

# The Creative Destruction of Montreal: Street Widenings and Urban (Re)Development in the Nineteenth Century

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Résumé de l'article

L'urbanisation rapide des villes nord-américaines au XIX<sup>e</sup> siècle a coïncidé avec des innovations périodiques et une importante croissance des moyens de transport, ce qui a occasionné des problèmes récurrents de congestion dans les centres urbains mal adaptés à ces difficultés. Durant la seconde moitié du XIX<sup>e</sup> siècle, le gouvernement municipal de Montréal a exproprié et détruit des milliers de propriétés pour élargir quelques dizaines de rues existantes. Cet article soutient que la cause de ces actes de « destruction créative » découle de la volonté de rendre la circulation fluide en vue d'accélérer le rythme de la croissance urbaine, et ce, par le redimensionnement périodique du « système vasculaire urbain ». Une analyse détaillée de la planification et de la mise en œuvre de projets majeurs d'élargissement des voies, entre 1862 et 1900, illustre comment l'aménagement de Montréal a été alternativement détruit puis rebâti par la coalition locale de développement urbain, dont les activités visaient à augmenter les loyers, la valeur des propriétés foncières et les revenus municipaux par l'exploitation du sol. L'analyse d'un échantillon de propriétés avant et après les opérations d'élargissement des voies suggère que le redéveloppement le plus intense se situait durant les périodes de forte croissance économique et dans les zones centrales, au moment où la compétition pour l'appropriation foncière était la plus vigoureuse. Ainsi, il existait une forte pression à transformer l'aménagement urbain en vue de satisfaire aux nécessités d'un nouvel ordre économique.

# ***The Creative Destruction of Montreal: Street Widenings and Urban (Re)Development in the Nineteenth Century***

**Jason Gilliland**

## **Abstract**

**Rapid industrialization of North American cities during the nineteenth century was associated with periodic innovations in transportation and massive increases in traffic, which, in turn, caused perennial problems of congestion in ill-adapted urban cores. During the latter half of the nineteenth century, the municipal government of Montreal expropriated and destroyed thousands of properties to widen dozens of existing streets. This paper argues that the key to these acts of “creative destruction” was the removal of barriers to circulation through a periodic redimensioning of the “urban vascular system,” and hence, a speed up in the rate of urban growth. A detailed investigation of the planning and execution of major street widening projects between 1862 and 1900 reveals how the built environment of Montreal was periodically destroyed and recreated by a local growth coalition committed to increasing aggregate rents, property values, and municipal revenues, through the intensification of land use. Examination of a sample of properties before and after street widenings suggests that redevelopment was most intense during economic boom periods and in central areas, when and where competition for space was most extreme, and there existed the greatest pressure to remodel the built landscape to fit the needs of a changed economic environment.**

## **Résumé**

**L'urbanisation rapide des villes nord-américaines au XIX<sup>e</sup> siècle a coïncidé avec des innovations périodiques et une importante croissance des moyens de transport, ce qui a occasionné des problèmes récurrents de congestion dans les centres urbains mal adaptés à ces difficultés. Durant la seconde moitié du XIX<sup>e</sup> siècle, le gouvernement municipal de Montréal a exproprié et détruit des milliers de propriétés pour élargir quelques dizaines de rues existantes. Cet article soutient que la cause de ces actes de « destruction créative » découle de la volonté de rendre la circulation fluide en vue d'accélérer le rythme de la croissance urbaine, et ce, par le re-dimensionnement périodique du « système vasculaire urbain ». Une analyse détaillée de la planification et de la mise en œuvre de projets majeurs d'élargissement des voies, entre 1862 et 1900, illustre comment l'aménagement de Montréal a été alternativement détruit puis rebâti par la coalition locale de développement urbain, dont les activités visaient à augmenter les loyers, la valeur des propriétés foncières et les revenus municipaux par l'exploitation du sol. L'analyse d'un échantillon de propriétés avant et après les opérations d'élargissement des voies suggère que le re-développement le plus intense se situait durant les périodes de forte croissance économique et dans les zones centrales, au moment où la compétition pour l'appropriation foncière était la plus vigoureuse. Ainsi, il existait**

**une forte pression à transformer l'aménagement urbain en vue de satisfaire aux nécessités d'un nouvel ordre économique.**

On November 15, 1895, in a public lecture on municipal administration, City Surveyor Percival St. George confessed that “Montreal is a city that has grown from being a small town, built of narrow streets, and which has outgrown its first conception.”<sup>1</sup> Rapid industrialization of Montreal during the 19th century was associated with periodic innovations in transportation and massive increases in the flow of goods and people into, out of, and through the city, which, in turn, generated serious problems of congestion in the narrow and crooked streets of an ill-adapted urban core. For a city to survive and grow, it must again and again, remove barriers to circulation, and increase the physical capacity of its “vascular system” of streets, sidewalks, tracks, bridges, and canals. During the latter half of the 19th century, the municipal government of Montreal demolished thousands of properties to widen dozens of streets. Pressed to account for the massive debt incurred by the Road Department for street improvements, St. George submitted: “it is a lesson to all of us who have any interest in good city government, to have a town laid out from the start with wide and straight streets.”<sup>2</sup>

My focus in this paper is on street widenings, a phenomenon which, although recurrent and widespread, has largely been neglected in previous historical research on North American cities. By investigating the planning, execution, and consequences of street widenings in late 19th-century Montreal, I aim to show how the changing demands of a rapidly industrializing urban economy were reflected in the physical redevelopment of the built environment. In the capitalist city, urban development is not a natural process of steady growth and expansion, but rather, city-building occurs in booms and busts which are embodied in the rhythm of destruction and renewal of the urban landscape.<sup>3</sup> This paper argues that the key to street widenings was the removal of barriers to circulation through a periodic redimensioning of the urban vascular system, and hence, a speed up in the rate of urban growth. Furthermore, it is argued that these planned acts of wholesale destruction and renewal were orchestrated by local property owners who, in their constant pursuit of profits, periodically manoeuvred public investment in street improvements toward the end of increasing aggregate rents and property values, by intensifying land use and increasing the demand for land.<sup>4</sup> An investigation of the changes in expropriation legislation – the instrument of destruction – over the latter half of the 19th century uncovers how civic officials in Montreal gradually gained control over private property for public use, but also how certain property owners were able to exploit the law for personal profit. Using detailed case studies of three major widenings, the paper examines the impact of such operations on the urban fabric, and provides insights into the experience of the rebuilding process for different segments of society. With samples of properties before and after widenings, I examine the relationship between dependent variables such as change of land use and the degree of change in the intensity of development, as a function of the mar-

ket situation (e.g., the location of the site and the timing of the operations). The findings indicate that street widenings generated significant and predictable changes in the built form of the city, and these changes were consistent with the demands of a rapidly industrializing urban economy.

### ***Interpreting Street Widenings: Urban Morphogenesis as Creative Destruction***

In Montreal, as in most North American cities during the latter half of the 19th century, the increased volume and speed of traffic, and the multiplication of various types of vehicles and infrastructures vying for street space,<sup>5</sup> forced civic officials to devote more attention to street design and management.<sup>6</sup> Urban historian Clay McShane has argued that the late 19th-century "revolution" in street paving was associated with a transformation in the uses of streets; traffic movement became the primary goal in street design, as older functions such as socializing and recreation were abandoned.<sup>7</sup> In Montreal, new and improved methods of grading, paving, lighting, cleaning, draining, and regulating streets helped combat what one self-proclaimed "traffic doctor" referred to as "the arterio-sclerosis of traffic and circulation"; however, to expand the capacity of Montreal's vascular system required radical surgery.<sup>8</sup>

Previous historical research on the (re)development of streets has focussed primarily on the most spectacular operations in European cities.<sup>9</sup> One of the most dramatic and, consequently, the most familiar case is the transformation of Second Empire Paris by Baron Haussmann under orders from Napoleon III.<sup>10</sup> While critics such as Walter Benjamin have attributed this massive project to the Emperor's concern with internal security, that is, his desire to control uprisings by obliterating the narrow, easily barricaded streets of the Middle Ages,<sup>11</sup> Haussmann's *Mémoires* suggest that he was as much a sanitary engineer as a politician. Indeed, Haussmann "wanted to make Paris a capital worthy of France, even of Western civilization," but, as David Harvey argues, "in the end he simply helped make it a city in which the circulation of capital became the real imperial power."<sup>12</sup> His primary goal was to create a general "circulatory" and "respiratory system" in which problems of traffic flow and ventilation were given priority.<sup>13</sup> Beyond widening streets and clearing insalubrious buildings, the essential feature of his plan was the installation of a new sewer network and the cutting of broad diagonal arteries through the densely built fabric of the city. For the rebuilding, Haussmann imposed classical principles of order, symmetry, and vista. Anthony Sutcliffe argues that Haussmann's aesthetic was dependent on the Parisian tradition of high building densities, and ultimately served to increase land values, rents, and speculation.<sup>14</sup>

