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LA PETITTE CEINTURE: THE LITTLE BELT RAILWAY. A CONNECTED  
GREENWAY TO ENCOMPASS PARIS, DIALOGUE BETWEEN THE URBAN  
FABRIC AND THE VEGETATIVE ENVIRONMENT.

BY

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Rutgers, The State University of New Jersey

In partial fulfillment of the requirement

For the degree of

Master of Landscape Architecture

Graduate Program in Landscape Architecture

Written under the direction of

Richard Alomar

And approved by

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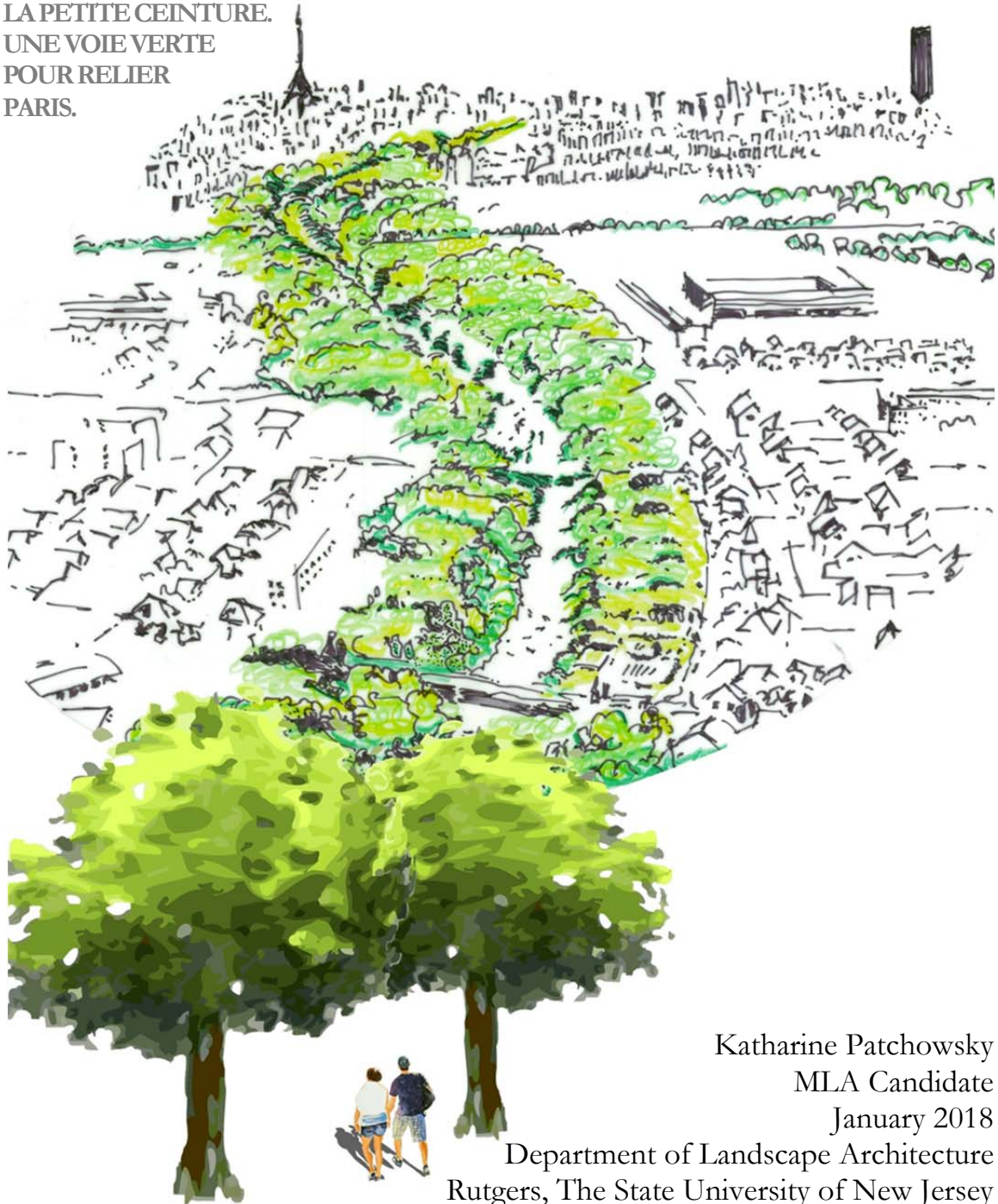
New Brunswick, New Jersey

January 2018



# LA PETITE CEINTURE: THE LITTLE BELT RAILWAY. A CONNECTED GREENWAY TO ENCOMPASS PARIS, FRANCE.

LA PETITE CEINTURE.  
UNE VOIE VERTE  
POUR RELIER  
PARIS.



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January 2018

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ABSTRACT OF THE THESIS

LA PETITE CEINTURE RAILWAY: THE LITTLE BELT RAILWAY: A  
CONNECTED GREENWAY TO ENCOMPASS PARIS, DIALOGUE BETWEEN  
THE URBAN FABRIC AND THE VEGETATIVE ENVIRONMENT.

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Thesis Director:

Richard Alomar

This thesis examines La Petite Ceinture in Paris, a rail line that is no longer in official use by its owner SNCF [Société Nationale des Chemins de fer Français] and its potential as a venue for useable open space and recreation. This rail line circumnavigates Paris just inside the Boulevard Périphérique and the border of the city proper. Therein lays its potential to unite the city with a circular greenway and promenade. In certain areas there are opportunities to provide open spaces for dense residential neighborhoods where a plaza or a park is more than a 10 minute walk. Additionally it would connect other parks, plazas and bike routes that are currently unconnected thereby expanding safe bike routes that are uninterrupted by vehicular traffic. As the line is located in residential neighborhoods toward the outskirts of the city, it is therefore postulated that this space will be useful for the citizens of Paris and assist them in their daily lives.

