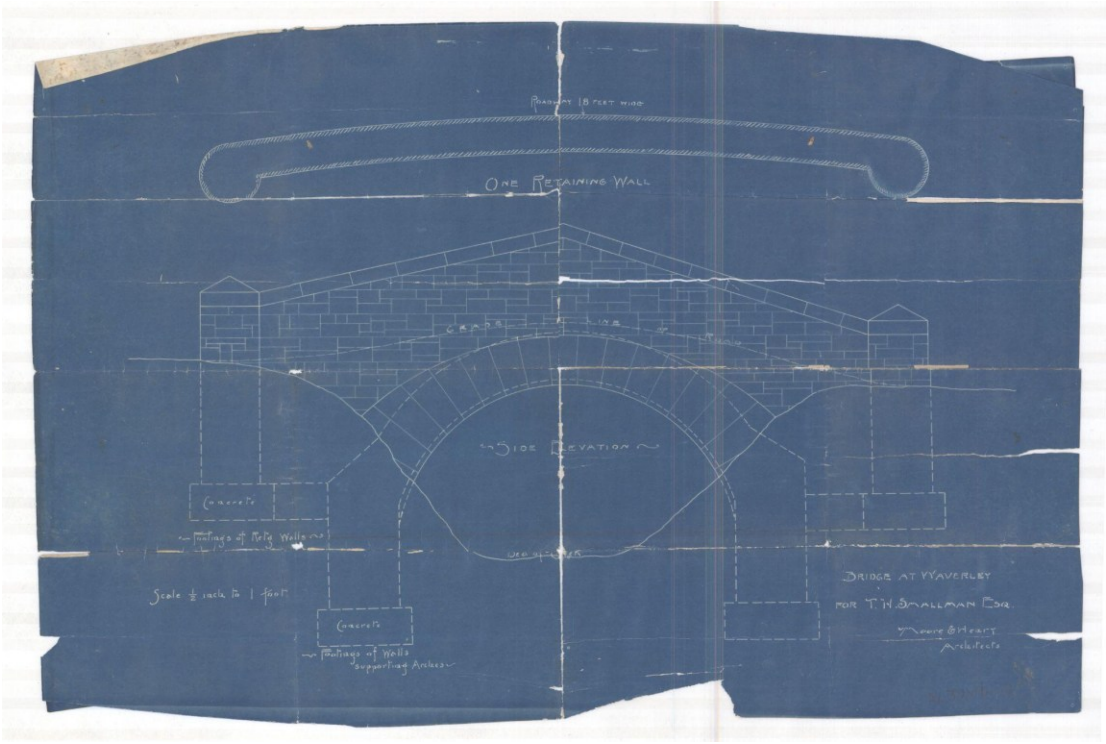

Figure 8: Image of Bridge for T.H. Smallman for The Waverly designed by Moore and Henry Architects, 1890. From "Murphy Moore Collection," Western University, Archives and Special Collections, Job Number 325b.

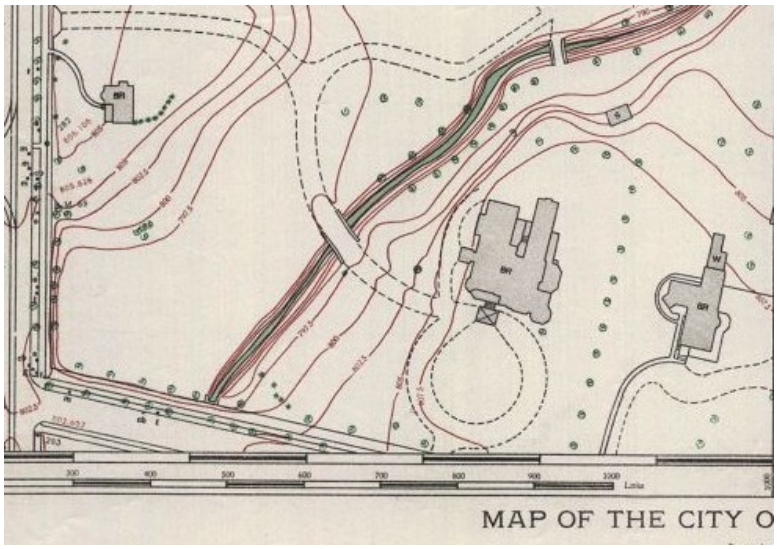

Figure 9: Image from the 1926 Geodetic Survey of London, Department of the Interior. From Western University, Map and Data Centre.

Conclusion

The "Archival Architecture Mapping Project" is intended to provide users with a new method and approach to accessing archival architecture records. Through an interdisciplinary approach to visualizing and creating this user interface for research purposes and greater access, applying GIS technologies such as Dashboards, harmonizes the connection between geospatial location and archival materials. Implementing archival research methods and tools such as referencing city directories, fire insurance plans, and photographs or newspaper articles, allowed the locations to be determined. Each method proved useful in unique ways and allowed greater opportunities for confirmation. These records within the Murphy Moore collection offer a rich insight into the history and development of London, Ontario, and other towns or cities across Southern Ontario. Creating a user interface that supports research initiatives allows these records to be shared and discovered, encouraging meaningful interaction with a unique primary source material.

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