The Parisian model had a significant impact on the redevelopment of other European cities,<sup>15</sup> and was a major inspiration for the City Beautiful Movement in North America (circa 1890–1930). While much has been written about the ideological debates and grand designs (rarely executed), less is known about how City Beautiful schemes transformed pre-existing environments.<sup>16</sup> Unfortunately, historians of the North American city have generally given only passing attention to the subject of street widenings, thus downplaying their role in the city building process. Christine

Meisner Rosen argues that massive conflagrations – such as those in Chicago (1871), Boston (1872), and Baltimore (1904) – encouraged major improvements to public infrastructure by removing physical, psychological, and financial barriers that stood in the way. While owners in burnt cities rebuilt their properties with taller and bulkier structures, they nevertheless blocked most proposals for street widening during reconstruction.<sup>17</sup> Geographer Martyn Bowden argues that there were no major changes to the street plan of San Francisco after the earthquake and fire of 1906 due to the rigid combination of piecemeal ownership of private property and laissez-faire municipal government.<sup>18</sup>

In the capitalist city, rapid growth means rapid obsolescence, the constant need for renewal, and hence, changes in urban form, or "morphogenesis." Although the built environment of a city is long-lasting and resistant to change, periodic interventions – such as the introduction of the streetcar or street widenings – can devalue or destroy past investments and greatly accelerate the processes of urban morphogenesis.<sup>19</sup> Economist Joseph Schumpeter coined the term "creative destruction" to describe the revolutionizing processes within capitalism, the incessant cycles of inventing new products and methods of production, and destroying old ones.<sup>20</sup> In reference to urban morphology, creative destruction takes on a literal meaning: old forms are periodically demolished to make way for new ones. As one turn-of-the-century civic booster explained: "To make Montreal the modern, up-to-date city it is, the older town, in the construction and equipment of which public debts had been incurred, had to be demolished."<sup>21</sup> By applying the concept of creative destruction to the literal destruction and creation associated with street widening operations, this paper illustrates how the dynamics of the capitalist economy are imprinted on the urban landscape.<sup>22</sup>

### ***Expropriation: The Instrument of Destruction***

During the latter half of the 19th century, the municipal government of Montreal widened more than 30 kilometres of existing streets.<sup>23</sup> Alterations to the street plan were very difficult, however, especially when they encroached upon individual property rights. In densely built urban cores, where alterations were usually most needed, the amount of capital sunk into the built environment was greatest, and thus, street widenings were extremely troublesome and controversial. This is why we find that some of the most magnificent, yet brutally destructive, public works projects were carried out by autocrats in authoritarian regimes (Napoleon III in Paris, Mussolini in Rome, Hitler in Berlin). The issue of expropriation, the taking of private property by government for public use, has received little attention from North American historians.<sup>24</sup> In order to understand the relationship between street widenings and urban development, it is therefore worthwhile to first examine the dynamics of expropriation law: the instrument of destruction.

In early 19th-century Montreal, the municipal corporation had no effective power to take land for public improvements, as the seizure of private land without the consent of its owner was forbidden.<sup>25</sup> Amendments to the city charter in 1845 made it lawful for the council "to purchase and acquire" any land required for opening and widening streets provided that it does not exceed

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100 feet (32.8 m) in depth.<sup>26</sup> Between 1846 and 1900, over 2250 properties were expropriated to open and widen streets.<sup>27</sup> Throughout the latter half of the 19th century, expropriation legislation was in a constant state of flux, as the municipal government attempted to expand its right to intervene over private property within the city. The provisions of the city charter relating to expropriation were amended at least a dozen times between 1845 and 1898.<sup>28</sup> The significant trend was toward erosion of a property owner's right to veto an improvement. While many modifications were made, two basic elements of expropriation law remained: (1) owners who forfeited property for the improved right of way were indemnified for their losses, whether by jury or by amicable arrangement; and (2) directly affected owners were assessed for a share of the cost of improvement: typically one-half, but ranging from one-third to the whole.

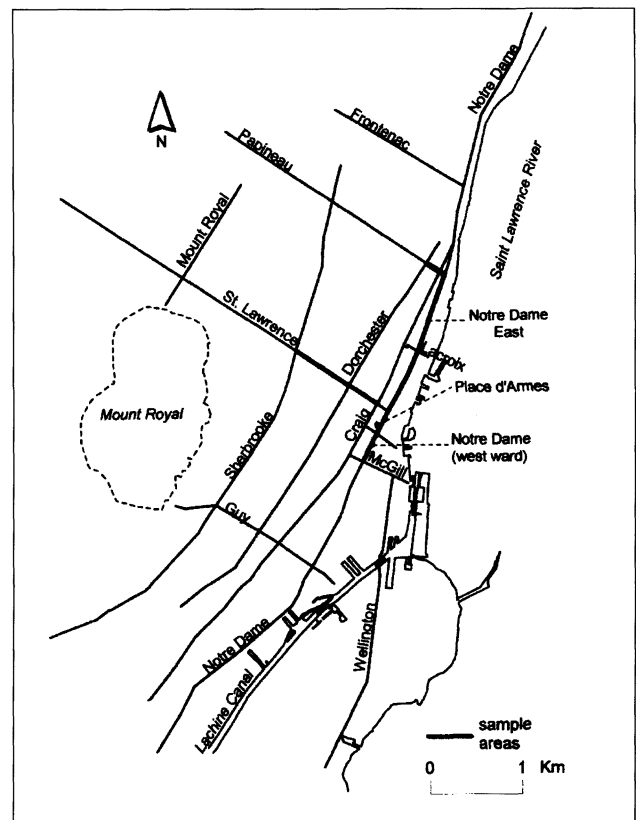
In 1874, the City Surveyor's office introduced an elaborate plan for street widenings: an official "homologation plan" showing the actual and proposed lines of every street in the city at a scale of 1:960.<sup>29</sup> Contrary to the common notion that the 19th-century city developed "organically" without a fully articulated plan,<sup>30</sup> the homologation plan, which was continually annotated and updated over the next century, illustrates that as early as the 1870s – almost two full decades before the first electric streetcar – the municipal corporation had a comprehensive strategy for widening major arteries and "regularizing" the street network.<sup>31</sup> Within a quarter century after the plan was introduced in Montreal, the city had widened several of its most heavily travelled streets: the leading thoroughfares connecting the city and its suburbs (e.g., Notre Dame, St. Lawrence), as well as the primary approaches to the railway stations and port (e.g. St. Bonaventure, Commissioners).

Since all property owners were bound to keep future construction behind the new homologation lines, this left in front of any new building an empty piece of land which was typically of no use to the owner. The homologation plan, therefore, was a deterrent to redevelopment, unless property owners could do so *en masse*, as part of a street widening. In order to remove this obstacle to growth, the law was amended to enable a proprietor to compel the city to expropriate the vacated portion in front,<sup>32</sup> as well as the remainder of the lot, if it was shallower than 40 feet (13.1 m).<sup>33</sup> Under this popular scheme, compensation for expropriations increased the municipal debt to such "alarming proportions" that in 1894 the government temporarily ceased expropriating. Between 1889 and 1896 the corporation spent more than \$6,500,000 on expropriations. During the same period the city's total debts had risen from \$22,000,000 to more than \$25,000,000, whereas the annual general revenue in 1896 was less than \$2,900,000. Because costs of expropriation were charged to the debt fund rather than to the annual budget, street widenings were the primary cause of the new indebtedness.<sup>34</sup> In 1898, Mayor Richard Wilson-Smith proclaimed "The clause introduced into our Charter, relieving the City from carrying out further expropriations until such time as she has sufficient funds on hand to pay for them, has, I believe, been the salvation of the city."<sup>35</sup> The mayor argued that expropriation had become prohibitively expensive because unscrupulous speculators brought forth overpaid expert witnesses – "a band of paid swearers"<sup>36</sup> –

who exaggerated property values, causing overruns to the preliminary financial arrangements anticipated by the council. "Notwithstanding the great expenditure," the City Surveyor argued in 1895, "no one can reasonably say that the great majority of the streets of this city have not been greatly improved, and if the town has become more regular in the width and straightness of its thoroughfares it is from this expropriation law."<sup>37</sup>

### *The Execution and Outcomes of Street Widenings*

Now that we have a general sense of why and how street widenings were carried out in the 19th-century city, we can look at three operations in more detail, to appraise the impact on urban form, property values, and municipal revenues, as well as the human consequences. Investigations with two streets, Notre Dame and St. Lawrence, allow us to analyse three major widening operations over 35 years. They involved acquisitions – individually negotiated or executed by the Superior Court – of nearly 200 properties, at a cost of nearly one and a half million dollars. The case studies are drawn from three different areas of the city – the central core of the city (what is now known as "Old Montreal"), a zone just outside the old core, and an east end suburb – and for each case, we can compare expropriated and non-expropriated sides of the street (see Figure 1).