## ACKNOWLEDGMENT OR DEDICATION

This work is dedicated to my family who has always supported me in every way.

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\*\* For color and map fold out version, go to the Landscape Architecture Department of Rutgers University.

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## Abbreviations

APUR	Atelier Parisien D’Urbanisme
ARR	Arrondissement [District]
ASPCRF	l’Association Sauvegarde Petite Ceinture. [The Association for Preservation of The Little Belt Railway]
CMAQ	Congestion Mitigation and Air Quality Program
FBT	Friends of Bloomingdale Trail
FHL	Friends of High Line
FHWA	Federal Highway Administration
HL	The High Line
PC	La Petite Ceinture [the Little Belt] Rail Way
METRA	Commuter Railroad in Chicago Metropolitan Area
MÉTRO	Paris Métro or Métropolitain – Métro de Paris
MIT	Massachusetts Institute of Technology
RATP	Régie autonome des transports Parisiens
RER	Réseau Express Régional [French commuter rail in Paris]
RFF	Réseau ferré de France
ROW	Railway Right-of-Way
SNCF	Société nationale des chemins de fer français [National Society of French Railways] Formerly RFF
WEF	World Economic Forum

## 1. Introduction:

*You can't escape the past in Paris, and yet what's so wonderful about it is that the past and present intermingle so intangibly that it doesn't seem to burden.*  
— Allen Ginsberg, poet.<sup>1</sup>

The potential for a connective green space through the city of Paris is significant. La Petite Ceinture railway [PC] is currently an abandoned railway line owned by Société nationale des chemins de fer français [SNCF], which circles upon itself in the city of Paris. La Petite Ceinture railway [PC] connects a multitude of underutilized spaces adjacent to the tracks that also belong to SNCF, as well as other parks and major boulevards that serve Paris. This thesis addresses possible connections between the wild vegetative space of the rail line and the urban fabric that surrounds it. It is the culmination of many months in Paris over the last few years observing and studying the situation. I've taken photographs, sketched, and talked to administration and observed various people and their activities. This thesis is the result of my observations, research and ideas regarding La Petite Ceinture and its future. Some sites are discussed that highlight several typical topographic exchanges between La Petite Ceinture and the city; others are used as case studies for the design development concepts.

La Petite Ceinture [PC] as shown in Image 1 represents an important part in the history and growth of the City of Paris.<sup>2</sup> It is a 32 km [20 miles] railway loop with over 40 hectares of open space that occupies a prime location in a dense urban environment. Currently the PC is under heavy scrutiny for development, this may serve as an example to other cities that faces similar situations. Such spaces are pressured by modern development projects such as a new housing project, or from landowners who wish to expand their restaurant or store





and enlarge their own space; they usually look only at the space itself and do not consider the larger context of city planning.

These actions could invoke an irrecoverable loss of green and open space for the city.

Developments are a huge part of organic city growth, but the overall benefit to the city and its citizens must also be considered. The site of La Petite Ceinture is an example, since it is on the forefront of the public's attention in Paris and development pressure is high. A site of this size and location that weaves through the city will not to be repeated. It would be best for the city and its citizens to preserve La Petite Ceinture and not allow it to be absorbed into the urban fabric through such developments. Instead La Petite Ceinture should be maintained for the much needed open and green spaces for the citizens and the City of Paris. It is a historic site that was a part of the building and growth of the city and should be landmarked as such.

The site of the PC is very rich in history and possesses a wealth of historic buildings and a myriad of connections to the city. Development is constant and an unstoppable progression of time. However, it may be a blessing as long as there are considerations for local context and the *genius loci* of the space. With any renovation or implementation of a completely new project, be it a building, a landscape or a space in between, consideration of the use it served in its existence, the history, with the context of a site will aid in the success of the project. Consideration of the vernacular dialogue that once was and that now is in play, will explain what one must consider, one only has to listen and learn. The spirit of place does matter.

This thesis examines:

- A spatial investigation of La Petite Ceinture [PC] rail line and its relationship to Paris.
- A look at some of the spatial growth of Paris through time
- Case studies of other linear spaces
- The history of the PC
- The rail line as a spatial lens, analyzing the spaces along and adjacent to the rail line
- The existing topography and connections with the urban fabric
- Three [3] potential sites for design with specific chosen criteria

As the PC is at the forefront of the public attention, it is therefore necessary to include the different schools of thought from each of the involved parties. With any new redevelopment project that appears in the public realm there will always be a difference of opinion from various perspectives. The involved parties in this discussion are as follows; APUR, SNCF, ASPCRF, City of Paris and the citizens.

## **APUR**

The city of Paris and Atelier Parisien d'Urbanisme [APUR], is the city urbanism agency created in 1967 by the Paris City Council. One of their goals is path finding, mapping and assisting in public planning and development, policy making both on a large scale city wide, as well as considering smaller scale districts or arrondissements. A key goal is to create more open and green spaces for the citizens of Paris. APUR currently has a few people whose work is dedicated to La Petite Ceinture specifically.

## **SNCF**

The current owners of the rail way line is Société nationale des chemins de fer français [SNCF-Network]; or the National Society of French Railways, formerly the RFF-(Réseau ferré de France).<sup>3</sup> SNCF has just recently signed an agreement with the city of Paris.

Essentially it allows for the City of Paris and the arrondissements to utilize the space of La Petite Ceinture for urban parks and gardens. However the tracks must remain to allow for the possibility of SNCF recovering the space for train use in the future. The arrondissements would be responsible for the park and the amenities added to each site, including furniture, wastebaskets, plantings etc. SNCF would be responsible for the upkeep of the infrastructure such as bridges and trestles and any other buildings.