**Figure 1: Location of sample areas**

**Notre Dame Street: "le scandale de la vitesse"<sup>38</sup>**

Notre Dame Street, long the city's principal thoroughfare, was laid out in 1672 at a width of 30 feet (9.1 m), and between 1864 and 1912 it was widened throughout most of its length. In the 1860s, the central portion was widened from 30 to 44 feet (9.1 to 13.4 m), and then, in successive building cycles, the remaining sections from Hochelaga in the east to St. Cunégonde in the west – almost 8 km – were widened to 60–65 feet (between 18.3 and 19.8 metres).<sup>39</sup> Let us take a closer look at the first widening of Notre Dame Street to 44 feet (13.1 m) in the centre, between McGill and Lacroix Streets, to appraise the impact on property values, land use, and urban form. For most of the nineteenth century, this section of Notre Dame was one of the most prestigious shopping addresses in the city, and in 1861 it was chosen for the inaugural run of the Montreal City Passenger Railway.<sup>40</sup> Although certain proprietors had petitioned for the widening of Notre Dame in 1854, the project was not formally initiated until 1864, and then promptly completed by 1868.<sup>41</sup>

This project marked the introduction of the practice of expropriating all the required properties at once, and carrying out the work in (four) large sections. Under the old method of piecemeal acquisition as properties became vacant, a street could be left with a "broken" or irregular building line for several years. The City Surveyor argued that this new method was designed to "add to the beauty and value of the city."<sup>42</sup> Since all properties affected were assumed to undergo an instantaneous increase in value, the city could charge an additional tax assessment.<sup>43</sup> On this section of the street, the widening clearly inflated property values. Some properties which sold for \$2.50 per square foot just before the widening were selling for \$7.00 immediately after. The city was quick to cash in on the bonanza: in February 1864, the city took from Pierre Malo 2229 square feet (207 m<sup>2</sup>) of property located at the corner of Notre Dame and St. Peter, and the jury awarded \$6,687 compensation. Less than four months later, when the widening had been completed, the city sold the residue, 1387 square feet (129 m<sup>2</sup>), to Jean-Baptiste Beaudry for \$6,640, virtually the same price they had paid for the entire property.<sup>44</sup> This amounted to a 60% mark up in price per square foot, and it also meant that the corporation had wiped out the cost of acquisition. This was the philosophy which the city optimistically espoused, but this type of case was rare. The total cost of expropriating the 55 required properties was \$309,880 at an average award of \$9.06 per square foot. The corporation, responsible for one half of the cost of the improvement – for which they took out a \$150,000 loan – left the other half to be paid by the fronting proprietors, by means of a special assessment levied over one year.<sup>45</sup>

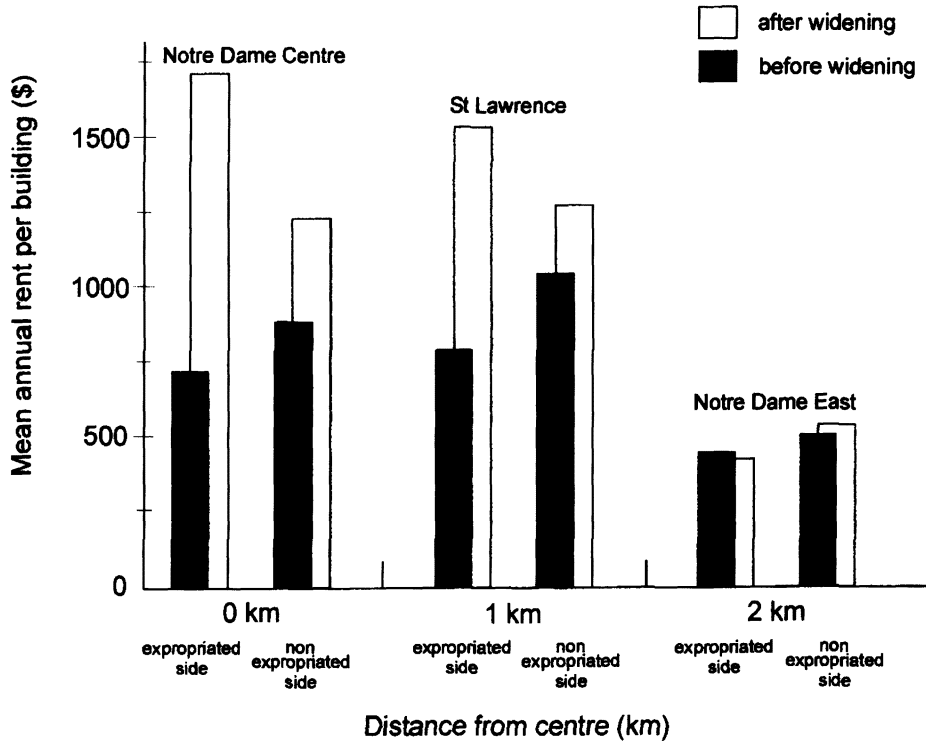
What impact did the widening have on the streetscape? Given that the first 14 feet (4.3 m) of every structure on the north side was demolished between McGill Street and Lacroix Street (nearly 1.5 km), it is safe to say that the streetscape was radically altered. But how was the street redeveloped after the widening? Since the demolished properties were located in the city centre, where competition for space was extreme, and the operations took place during a building boom, we can expect to find that the rebuilding was quick, and involved morphological changes which increased the size of the building. To test the ef-

fect of market situation (i.e. location and timing) on the degree of change in intensity of development, we can compare the before-and-after stream of rent generated from affected lots.<sup>46</sup> Our primary source of data is Montreal's annual rental tax rolls, which provide the names of each business or household head, the type of occupation, the assessed value of the building and land, for tenants a rental value, and for owner-occupiers an estimate of market rent based on floor area. The reliability of this source has been confirmed in several studies.<sup>47</sup> As a theoretical concept, the "rental values" are meaningful, as they represent the potential flow of income from capital invested in the built landscape. Where precise data on three-dimensional form is not available, rental values offer a convenient surrogate, as they have been shown to correlate perfectly with floor area, and by allowing ten feet height per storey, we can estimate the building volume, and thus, the scale of development.<sup>48</sup>

In 1862, immediately before the widening, the mean annual rent per building was \$713 on the north side of the street, and \$880 on the south side, suggesting that buildings on the south side, on average, were of a slightly larger scale than those across the street (see Figure 2, Table 1).<sup>49</sup> By 1872, a few years after the widening was completed, mean annual rent per building was much higher (40%) on the north side, which had been partially expropriated and destroyed, than on the south side (\$1709 versus \$1225). The fact that the mean annual rent per building on the north side of the street more than doubled (140% increase) between 1862 and 1872 indicates that the new buildings put up after the widening were, on average, of much larger size – taller, bulkier, with more floor space – than those which were destroyed for the widening. Given that mean rent on the south side of the street also rose substantially (39%) between 1862 and 1872, some of the owners on this side may also have rebuilt their properties to a greater scale, or performed morphological changes to create more rentable space (e.g. the addition of storeys), to take advantage of increased commercial activity, and to attract higher-order commercial functions (such as banking and insurance) to such prime locations. Owners on both sides would have been pressed to collect more rent by the obligation to pay for a share of the widening.

Historical imagery of the Notre Dame streetscape before and after the widening support the claims based on the empirical data. The illustration in Figure 3 (top), for example, gives an impression of what the case study area looked like before the widening, in the 1850s. Most of the street was lined with two-and-a-half- and three-and-a-half-storey stone structures, with a few one-and-a-halfs, and all had peaked roofs. A generation after the widening (Figure 3, bottom), it is clear that the north side (photo left) had been rebuilt primarily with taller, four-storey, flat-roofed structures. A typical example of redevelopment on the north side was A. M. Delisle's property, on the corner of Dollard Street (just beyond the "furniture" sign at left in the photo). In 1862, Delisle's two-storey building accommodated a tailor and a shoemaker, both of whom lived upstairs, and the total annual rent was \$1000. The new four-storey building was entirely commercial, with a tailor and jeweller sharing the ground floor, another tailor on the second floor, and a shoemaker on the third and fourth floors; the total rent of the new building was

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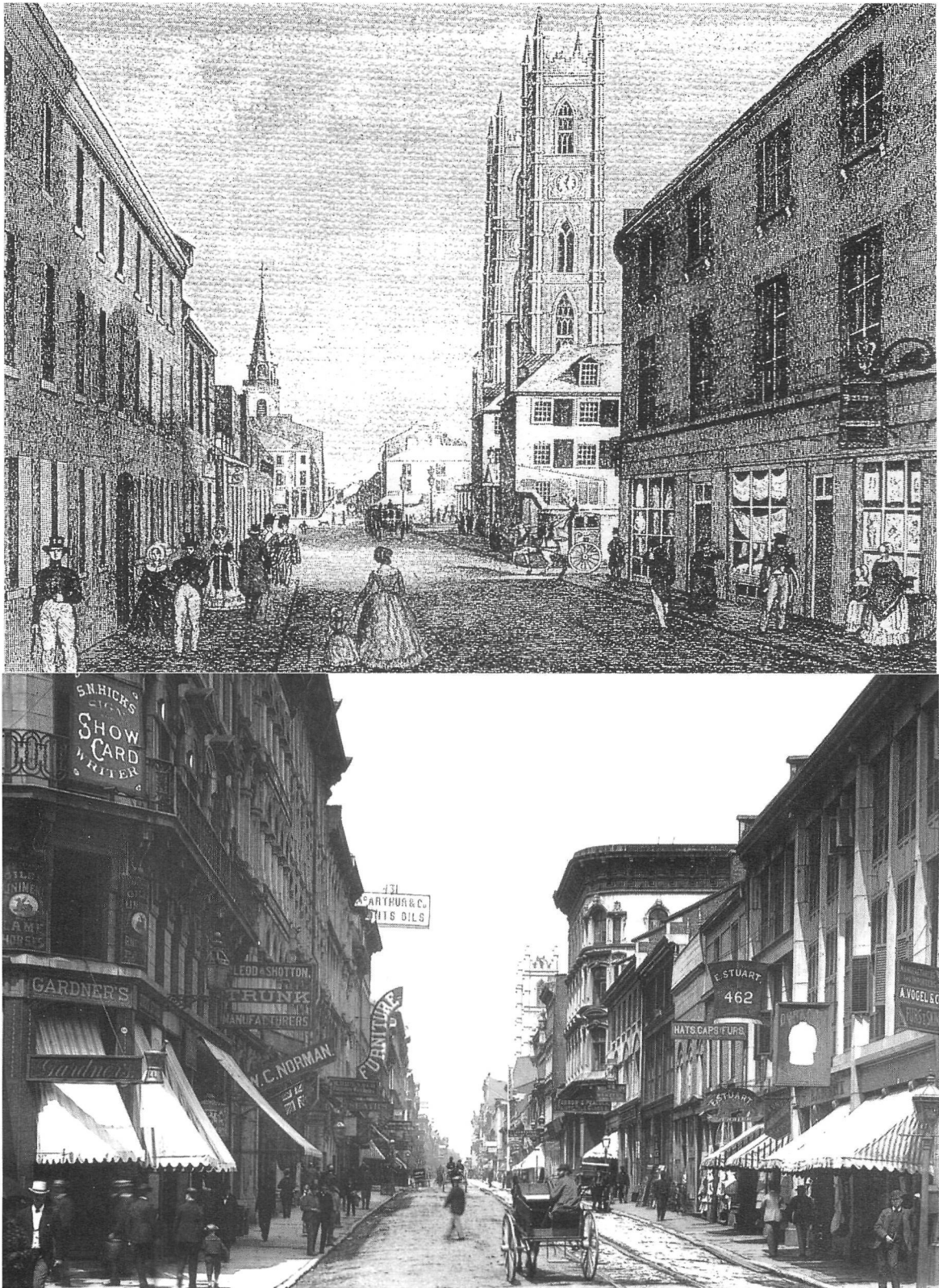
**Figure 2:** *Redevelopment of three widened streets, 1862-1900*  
 Source: *Montreal, Rôles d'évaluation, 1862-1900.*

**Table 1**  
*Annual rental values per building in sample areas before and after street widenings*

Sample area	Distance from centre (km)	Side of street	Mean rent per building (\$)			Sample size	
			before widening	after widening	increase (%)	before (n)	after (n)
Notre Dame (West Ward)	0	expropriated	713	1709	140	32	27
		non-expropriated	880	1225	39	26	26
St. Lawrence	1	expropriated	779	1531	97	29	29
		non-expropriated	1052	1261	20	29	29
Notre Dame E. (St. James Ward)	2	expropriated	440	415	-6	35	29
		non-expropriated	505	535	6	25	30

**Note:** *Values for Notre Dame (West Ward) are from 1862-1872, values for St. Lawrence are from 1888-1900, and for Notre Dame E. (St. James Ward) are from 1890-1900. Source: Montreal, Rôles d'évaluation, 1862-1900.*

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**Figure 3:** *Notre Dame Street looking east toward Place d'Armes, circa 1850 (top) and 1882 (bottom)*  
Sources: top, *Illustrated London News* (25 Aug. 1860); bottom, *Notman Photographic Archives, McCord Museum of Canadian History, Montreal (VIEW-1329)*.

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\$1840. The widening facilitated the elimination of the dwelling-over-the-shop habitat, which was already nearing extinction in the old core due to the powerful demand by commercial activities for such prime locations, and their ability to pay higher rents.<sup>50</sup>

The photograph also confirms that a few properties on the south side, although not expropriated, were redeveloped to a greater scale. For example, the prominent four-storey commercial building with a flat roof and heavy cornice at the corner of St. Helen (which projects above the others on the right side of the photo) was erected in 1869, on the site of the old Recollets Church. This building, owned by W. F. Kay, contained approximately 18,400 square feet (1710 m) of floor space, and had a total annual rental value of \$2900 in 1872. Although religious institutions were exempt from the tax assessment,<sup>51</sup> the 1862 tax roll provides an estimate of \$1640 total annual rent for the church property. To the immediate east of Kay's building was another four-storey commercial building erected by the Shaw brothers in 1868, after they also purchased church property from the Fabrique. The total annual rent of the Shaw building was also \$2900 in 1872.

The case of the old Recollets Church property also raises questions regarding property transfers and the subdivision or consolidation of lots. How much property changed hands due to the widening? Approximately two-thirds of the properties on the north side were transferred to new owners between 1862 and 1872, fewer than one-quarter on the south side. The widening encouraged the sale of properties, since it inflated values on the street. Not every owner would be seen as an equally good prospect for financing; however, the timing was favourable for obtaining additional capital. Since the stream of rents from tenants and business activities had already been interrupted due to the widening, the timing was ideal to sell. As was the case with Malo's property, some properties were sold first to the city, and then to a new owner. In some cases, the widening made a lot too small for the owner to rebuild profitably, and such residual slips of land were sold to neighbours. This practice of lot consolidation explains why, in Table 1, a greater number of buildings are recorded on the north side before the widening than after (32 versus 27). Widening forced a change in the morphology of every lot on one side of the street, and occasionally encouraged the consolidation of individual pieces of land to form larger lots, upon which larger buildings could be erected.

The analyses indicate that the widening had a considerable impact on the form and character of Notre Dame. On both sides of Notre Dame, larger lumps of capital, that is, greater investments per square foot of land, generated taller, bulkier, and more spacious buildings, which garnered higher rents per building, and radically altered the streetscape. In 1862, Hector Fabre, a legal clerk on Notre Dame wrote about his experience of modernity and destruction on his beloved street: "La rue Notre-Dame se dépouille de sa vieille physionomie, la rue Notre-Dame des anciens jours s'en va rapidement."<sup>52</sup> According to the self-proclaimed *flâneur*, the chaotic transformation of the physical and social character of Notre Dame was associated with the introduction of the tramway, which greatly increased traffic on the already crowded corners of this prestigious promenade: "Elle

n'est plus étroite et resserrée sur tout son parcours; le chemin de fer urbain augmente le nombre des passants, trouble les conciliabules des flâneurs au coin des rues, et leur donne le scandale de la vitesse."<sup>53</sup> Fabre's comments reveal how the creatively destructive processes of capitalism were inscribed into both the physical environment of the city, and the minds of its inhabitants.

### *St Lawrence Street: Modernizing "the Main"*

For our second case study, we move just outside the central core of the old city to St. Lawrence Street (a.k.a. "the Main"). During the second half of the 19th century, St. Lawrence was transformed from the mixed-use main street of the St. Lawrence Suburb to one of the most important commercial thoroughfares in the industrial city; it was the primary north-south link between the downtown, with its port and financial district, and the rapidly expanding suburbs to the north.<sup>54</sup> Associated with this transformation of St. Lawrence, was the widening of a 2.7 kilometre stretch from the edge of the old core to the suburb of St. Louis du Mile End (annexed in 1910). Between 1888 and 1892, the lower portion, between Craig Street and Sherbrooke Street, was widened from 47 to 67 feet (14.3 to 22.0 m), and between 1903 and 1905, the widening was completed up to Mt Royal Avenue.

The widening of St. Lawrence has been the subject of much speculation by local historians.<sup>55</sup> In the most recent history of the Main, for example, Pierre Anctil claims the city demolished the west side "on the pretext of installing electrical wires and new tramway tracks."<sup>56</sup> Moreover, Anctil boldly charges: "in actual fact, it was the marginal inhabitants and the nascent criminality in the neighbourhood that the authorities wished to nip in the bud."<sup>57</sup> While such claims are intriguing, they lack supporting evidence, and are highly debatable. I argue that the city widened St. Lawrence Street for the same reasons it widened Notre Dame and most other leading thoroughfares: to enhance circulation and to augment its tax base through increased property values. A closer look at the section from Craig to Sherbrooke reveals how local property owners initiated the street widening as an opportunity to intensify the use of their land, in order to take advantage of the escalating demand for central city sites.