## **ASPCRF**

L'Association Sauvegarde Petite Ceinture [ASPCRF] or, The Association Backing Little Belt. This organization promotes the preservation and knowledge of La Petite Ceinture with the specific goal of returning public train service back to La Petite Ceinture railway. They are a very active association with regular meetings, outings and many written articles, books and information designed to preserve the history and educate the public. Members of the organization pay an annual fee; student rate is 7 euros per year and active membership fees are between 40 – 69 euros per year.

## Paris and its Citizens

The City and the Mayors wish to open the space to the public; however, it is still yet undecided as to the programming of each space and how and when things may be accomplished. For the past few years, the City of Paris and the Mairie of each arrondissement [Mayor's office of each district] along with APUR have been hosting open community meetings to engage the public.

Within the city of Paris, citizens are either aware or somewhat informed of the PC and there are those who do not know. Among those citizens who are aware of the abandoned railway line, they either do not cross the 'do not trespass signs', the 'keep out or 750€ fine' or there are those who do. Those who do currently utilize the many spaces in spite of the warning signs and in so doing have found a reprieve from the city. There are many spaces used as well-tended vegetable patches, gardens and places for picnics, etc. Many of these areas can be as busy as any public park. There are people who are using the space as their secretive garden reprieve from the city environment and many wish it to remain a secret. However spaces and development is a constantly changing dynamic that is forever moving forward. As there is movement and development pressure within the city that the space will not stay hidden from the public for long. Additionally there are many citizens who may not know where the proverbial holes in the fences are and they wish to see the space utilized as a public park or garden.

**Notes:**

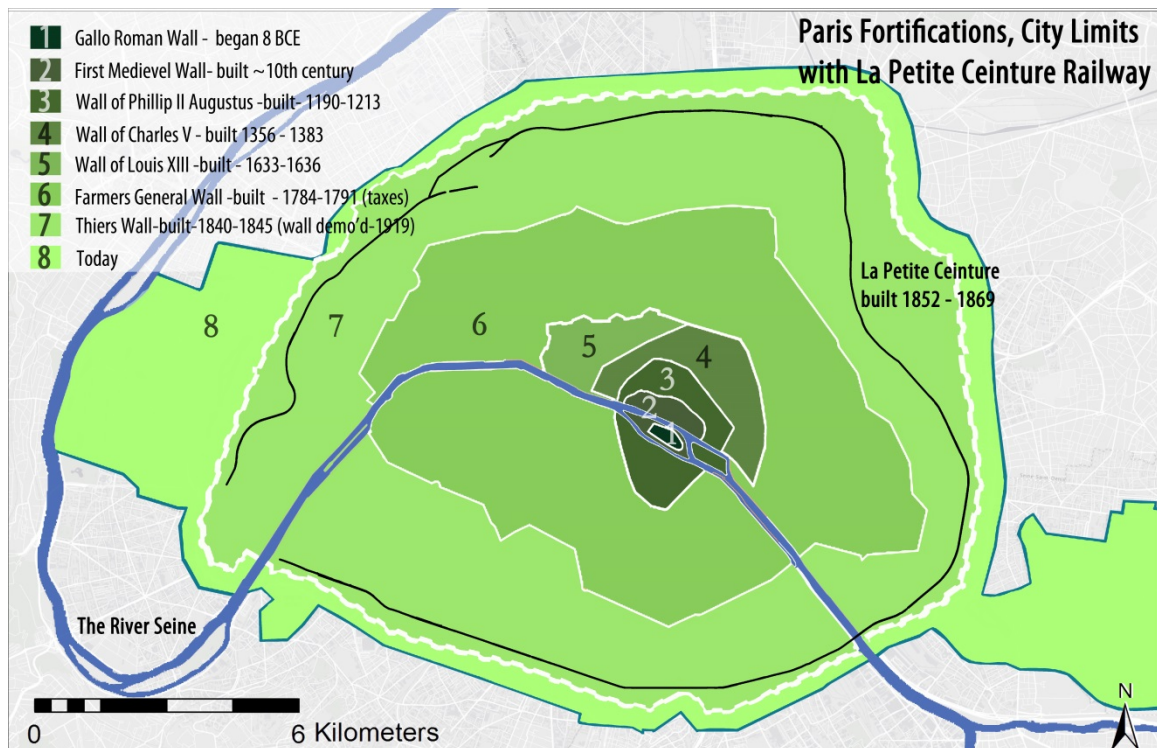
1. Herlihy-Mera, Jeffrey and K. Koneru, Vamsi, ed's. 2015. *Paris in American Literatures: On Distance as a Literary Resource*. University Press Copublishing Division / Fairleigh Dickinson University Press Epilogue. p. 188.
2. The map shows La Petite Ceinture Rail Line in red, in 1911. Other rail lines and train stations are visible along with the Thiers Wall, the limits of the City of Paris at the time. ASPCRF – l'Association Sauvegarde Petite Ceinture. Last Accessed June 15, 2017. <https://www.petiteceinture.org>.
3. RFF was a French company that owned and maintained the French national railway network from 1997–2014. In January 2015 SNCF Réseau became the operator of the French railway system. It was created as a result of the merger between RFF, SNCF Infra and the Division of Railway Traffic Management [DCF]. Last Accessed: June 15, 2017. <https://www.sncf-reseau.fr>.