In the 1880s, owners in this section banded together and formally petitioned the Road Committee to pave and widen their street so that it might be placed on an equal footing with other commercial arteries, such as Notre Dame and St. James.<sup>58</sup> Since the new lines for this street had already been established on the homologation plan of 1874, and St. Lawrence was undoubtedly one of the busiest streets in the city,<sup>59</sup> the city would have eventually carried out the widening; therefore, the petitioners merely accelerated the process. The work of expropriating, demolishing, and rebuilding the 68 properties on the west side began in 1889 and was completed expeditiously in three sections by 1892.<sup>60</sup> Although not the primary motivation for undertaking the project, the widening of this section allowed for the introduction of parallel electric streetcar lines in 1892, which created direct links between the lower "Main" and suburbs in all directions.<sup>61</sup>



How was St. Lawrence Street redeveloped after the widening? Given the centrality and timing of the project, we should expect to find that redevelopment on St. Lawrence was similar to what we discovered on Notre Dame. As an empirical test, let us examine the before-and-after rents for a sample of properties on both sides of the street.<sup>62</sup> In 1888, just before the work was authorized, mean annual rent per building was \$779 on the west side and \$1052 on the east side of the street (Figure 2, Table 1). The more intensive development on the east side was a consequence of massive conflagrations in 1850 and 1852: burnt properties on the east side had been redeveloped to a greater scale than those on the west side, which had escaped the fires entirely.<sup>63</sup> This may be the reason why the homologation line was originally established on the west instead of the east side. Before the widening, this street contained mostly two-and-a-half and three-storey buildings, with shops on the ground floor and dwellings upstairs. About one-half of the buildings expropriated for the widening were made of stone, one-fifth of brick, one-sixth a combination of brick or stone with wood, and one-sixth constructed entirely of wood.<sup>64</sup> This suggests that at least one-sixth of all structures on the west side had been constructed before the great conflagrations of the 1850s, prior to the law banning wooden buildings.<sup>65</sup>

Almost a decade after the widening of St. Lawrence (in 1900), mean annual rent per building in the expropriated section had doubled (to \$1531). Rents on the side which had not been expropriated rose by less – one-fifth – and mean annual rent per building was lower (by one-sixth) than in the expropriated section (Figure 2, Table 1). In other words, the west side was now redeveloped to a higher intensity than the east. A bylaw specially enacted for this widening demanded that all new structures have stone or iron fronts and be no less than three storeys (or 35 feet from sidewalk to roof),<sup>66</sup> and therefore demanded a considerable improvement in the scale of investment and quality of architecture and urban design. These regulations were aimed at creating a continuous communal frontage and represent one of the earliest official considerations of streetscape aesthetics through urban design practices in Montreal. Art historian Aline Gubbay has gone so far as to suggest that the widening was part of a special scheme by city planners to fashion St. Lawrence into “a Champs Élysées that would challenge that of Paris.”<sup>67</sup> The fact that *La Presse* published sketches for a “Boulevard National” (to stretch between St. Lawrence and St. Denis) implies that grandiose plans for St. Lawrence had entered the public imagination;<sup>68</sup> however, I have found no evidence to suggest that such fanciful plans were ever seriously considered by city officials. Although we cannot entirely discount possible attempts at improving the visual quality of the streetscape, the evidence suggests that the city established such regulations on rebuilding primarily to guarantee an enhanced tax base after the widening. Similar bylaws were passed for other streets to be widened in this era, including Notre Dame West (formerly St. Joseph Street), Notre Dame East (formerly St. Mary’s), and Bleury.

Plans of St. Lawrence in 1880 and 1907 (see Figure 4) confirm that the west side was rebuilt to a much greater intensity after the widening; although the lots were made smaller by the widening, the new buildings along the west side had, on average,

larger footprints, that is, they covered a greater proportion of the area available on each lot. Between 1880 and 1907, the average lot size on the west side decreased from about 400 to 350 square metres, however, building coverage increased from about 73% to 84% of available land. During this same period, three lots fronting on St. Lawrence were extended to the rear by absorbing portions of lots that fronted on St. Charles Borromée. Furthermore, the plans illustrate that these new buildings incorporated more durable, longer-lasting construction materials, as required by the 1851 law banning wooden exteriors.<sup>69</sup> By 1907, only 7.0% of available land on the west side was covered with wood construction, compared to 26% in 1880. The plans also confirm that redevelopment on the east side was not as dramatic as that on the west side. While the wholesale reconstruction of the west side involved a new building type (i.e. the versatile industrial loft), the intensification of land use on the east side appears to have been achieved mostly by extending existing buildings, with only a few cases of entirely new development.<sup>70</sup>

A photograph taken in 1892 confirms that the new buildings on the west side (photo left) were taller than those on the east (see Figure 5). All of the buildings on the west side after the widening were a minimum of three storeys and several were larger; whereas most of the buildings on the east side were two-and-a-half or three-and-a-half storeys. A typical example of rebuilding was Lucie Perrault’s four-storey, cut-stone building on the north-west corner of St. Lawrence and Craig Street (photo left), erected shortly after the old building was torn down in 1889. The old building was a stone two-and-a-half, occupied by a grocery on the ground floor, with a dentist’s office and residence upstairs, and produced yearly rents of \$1800. The new building, with the same owner,<sup>71</sup> garnered twice the rents (\$3510), and contained an inn, a merchant tailor, and several offices for agents, lawyers, a notary, and architect. The changes of occupancy are indicative of the changing function of the street during this period, from one that served the needs of the local neighbourhood, to one that served a clientele from all over the city.<sup>72</sup>

### *Notre Dame Street East: Growing Pains*

For a third study, we move farther from the city centre to the eastern section of Notre Dame (formerly St. Mary Street) between Lacroix Street and Papineau Road. In the first half of the 19th century, Notre Dame East developed as the main commercial axis of a primarily working-class, French-Canadian neighbourhood known as “Faubourg Québec.” During the second half of the century, this street served as the primary thoroughfare between the city centre and industrial developments along the east end waterfront, and, consequently, its traffic contained a high volume of heavily-loaded teams.<sup>73</sup> Despite protests from abutting property owners against the widening of this stretch from 45 to 65 feet (13.7 to 19.8 m), in 1891, the city expropriated and demolished the entire north side between Lacroix and Papineau, which contained 59 properties, assessed at about a quarter of a million dollars.<sup>74</sup> This case points to the fundamentally undemocratic process of expropriation in highlighting the human consequences of the creative destruction of the built environment.

## The Creative Destruction of Montreal

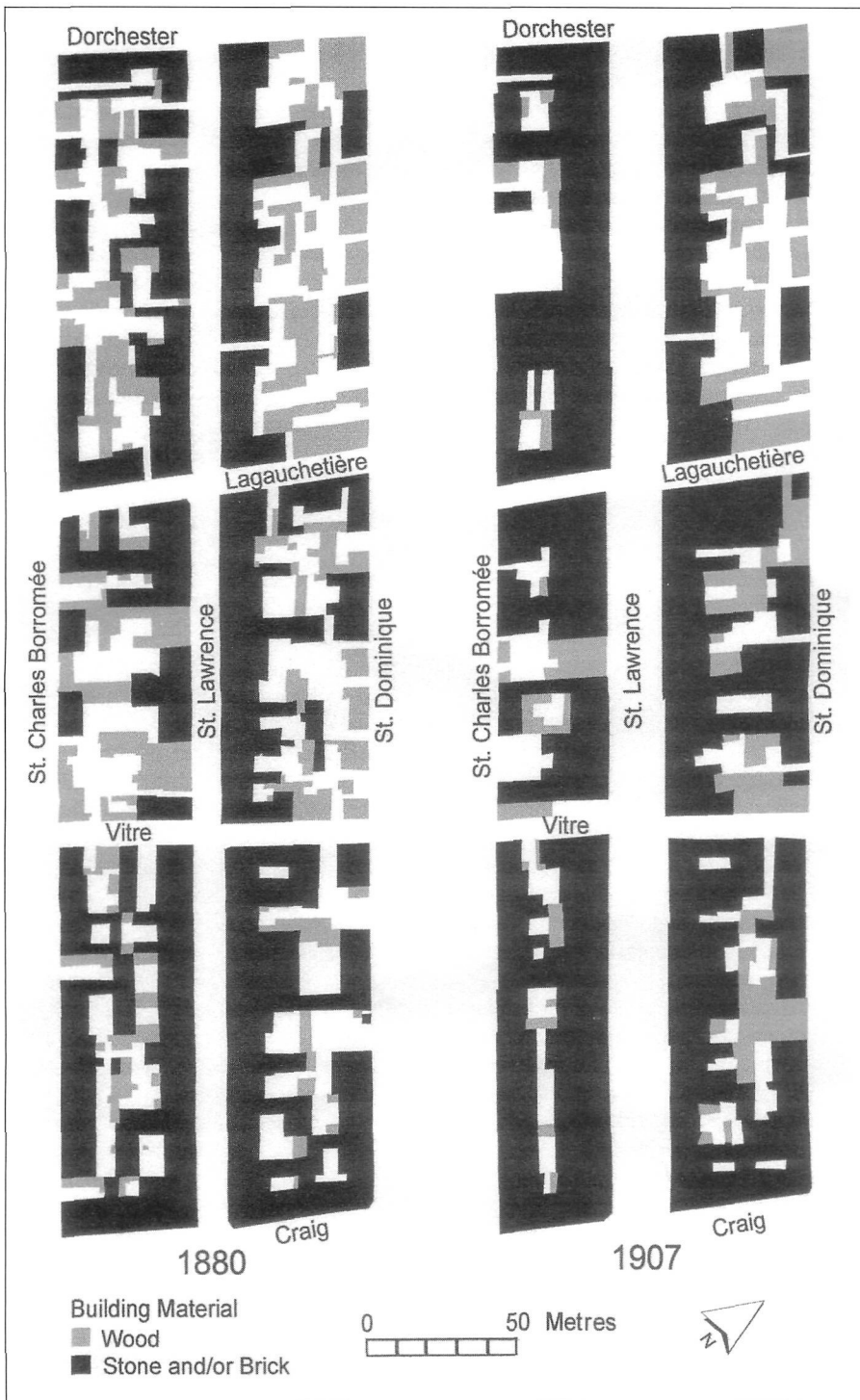


Figure 4: Figure ground plans of St. Lawrence Street before and after widening, 1880 and 1907

Sources: C.E. Goad, *Atlas of the City of Montreal*, (1881);  
A.R. Pinsonneault, *Atlas of the City of Montreal* (1907).