## 2. La Petite Ceinture and The City of Paris

*“Paris is the heart of France, and all the useful improvements that we can adopt here contribute powerfully to the general good. . . . Let us put all our efforts to embellishing this great city, to improving the condition of its citizens, to enlightening them on their true interests. Let us Open new streets, Clean up the populous neighborhoods that lack Air and Daylight, and let the sun’s beneficial rays penetrate everywhere behind our walls, like the light of truth in our hearts.”*  
 – Président Louis-Napoléon in inauguration speech December 1850. <sup>1</sup>

*“Make no little plans. They have no magic to stir men’s blood and probably will not themselves be realized.” — Daniel Burnham, Architect and Urban Designer. <sup>2</sup>*



**Image 1.** Paris walls and fortifications from the 4th century until today. La Petite Ceinture existed just inside the Thiers Wall. Map composed by author.

Paris began as a fishing settlement with Gauls of the Parisii on Île de la Cité from about 250-200 BCE. <sup>3</sup> The first of a succession of walls or fortifications was the Gallo-Roman wall on Île de la Cité, image 1. Over time the borders expanded farther as more space was needed to accommodate the growing population. Old walls were removed and deconstructed with the

materials being reused for buildings and streets. Additionally new fortifications were built and constructed over time and through various reigns, both monarchic and governmental.

The longevity of buildings and infrastructure in cities can easily give the appearance of its existence being longer than it was. In France much of the rail infrastructure that is often taken for granted was only recently laid in the 19<sup>th</sup> century. In fact, by the end of 1841 there were only 573 km of rail lines laid in France, compared with a total of



**Image 2.** Plans of the Ile-de-France Railways in 1863. A specific color is attributed to the network of each company as well as to the Rive Droite and Rive Gauche Belts. The gray area represents Paris in its pre-1860 limits. The serrated line represents the fortifications of Thiers.

railways to private companies while remaining under a government guarantee with a condition that the lines thus built would become the property of the state after a certain number of years. This created a boom in rail companies; 33 in 1846 for 1,900 km of lines. However many companies could not fulfil their engagements and the state needed to intervene. To remedy this, the government brought about an amalgamation of existing companies. In spite of the economic and political crisis at the time six major companies were created on December 31, 1858.





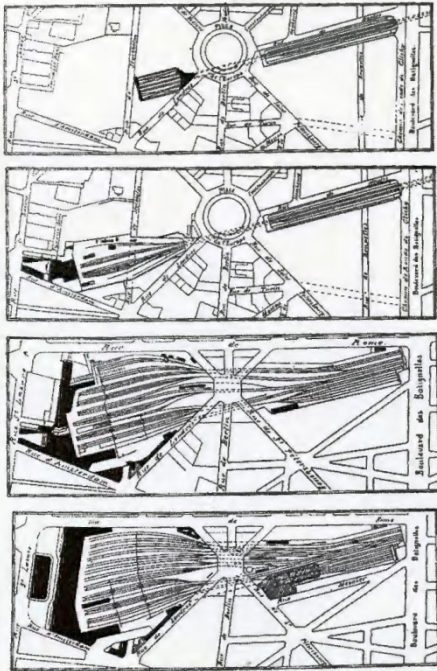
**Image 3.** Map of rail lines in France in 1850, 1860 and 1870 respectively.

The merging of the companies added stabilization to the network. Each of the six companies were allotted an average of 2, 717 km per company. Following the mergers, construction of the rail way lines became a back breaking pace, 770 km on average per year, image 3.<sup>5</sup> Thereby making six major companies broken up by regions as follows.

1. The Compagnie des Chemins de fer du Nord [The Northern Railway Company]
2. The Compagnie des Chemins de fer de l'Ouest [The Western Railway Company]
3. The Compagnie des Chemins de fer de l'Est [The Eastern Railway Company]
4. The Compagnie des Chemins de fer Midi [The Southern Railway Company]
5. The Compagnie des Chemins de fer Lyon et Méditerranée [Lyon & Mediterranean Company.]
6. The Compagnie des Chemins de fer Paris-Orléans PO –[The Paris-Orléans Company].

At the same time other rail networks were being created. While this all led to a vast network of lines that transported everything regionally in and out of Paris, including people, raw materials, merchandise and cattle. It did little to improve city transportation. Though this vast newtork of rails met in Paris, like Gare St Lazare Station, the lines were separate from one another with little or no communciation. The quickened pace of construction lead to city growth, and population soar, easily seen in the train stations evolution, image 4.<sup>6</sup>

Existing spaces were further divided as new buildings are built to accommodate the quickly growing population. The population stretched existing infrastructure to its limits.



**Image 4.** Gare St. Lazare one of the terminus stations in Paris, rail diagrams from 1837 to 1889.



**Image 5.** An aerial, of Gare St. Lazare as seen today.  
By author.



**Image 6.** An aerial view of Gare de l'Est in 2011.



**Image 7.** Rue Haute des Ursins, by Charles Marville, 1865.



**Image 8.** Rue de Glatigny, by Charles Marville, 1865.

In 1749 Voltaire wrote an essay entitled “On the Beautification of Paris”. “We need public markets, Voltaire wrote, “fountains that actually give water, regular intersections, performance halls, we need to widen the narrow and filthy streets, uncover monuments that we cannot see, and build new ones to be seen”.<sup>7</sup> Voltaire’s words described the situation, he despised the ugly truth, the squalor many Parisians were living in. In the 1800s the City of Paris, had little supportive infrastructure, few public and government buildings, narrow medieval streets, with no intercity transportation network other than hired carriages. The narrow pitched streets were the medieval version of a sewer; they ran constantly with sewage both from humans and animal waste, Image 8.<sup>8</sup> In the 1800s the city did not yet have a complete underground sanitary sewer system. One of the early photographers of his time, Charles Marville photographed much of his beloved city of Paris which helped to illustrate the living conditions. The drinking water came from the Seine River downstream from

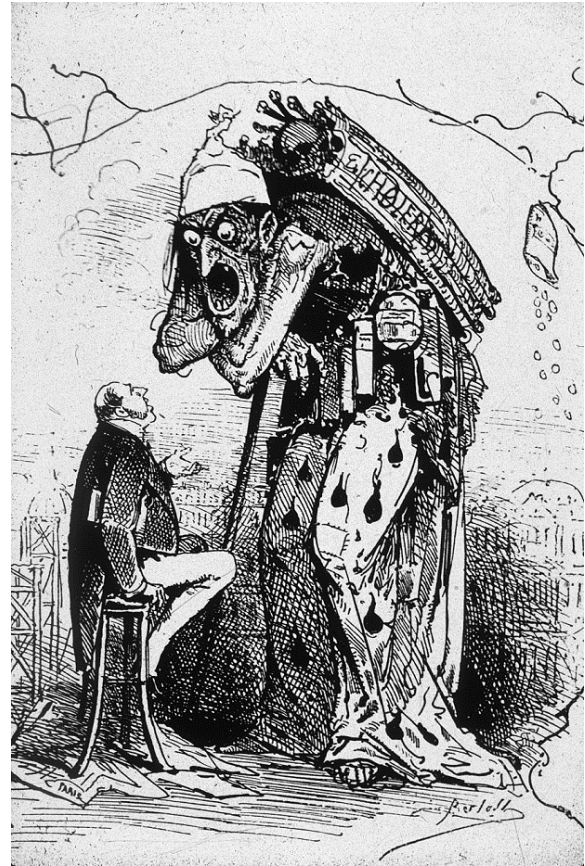


where the street clean-up crews dumped garbage and sewage from the streets including horse droppings into the river, unaware of the detrimental effects to the river itself, Image 8.<sup>9</sup> In 1832 Paris experienced one of many massive cholera outbreaks, where 20,000 died from a population of 650,000, about 3%. Another cholera outbreak occurred in 1849. The contaminated Seine was the most likely source of the bacterium that caused this acute diarrheal infection. The unfortunate conditions of the city were well known, although the cause was not yet known.



**Image 9.** Rue de Constantine, circa 1865. Street clean-up crews picking up the piles destined for the Seine River, by Charles Marville.

It wasn't until the reign of Président Napoléon Bonaparte, [later became Emperor Napoléon III] and Baron Haussmann, Prefect of the Seine that many of the civic improvements were realized. The new president wished to improve the lives of the Parisians, especially the working class. Although there were some proposed projects on the books and other projects awaiting approval, it wasn't until this regime that the so-called bureaucratic red tape was cut. Napoléon III had a vision for the capital, one he would not be stopped in carrying out. A prime goal was to push civic improvements and open the city to air and light just as declared in Président Napoléon's inauguration speech. After his presidency ended, Président Napoléon held a coup d'état and became Emperor Napoléon III, thus beginning what became known as the Second Empire [1852-1870]. It was during this time of major civic improvements, in the latter half of the 19<sup>th</sup> century, the city opened up to new wide boulevards, squares, parks and bridges and public places. It was believed that bringing in fresh air and light into the city would rid it of the bad air and hence the cholera.



**Image 10.** Cholera protests to Baron Haussmann that demolition of old houses in Paris have left him homeless – a jibe at critics of Haussmann who complained that public works had created a housing shortage. The illustration of 'Cholera' first appeared in L'illustration, Paris March 13, 1869, pg. 172

Among the needed projects were ways to improve pedestrian, rail and carriage movement throughout the city. At the time there was no network of major roads, just jagged dense medieval city streets. Additionally it was necessary to find a way to connect the terminus of the many rail lines in Paris.

In October of 1842, the Minister of Public Works, John Babtiste Teste examined proposed train routes within and outside the fortifications of the city. However, it was not until December 10, 1851, that a decree of declaration was created with the specific purpose to establish a public utility, the Belt Railway [La Petite Ceinture] within the fortifications of Paris allowing it to connect the stations and all the terminus lines. It was part of the economic recovery program for France, to provide work and combat unemployment, with a state requirement of completion within two years.



**Image 11.** “Travaux de relèvement du chemin de fer de ceinture”, 1888 by, Paul Désiré Trouillebert, in what would become eastern Paris; Cours de Vincennes, 12<sup>th</sup> Arr. (Construction of Elevated Railway).



**Image 12.** “La Petite Ceinture at a level crossing in Parisian suburbs” (Train of Little Belt Railway), by George Scott, ca 1885. Painted January 01, 1900.