Many of the expropriated buildings were less than 40 years old, rebuilt after having been destroyed by the conflagration of 1852. Because the bylaw enacted after the fire prohibited wood exteriors, most of the buildings expropriated in the 1890s were brick-clad (70%).<sup>75</sup> About one-third of the buildings were three storeys and one-half were two-and-a-halves, similar to the ones shown in the section at the top of Figure 6.<sup>76</sup> Bylaws enacted for the widening, however, required new construction to be of dressed stone or iron fronts, and not less than three storeys high, thus prescribing a significant transformation of the streetscape.<sup>77</sup>

An examination of rental assessments on Notre Dame Street East before and after the widening suggests that redevelopment here was substantially different from that on the central portion of Notre Dame and lower St. Lawrence.<sup>78</sup> In 1890, shortly before the expropriations, the mean annual rent per building was \$440 on the north side and \$505 on the south side, indicating that buildings on the south side, on average, were moderately larger than those across the street (see Figure 2, Table 1). The discovery that buildings on the side to be expropriated were relatively smaller, on average, than those on the opposite side is consistent with what we found in the other cases, and, again, may have been a factor in choosing which side to expropriate. By 1900, a few years after the street was widened, the mean annual rent per building was essentially the same as before: \$415 and \$535 on the north side and south side respectively. The evidence indicates that owners on the north side rebuilt to a similar scale as before, and most owners on the south side did not alter their buildings at all. Most owners on the north side chose to rebuild to the legal minimum of "three stories in height, the ground floor being devoted to stores and the two storeys above to dwellings,"<sup>79</sup> as in the example at the bottom-right of Figure 6.

While politicians such as Raymond Préfontaine, "Montreal's Baron Haussmann,"<sup>80</sup> and expert witnesses from the real estate industry believed that widening Notre Dame would enhance its status as a leading thoroughfare, the evidence suggests something different. Some small-time owners objected to having to rebuild in stone, which was much more costly than the more commonly-used brick.<sup>81</sup> Other property owners protested having to pay for half of the project, since it was of no benefit to them. J. O. Joseph, for example, who owned a small house less than 30 metres from both the Canadian Rubber Company and Molson's Brewery, argued: "En



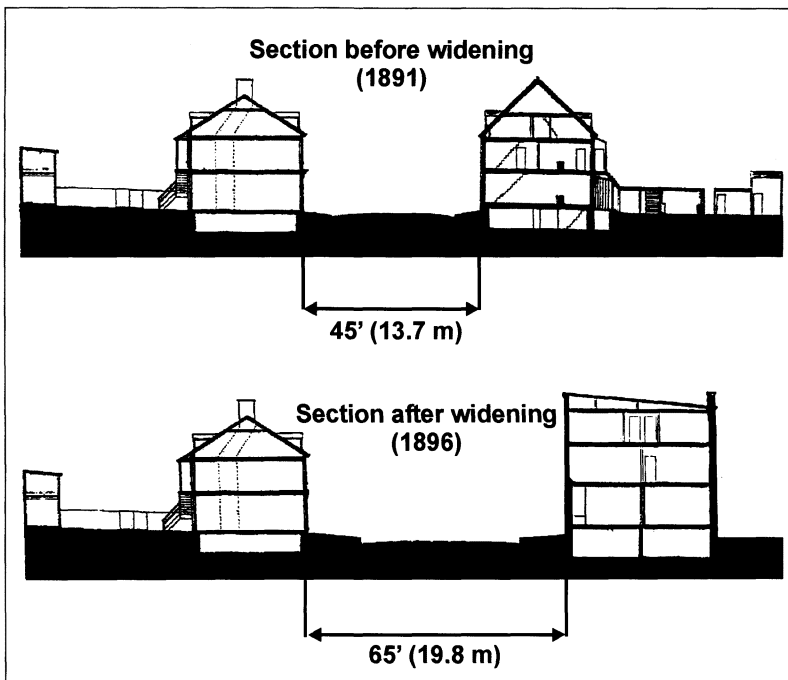
**Figure 5:** *St Lawrence Street corner Craig Street, rebuilt after widening, circa 1892*

**Source:** *Notman Photographic Archives, McCord Museum of Canadian History, Montreal (VIEW-2698).*

principe, toute expropriation doit être payée par le bénéfice que les contribuables peuvent en retirer, mais celle-ci a été ruineuse, désastreuse. C'est la ville qui nous a causé ce dommage, elle est tenue de le réparer."<sup>82</sup> Nevertheless, under the existing expropriation law, small-time owners had very little power to veto the improvement. To stop the widening, the law required that a signed declaration of opposition be filed with the city clerk within ten days after publication of the notice of expropriation, and the signers must constitute the majority *in value* of the parties benefited.<sup>83</sup> Since the definition of majority was calculated using assessed property values and not the actual number of abutting owners, the ultimate decision to widen or not was held by a small number of owners of extremely large and valuable proper-

ties – such as Molson's Brewery – who also stood to benefit most from the widening, and were therefore in favour of it.

Whereas most properties on St. Lawrence and Notre Dame Street in the core were rebuilt within a year after being destroyed, the work on Notre Dame East was fraught with delays. The widening project seriously disrupted private lives and business activities of hundreds of people. "Hundreds of dwellings, shops, factories, breweries, bar rooms, hotels, boarding houses . . . [were] converted into dust and debris . . . and a sufficient population moved out."<sup>84</sup> A conservative estimate (based on 1881 census) before the widening suggests that the 59 expropriated properties contained as many as 145 households and over 700 persons. The biggest blow was to the owners of small busi-



**Figure 6: Typical Section of Notre Dame East before and after widening**  
**Source: Cour Supérieure de Montréal, Dossier Référé #184, Ville de Montréal vs Rue Notre Dame (Archives Nationales du Québec).**

nesses, who claimed that, during the three to four years it took to complete the project, they lost most of their clientele to other commercial streets (notably Craig and St. Catherine).<sup>85</sup> To rub salt in the wounds, many of the small owners who had rebuilt after the widening, again had their properties taken from them a few years later in order to expand the Viger Station and rail yards. As we have experienced with expressway projects in the twentieth century, the case of Notre Dame East offers an example of the demands of “big business” taking priority over the “little guy,” that is, small business owners were removed for the benefit of railway companies and major industries such as Molson’s Brewery and Canadian Rubber Company located at the far eastern end of the street. In the name of East End development, a once thriving neighbourhood was destroyed, and the obituary read:

In the main, the buildings and blocks which have been removed had outgrown their usefulness and their removal must have come ere long anyway. Yet Montreal to-day is paying large interest on the cost of widening and improving that very Notre Dame street east which is now being converted into a lane through a railway yard.<sup>86</sup>

### **Discussion and Conclusions**

How can we explain the differences in the patterns of destruction and redevelopment in the three case studies? The findings are consistent with predictions regarding the trajectory of investment in the built environment: properties located in the more central areas of the city – Notre Dame in the core and lower St. Lawrence – were rebuilt with larger lumps of capital, that is, with

larger investments per square foot of land, with taller buildings that produced higher rents. Redevelopment was most intense in these central areas where land values were highest, where competition for space was most extreme, and where there existed the most pressure to adapt the built environment to accommodate the needs of a rapidly industrializing economy.

As anticipated, the timing of the project was an important factor in determining the scale and intensity of redevelopment. For property owners on Notre Dame East, demolition and rebuilding took place during an inopportune moment, the beginning of a “bust” period in construction. Indeed, in January 1895 a local contractor complained that “had it not been for the rebuilding of that street, Montreal would have witnessed the poorest year of building operations ever recorded in its annals.”<sup>87</sup> Conversely, the widening of the other case study streets took place during boom periods, when there would have been loans available and a strong incentive to rebuild to a greater scale and intensity in order to deal with heightened competition and to take advantage of increased values.

The fact that property owners on the central portion of Notre Dame and on St. Lawrence petitioned for street widening, while owners on Notre Dame East protested against widening, provides further compelling evidence that owners in the centrally located areas were more eager to redevelop their properties than owners on Notre

Dame East. By petitioning for the improvement, property owners sought to remove barriers (physical, financial, psychological) to redevelopment. The first major obstacle was the reality of the homologation line. Since all new structures had to be erected behind the new line, which in the case of St. Lawrence was drawn 20 feet (6.6 m) deeper than the old line, ambitious property owners had fewer square feet upon which to rebuild. This impediment could be overcome by the potential for increased rental and property values; however, since property values did not increase until the street was widened completely, with all neighbouring owners having rebuilt to the new line, there existed a serious disincentive for individual proprietors to act alone. Property owners therefore banded together to lobby the municipal government for street improvements.