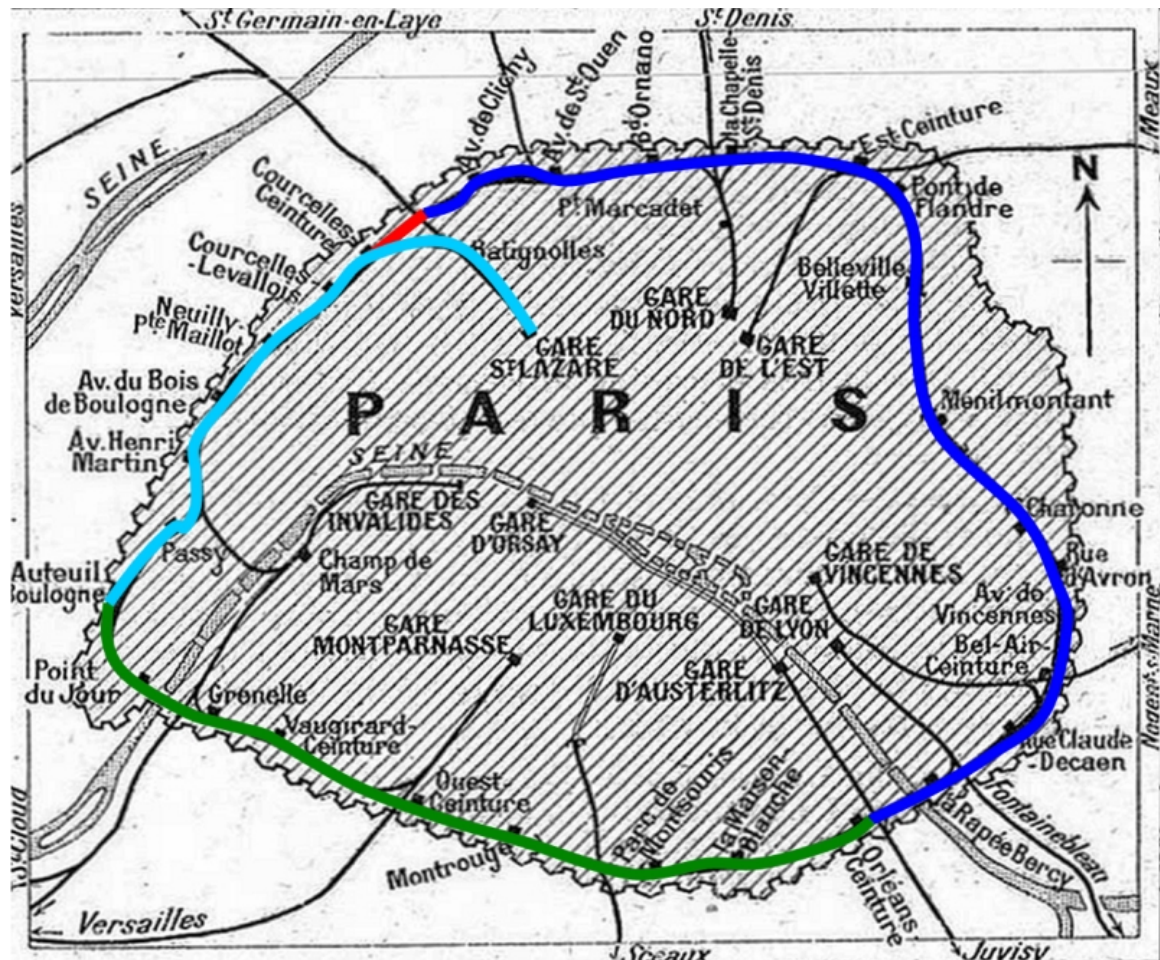
presented many changes in grade and few level crossings, it was easier to acquire the land. The intended route had to pass through quarries and catacombs and it required moving a great deal of earth and rock. The line needed to be laid to cross above the Seine River and to cross through tunnels and valleys. There was considerable exceptional engineering

needed. For example, a section from Montrouge to Bercy had a length of 4,900 meters, 1,790 meters of covered bridges and viaducts, 1,000 meters of embankments, 2,400 meters of large trenches, and 1,860 meters of retaining walls. In addition the consolidation and movement of quarries in the route required 26,400 cubic meters of masonry.<sup>10</sup>

Another example was The Rive Gauche line [the Left Bank line]. In 12 km of its course, there were, 3 large underground tunnels, 3 viaducts, 19 stone bridges both under and over the roadway, 7-iron spans, 5 framing bridges in addition to 8 stations and various other service buildings and ramps. The three longest tunnels are Belleville which is 1,124 meters long and travels under Buttes Chaumont Parc [between the 19<sup>th</sup> and 20<sup>th</sup> Arr.], Charonne which travels just adjacent to Pere Lachaise Cemetery [20<sup>th</sup> Arr.] and is 1,300 meters long and the Montrouge tunnel is 904 meters long in the 14<sup>th</sup> Arr.

The real value of the PC lies in its location, connecting all the other rail lines within the fortifications of the city limits, providing a strong strategic military advantage to service to all the forts safely along the Thiers wall with materials and troops. When the rail line was built and a partial section of the line was opened between 1852 and 1869, the area it occupied was largely devoid of the heavy buildings. The rail ran through farmland and small suburbs of the city, and open and unoccupied space. Over time the city grew up to it and around it and the line became hidden behind buildings and the infrastructure of the surrounding city.





**Image 13.** The four different rail lines of La Petite Ceinture and its connections to the major Paris train stations and lines in and out of Paris. Blue – Rive Droite [Right Bank] 1854; Green- Rive Gauche [Left Bank] 1867; Cyan – Auteuil Line, 1854; Red – The Courcelles Line connection in 1869. The jagged outline is the Thiers Wall and the Paris limits at the time.

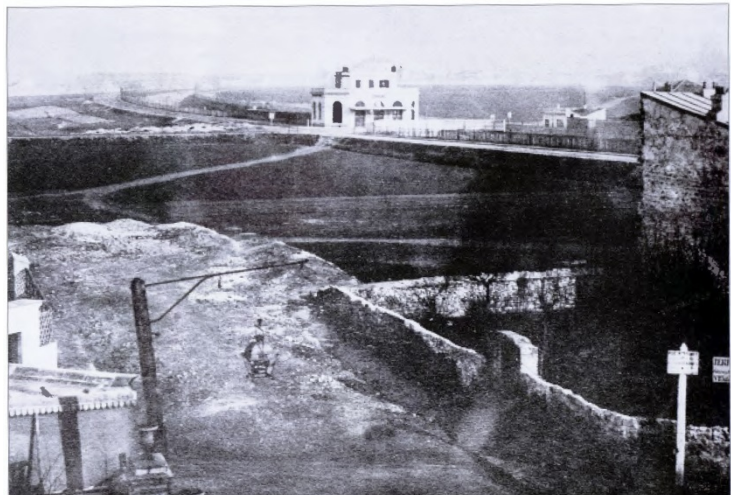
### The Four Sections of La Petite Ceinture

Although, the four lines of the PC were built at different times the routes was planned from the beginning. The PC route, just behind the Paris fortifications are shown in Image 13.

1. La Petite Ceinture Rive Droite [The Little Belt Right Bank]. Located on the Right Bank of the Seine River, 14 km long connecting Les Batignolles [17<sup>th</sup> Arr.] to Ivry [13<sup>th</sup> Arr.].

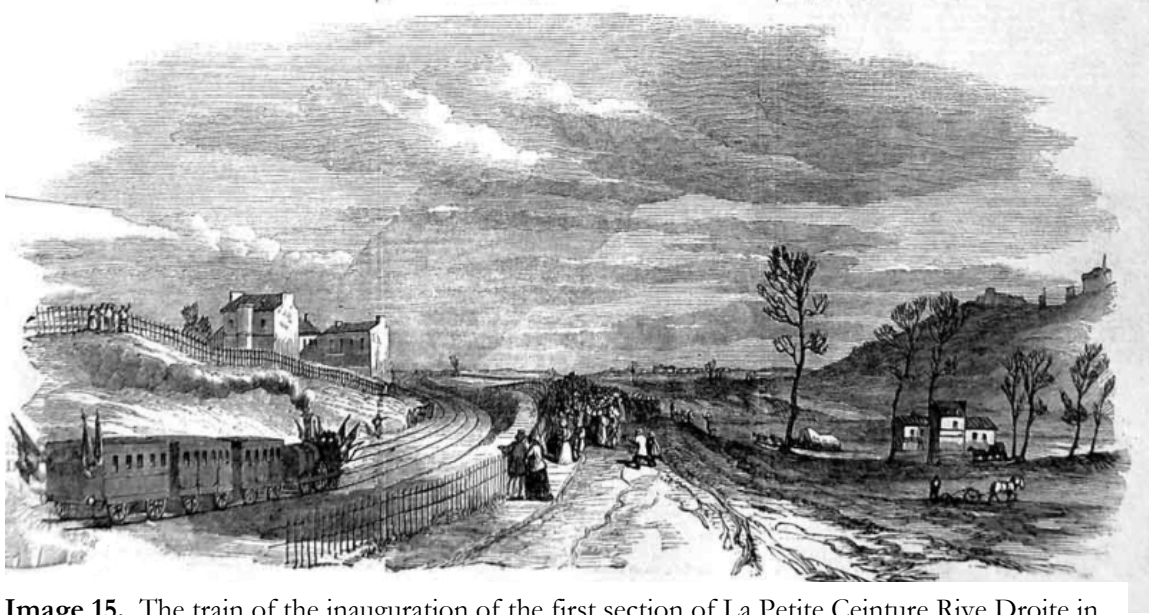


2. La Petite Ceinture Rive Gauche [the Little Belt Left Bank]. Located on the Left Bank of the Seine River, 12 km long connecting Ivry [13<sup>th</sup> Arr.] with Porte d'Auteuil [16<sup>th</sup> Arr.] commissioned in 1867.
3. The Line of Auteuil at 8.2 km long, connected les Batignolles to Porte d'Auteuil, opened independently by the Compagnie des Chemins de fer de l'Ouest initially for only passenger service. The western Auteuil Line, as it traversed the highly regarded and fashionable 16<sup>th</sup> and 17<sup>th</sup> Arrondissements was commissioned by the P  reire Brothers in 1854 to serve the holiday resorts of the Parisian bourgeoisie during the second empire.
4. The last connecting piece of the railroad was the Courcelles line completed by West Railway Company [Compagnie des chemins de fer de l'Ouest]. It opened in 1869 to connect the Line of Auteuil and La Petite Ceinture Rive Droite connecting freight and passenger service throughout.



**Image 14.** A view of Courcelles-Levallois Station circa 1860. These tracks run alongside the current Blvd P  reire in the 17<sup>th</sup> Arr. in western Paris.

The connection was between Courcelles P  reire Boulevard and Porte de Clichy in the 17<sup>th</sup> Arr. This commissioning was the last phase of the construction of La Petite Ceinture.<sup>12</sup>



**Image 15.** The train of the inauguration of the first section of La Petite Ceinture Rive Droite in 1852. Engraving from the January 29, 1853 issue of the British weekly, *The Illustrated London News*. “The Little Belt is then in the countryside!”.

With the exception of the Auteuil Line, the PC was initially built for freight traffic.

Eventually public passenger service was offered for over seventy years between 1862 and 1934. At the beginning of the twentieth century and during the peak years of service, the line handled an average of 566 passengers’ journeys per day, including 196 circular passenger trains as well as 148 freight trains of merchandise per day. Around the time of the 1900 World’s Fair, it transported 85,000 to 90,000 passengers per day and thirty nine million passengers per year.<sup>13</sup>

The PC’s heavy and quickly growing use illustrated the growing demand for raw materials and manufactured goods. The line was particularly important in moving merchandise between the commercial yards and slaughterhouse stations that serviced the city. The new line allowed trains to connect without leaving the city and traveling for more than half a day outside the city to connect to another line, turn around or reconnect elsewhere. It reduced

the cost of transportation and reduced the travel time considerably, thereby, for all these reasons, becoming a valuable asset to the infrastructure and city of Paris.

It should also be mentioned that the valued PC inspired the planning and building of a second ring, la ligne de la Grand Ceinture – The Great Belt which opened in 1877. The Great Belt is a railway line that loops around Paris and is 15 km outside the PC and the city. Today the line is used for commercial traffic only.