The physical durability of existing structures, and the amount of built capital invested in them, also acted as barriers to redevelopment. As Rosen has argued for the case of accidental destruction by fire,<sup>88</sup> planned demolition, or “creative destruction,” also eliminated the inertia of built capital, and therefore offered the property owners a *tabula rasa* upon which to rebuild and to intensify the accumulation of capital. Owners were not completely free to build as they pleased, however, since the city in some instances restricted the type of material to be used, the minimum number of storeys, and the minimum height from sidewalk to roof. Although such regulations helped beautify the streetscape, the evidence suggests that the city was more concerned about guaranteeing an enhanced tax base after the widening.

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Another factor affecting redevelopment was the availability of capital. The practice of compensating proprietors for their losses helped to remove the financial barrier to redevelopment in the same way that insurance coverage assists redevelopment after accidental losses. Considering the different patterns of redevelopment in the case studies, we might expect to find that the compensation awarded to proprietors on Notre Dame East was not as substantial as the awards to proprietors in the central areas. On the contrary, the average award to owners on Notre Dame East (\$10.05 per square foot) was more generous than the average award to owners on lower St. Lawrence (\$9.41 per square foot).<sup>89</sup> Although the awards seem equitable, especially when compared with the assessed values before expropriation, they were not exactly windfalls for the owners. In fact, some owners on Notre Dame East hired their own "expert witnesses" and contested the awards in court, arguing that the city did not consider the totality of losses, since they overlooked items such as building fixtures, lost business, and the good will of the customers.<sup>90</sup> Besides, since owners were required to pay for half of the widening, much of the award money came from their own pockets!

In 1895, City Surveyor Percival St. George confessed in a public lecture that the homologation plan adopted two decades earlier "was a hardship necessitated by the condition in which the great growth of the city found itself, and some means had to be taken in order to make the streets wider."<sup>91</sup> St. George's statement is interesting for two reasons. First, it supports my argument that alterations to the street plan were a response to the congestion generated by rapid urban development. The homologation plan was not only a strategy to accommodate future growth, but it was primarily also a mechanism to cope with existing congestion. Second, the "hardship" he refers to was that experienced by the city government, due to the large debt resulting from reimbursements. There was no recognition in his speech of the suffering of property owners; in fact, the opposite was true. The City Surveyor suggested that a fixed award of no more than 25% to 50% above the assessed value of the property would be adequate to "compensate owners for the forced sale . . . and the proprietor would not object to it, as he would look forward some day to being expropriated himself."<sup>92</sup> The fact that owners on Notre Dame East protested their compensation amounts, which were typically 770% above the assessment values, suggests that the City Surveyor's cost-saving ideas were unrealistic.

Architectural historian Spiro Kostof argued that "expropriation is rarely welcomed by those who inhabit the condemned property, and it is always an arbitrary intervention performed coercively."<sup>93</sup> The fact that owners on St. Lawrence Street and the central portion of Notre Dame petitioned in favour of street widenings implies that expropriation was sometimes welcomed by proprietors. Indeed, so many property owners opted for expropriation under the system of annual expropriations (established 1889) that the city was rapidly driven into massive debt. Nevertheless, examination of expropriation law in late 19th-century Montreal reveals that individuals had little power to resist the destruction of their properties once a widening was set in motion. Furthermore, the negative experience of the widening for small-time owners on Notre Dame Street East points to the undemo-

cratic nature of expropriation law, which put the decision on widenings into the hands of big-time capitalists (e.g. factory owners) who owned the largest, most valuable properties. It was clear that the eastern section of Notre Dame did not follow the trend in increased exchange value as did the more central portion. Indeed, the heavy industrial traffic through Notre Dame East was not an asset to the retail enterprise which comprised most of its frontage. Nevertheless, based on the assertion that a widening benefited all, the city could charge all abutting owners for the cost of the work, and could increase its revenue by collecting higher taxes on properties fronting on "improved" streets. Despite the fact that widenings may have sometimes *seemed* arbitrary to people immediately affected, the evidence suggests that the expropriation of property and the widening of streets in Montreal were not arbitrary processes; on the contrary, the homologation plan, as originally designed, was a rational strategy for accommodating growth through the gradual widening of principal thoroughfares. For the most part, widenings took place where the urban vascular system was most congested, namely the narrow streets of the urban core, the major thoroughfares, streetcar routes, and the approaches to the railway stations and docks.

In this paper we have explored how the built form of Montreal was continuously shaped and reshaped by civic officials and property owners committed to increasing rents, property values, and municipal revenues, through the intensification of land use. The findings with respect to the processes of expropriation, widening, and rebuilding in 19th-century Montreal exemplify the paradoxical nature of modern urban experience, and point to the pressures imposed by the cyclical nature of urban development. Each wave of urban growth was associated with a massive surge in the flow of goods and people into, out of, and through the city, heightened competition for urban space, extreme congestion of public infrastructures, and, consequently, an intensified pressure to adapt the inherited built landscape to accommodate new demands. Since built capital is fixed in place and slow to change, a continuous source of conflict exists between contemporary demands and the legacy of investments in the built environment. Each new wave of growth and associated crises repeatedly forced the "creative destruction" of the exchange values of past investments in the built environment, in order to make room for future accumulation. Investments in street widenings were a way for the city to remove congestion in the urban vascular system, to "annihilate space" in relation to time, and hence, to speed up the rate of growth of capital – paving the way for the next more extensive and more destructive episode which would come along.

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26. Montreal, *An Act to Amend and Consolidate the Provisions of the Ordinance to Incorporate the City and Town of Montreal* (Montreal: James Starke & Co., 1845), 56.
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28. See Citizens' Association of Montreal, *Report of the Citizens' Association on Municipal Expropriations* (Montreal, 1869).
29. Quebec, *Statutes*, 37 Victoria, Chapter 51, Sections 168–72. Comments by the City Surveyor, P. Macquisten, suggest that he had been contemplating such a plan for Montreal for at least a decade, and he may have been inspired by a French law of 1807 which required all towns with more than two thousand inhabitants to establish "un plan général d'alignement" upon which the municipal council would mark desired alignments of all streets. See *Report of the City Surveyor* (1864); also, M. Darin, *Alignement des rues* (École d'architecture de Nantes, 1987).
30. Jean-Claude Marsan, for example, claims the first attempt at "overall planning" in Montreal came in 1944. Marsan, *Montreal in Evolution: historical analysis of the development of Montreal's architecture and urban environment* (Montreal: McGill-Queen's University Press, 1981), 329.
31. Planning historian Françoise Choay defines "regularization" – a term also used by Haussmann – as "that form of critical planning whose explicit purpose is to regularize the disordered city, to disclose its new order by means of a pure, schematic layout which will disentangle it from its disorder, the sediment of past and present failures." Choay, *The Modern City*, 15.
32. Expropriations were to take place every five years after 1885, however, after 1890, they became an annual practice. Quebec, *Statutes*, 42–43 Victoria,

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- Chapter 53; Quebec, *Statutes*, 52 Victoria, Chapter 79, Sections 222–27; Quebec, *Statutes*, 54 Victoria, Chapter 78, Section 7.
33. The latter proviso about residuals was added in 1889. Quebec, *Statutes*, 54 Victoria, Chapter 78, Section 7.
  34. See Montreal, *Report of the City Treasurer* (1895), 3; also R. Wilson-Smith, *Inaugural Address of the Mayor of the City of Montreal* (Montreal, 1898).
  35. Wilson-Smith, *Inaugural Address*, (1898), 7–8.
  36. This was the name the city attorney gave to expert witnesses hired by property owners. *The Week* (23 August 1895), 925.
  37. St. George, "Our streets and drains," 33.
  38. H. Fabre, *Chroniques* (Québec: Imprimerie de l'événement, 1862 reprinted 1977), 38.
  39. The suburban municipalities – Hochelaga and St. Cunégonde – were annexed in 1883 and 1905 respectively.
  40. Between 1861 and 1868, tram ridership in Montreal doubled from about one million to two million passengers per annum.
  41. The first two parcels of land were acquired from the petitioners in 1854, another was procured in 1863, three more in 1864, and the remaining 49 properties were acquired all at once in 1865. *Report of the City Surveyor* (1854; 1863; 1864; 1865).
  42. Canada, *Statutes*, 27 and 28 Victoria, Chapter 60. See explanation in *Report of the City Surveyor* (1864), 9.
  43. P. MacQuisten, City Surveyor, explained the logic: "When a strip of land, say 30 feet long by 10 feet deep, is taken to widen a street, the remainder of the lot cannot be considered to have been increased in value, if the buildings on each side of it project ten feet beyond its front, and no additional assessment will be received from it." *Report of the City Surveyor* (1864), 9.
  44. By 1872, this corner property was assessed at \$18,000. *Rôle d'évaluation* (1872).
  45. *Report of the City Surveyor* (1854; 1863; 1864; 1865). The "special assessment" varied according to section, ranging from \$1.19 to \$2.53 per \$100 of assessed value of property. See Canada, *Statutes*, 27 and 28 Victoria, Chapter 60[30].
  46. The term "intensity of development" refers to the concentration of built capital on a lot or lots.
  47. The source is further described in D. Hanna and S. Olson, "Métier, loyer et bouts de rue: l'armature de la société montréalaise de 1881 à 1901," *Cahiers de géographie du Québec* 27 (1983): 255–75; J. Gilliland, "Modeling residential mobility in Montreal, 1860–1900," *Historical Methods* 31 (1998) 27–42; R. Lewis, *Manufacturing Montreal: the making of an industrial landscape, 1850 to 1930* (Baltimore: The Johns Hopkins University Press, 2000).
  48. According to geographer David Hanna, the earliest available atlas showing heights of Montreal buildings is the 1907 update of an earlier atlas by Charles Goad, but only a few plates still remain in a corporate archive. By measuring a stratified sample of houses, Hanna and Olson (1983) confirmed the powerful correlation ( $r=.99$ ) between rents and floor area. The "scale" of a building refers to the overall size or volume, and thus, "scale of development" refers to the density of building coverage on a lot or set of lots in three-dimensions.
  49. The sample consists of all properties fronting on Notre Dame (both sides) between McGill Street and St. François Xavier Street in the years 1862 and 1872. It is likely that the city chose to expropriate the north side so as not to disturb the Notre Dame Basilica, Montreal's most cherished monument, located on the south side.
  50. While none of the buildings in the case study area was entirely residential in 1862, over four-fifths on the north side, and three-quarters on the south side, contained dwellings upstairs. A decade later, however, only one property on the north side, and less than one-third on the south side contained residential components. Historian Jean-Claude Robert estimates that by 1852, barely one-tenth of Montreal's population lived in the central core of the city. See J.-C. Robert, *Atlas Historique de Montréal* (Montreal: Art Global, 1984).
  51. See G.J. Levine, "Tax exemptions in Montreal and Toronto, 1870 to 1920," *Cahiers de géographie du Québec* 35 (1991): 117–34.
  52. Fabre, *Chroniques*, 38.
  53. *Ibid.*
  54. See P. Anctil, *Saint-Laurent: Montreal's Main* (Sillery, QC: Septentrion, 2002); and A. Gubbay, *A Street Called the Main: The Story of Montreal's Boulevard Saint-Laurent* (Montreal: Meridian, 1989).
  55. See Anctil, *Saint-Laurent*; A.-G. Bourassa and J.-M. Larrue, *Les Nuits de la « Main »: Cent ans de spectacles sur le boulevard Saint-Laurent (1891–1991)* (Montreal: VLB éditeur, 1993); and A. Gubbay, *A Street Called the Main*.
  56. Anctil, *Saint-Laurent*, 22.
  57. *Ibid.*
  58. The petitions for paving and widening were submitted in 1881 and 1888 respectively, see: Commission de la voirie, *Rapports adoptés*, 26 March 1881; Commission de la voirie, *Procès Verbaux*, 12 May 1888. Some of the information on St. Lawrence Street was gathered in cooperation with my colleague Julie Podmore, who has written about gender relations along "the Main" over the past century. See, J. Podmore, "St. Lawrence Blvd. as 'Third City': Place, Gender and Difference along Montréal's 'Main'." (Unpublished Ph.D. thesis, McGill University, 1999).
  59. Almost 3000 vehicles (all horse-powered) passed down this street on a typical business day (7am to 7pm) in 1891 – including one horse tram every 4 or 5 minutes – making it one of the busiest arteries in the city. Traffic volume on lower St. Lawrence was about 50% greater than on the central section of Notre Dame, however, St. Lawrence was also about 50% wider. For further examination of traffic in 19th-century Montreal, see Gilliland, "Redimensioning Montreal."
  60. The work was to begin May 1, 1889, and be completed within three years. The total compensation for expropriation was \$677,701. *Report of the City Surveyor* (1889).
  61. Evidence suggests that official discussions concerning a possible double track on St. Lawrence may have surfaced only in 1890, after the widening had already begun. Commission de la voirie, *Procès Verbaux*, 15 October 1890.
  62. The sample comprises all properties on both sides between Craig and Dorchester in 1888 and 1900. The cost of expropriating these 29 properties was \$303,994, at an average reimbursement of \$9.41 per square foot. *Report of the City Surveyor* (1889).
  63. Gilliland, "Redimensioning Montreal."
  64. *Report of the City Surveyor* (1889).
  65. The ban on wood construction is explained in: Montreal, *An Act to Amend and Consolidate the provisions of the ordinance to incorporate the City and Town of Montreal* (1851), 51.
  66. By-law 161, passed 1 Oct. 1888.
  67. Gubbay, *A Street Called the Main*, 43.
  68. The sketches by Georges Delfosse were inspired by the "Boulevard de l'Opéra" in Paris. *La Presse* (27 May 1899).
  69. Montreal, *An Act to Amend and Consolidate the provisions of the ordinance to incorporate the City and Town of Montreal* (1851), 51.
  70. See J. Zacharias, "The emergence of a 'loft' district of Montreal," *Urban History Review / Revue d'histoire urbaine* 19 (1991): 226–32. Building coverage on the east side increased from about 70% to 80% between 1880 and 1907.
  71. Between 1888 and 1900, one-third of the properties on the west side had changed owners; whereas, on the east side, barely one in seven properties had been transferred.
  72. For further discussion of the changing character of St. Lawrence, see: Gubbay, *A Street Called the Main*; and Podmore, "St. Lawrence Blvd. as 'Third City'."
  73. See Lewis, *Manufacturing Montreal*. On a typical day in 1892, about two-fifths of all vehicles on Notre Dame East were greater than one ton,

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- whereas, barely one-fifth of vehicles on St. Lawrence and Notre Dame in the core were "heavy." *Report of the City Surveyor* (1892).
74. The cost of expropriation was \$443,268. *Report of the City Surveyor* (1891).
75. The remaining 30% were stone, or mixed stone and brick. See official notice of expropriation in *Montreal Gazette* (28 February 1891).
76. The remaining one-sixth were one or two-storeys. There were no buildings higher than three-storeys. For a morphological analysis of these buildings, see F. Dufaux, "A new world from two old ones: the evolution of Montreal's tenements, 1850–1892," *Urban Morphology* 4 (2000): 9–19.
77. By-law 192, passed 29 May 1891.
78. The sample consists of all properties within St. James Ward, between Lacroix and Visitation on the north side, and Lacroix to Barclay on the south side. Average reimbursement in this section was \$10.05 per square foot.
79. *Canadian Architect and Builder* (January 1895), 8.
80. W.H. Atherton, *Montreal, 1535–1914*. Vol. II, (Montreal: The S.J. Clarke Publishing Company, 1914), 185. For discussion of Préfontaine's "political machine," and municipal governance in Montreal in general, see M. Gauvin, "The Reformer and the Machine: Montreal Civic Politics from Raymond Préfontaine to Mederic Martin," *Revue d'études canadiennes/Journal of Canadian Studies* 13 (1978):16–27; Linteau, *The Promoter's City*; M. Dagenais, *Des pouvoirs et des hommes: L'administration municipale de Montréal, 1900–1950* (Montreal: McGill-Queen's University Press, 2000); and Gililand, "Redimensioning Montreal."
81. For example, Elzéar Bélanger pleaded: "Pendant que nous étions forcés de construire à grands frais, des édifices en pierre, de trois étages, on amendait les règlements en faveur de certaine compagnie, pour lui permettre d'ériger des bâtiments en brique. On me dit même que l'on ne s'est pas donné la peine d'amender les règlements, à ce sujet, et que ces constructions ont été érigées d'une manière irrégulière" *La Presse* (22 February 1902), 5.
82. *La Presse* (22 February 1902), 5.
83. Quebec, *Statutes*, 52 Victoria, Chapter 79, Sections 9 and 10. Half of the cost of the widening was to be paid by the city, the other half to be paid by the proprietors on both sides of the street to a depth of 50 feet (19 m) between Dalhousie Square and Frontenac Street. The amount owed was payable in up to ten annual installments at an annual rate of 6% interest. See Quebec, *Statutes*, 54 Victoria, Chapter 78, Section 2; also Quebec, *Statutes*, 55 and 56 Victoria, Chapter 49, Section 22.
84. *Montreal Star* (28 August 1909), 2.
85. See accounts of merchants J. Wright and E. Bélanger in *La Presse* (22 February 1902), 5.
86. *Montreal Star* (28 August 1909), 2.
87. *Canadian Architect and Builder* (January 1895), 8.
88. Rosen, *The Limits of Power* (1986).
89. Furthermore, if we compare these figures with the assessed value of properties before expropriation, we find that the awards per square foot on Notre Dame East were 7.7 times higher than the assessed property value per square foot (\$1.30); whereas the awards on St. Lawrence were only 2.9 times higher than the assessed value per square foot (\$3.16) (pre-expropriation square footage estimates are unavailable for the central portion of Notre Dame).
90. Cour Supérieure de Montréal, Dossier Référé #184, *Ville de Montréal vs Rue Notre Dame* (Archives Nationales du Québec).
91. St. George, "Our streets and drains," 32.
92. *Ibid.*, 33.
93. Kostof, *The City Assembled*, 266.