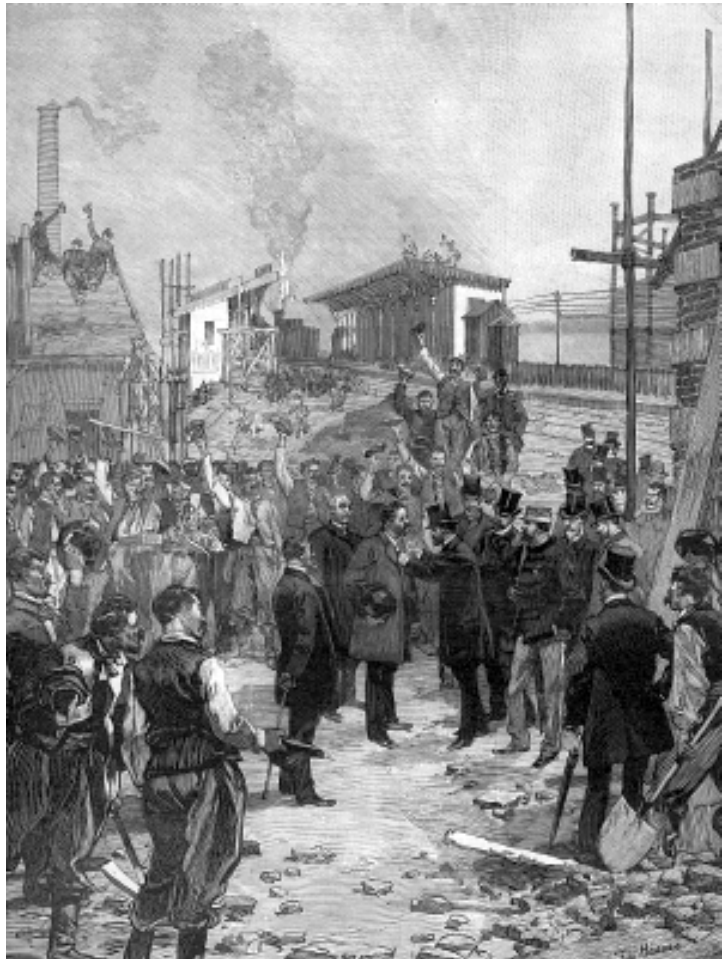
The operator of the Petite Ceinture was the ‘Compagnie du Chemin de fer de Ceinture’ [The Belt Railway Line Company]. The Right Bank use was granted December 10, 1851 to the companies of Rouen Railways, Orleans, Lyon, North and Strasbourg. These five companies each operated lines in and out of Paris. Two years later after the coup d’état, by Emperor Napoléon III, a decree in January 22, 1853 formed a regulating Syndicate to organize the Belt Railroad Company. The objective was to connect the various companies with networks coming into Paris for the better communication and transport of goods. This Syndicate consisted of ten members from each of the five major rail companies at the time:

1. The Compagnie des Chemins de fer du Nord [The Northern Railway Company] owned Gare du Nord, the North Station in the 10<sup>th</sup> Arr. <sup>14</sup>
2. The Compagnie des Chemins de fer de l’Ouest [The Western Railway Company] owned the Gare Saint-Lazare in the 8<sup>th</sup> Arr., and Gare Montparnasse in the 8<sup>th</sup> Arr.
3. The Compagnie des Chemins de fer de l’Est [The Eastern Railway Company] owned the l’Est Ceinture station in the 10<sup>th</sup> Arr.),

4. The Compagnie des Chemins de fer Paris Lyon Méditerranée PLM owned the Gare Lyon, the Lyon Station in the 12<sup>th</sup> Arr.
5. The Compagnie des Chemins de fer Paris-Orléans PO owned the Gare Austerlitz, the Austerlitz Station in the 13<sup>th</sup> Arr. [Note: Musée d'Orsay is a previous train station on this line on the Left Bank of the River Seine.] <sup>15</sup>

### Gares [Stations]

On the 24<sup>th</sup> of February in 1867 the whole line of La Petite Ceinture was opened to the public for use. It was possible to make a tour of Paris via La Petite Ceinture in an hour and 15 minutes, 31.5 km. The train frequency was an average of 7 minutes in each direction varying distance of 500 to 1,760 meters between stations. La Petite Ceinture serviced 29 passenger train stations, 4 commercial yards and 2 stations that served specifically for the slaughterhouses,



**Image 16.** Visit of the President of the Republic, Sadi Carnot to see the building of the station on Cours du Vincennes on December 14, 1888. Engraving of the illustration first published in L'Illustration #2391 on December 22, 1888.

meat markets and horse markets.

Of the 29 numerous passenger stations built, 17 still remain.<sup>16</sup>

The construction of passenger stations was carried out in two distinct historical periods during the Second Empire and during the first half of the Third Republic. During the Second Empire period of construction,

the first of the PCs passenger stations were built, whose outcome was the commissioning of the complete circular path of Paris in 1869. During the first half of the Third Republic [1870-1940], the realization of the Métropolitan Railway in Paris, i.e. the Métro was occurring. It was during this time, while the beginnings of the first underground sections of the first Métro lines were built, the last of the passenger stations of the PC was being constructed. This period ended in 1907. Each line of the PC adopted a specific architectural style of stations. In the west and south of Paris the stations were built by the Compagnie des Railroads de l'Ouest. These stations along the Auteuil Line and the Rive Gauche Line [Left Bank] of the PC are called the Auteuil Style. The stations along the Rive Droite [Right Bank] in the north and eastern sections were all built by the Belt Railway Syndicate. This line was built after the Auteuil Line.<sup>17</sup>



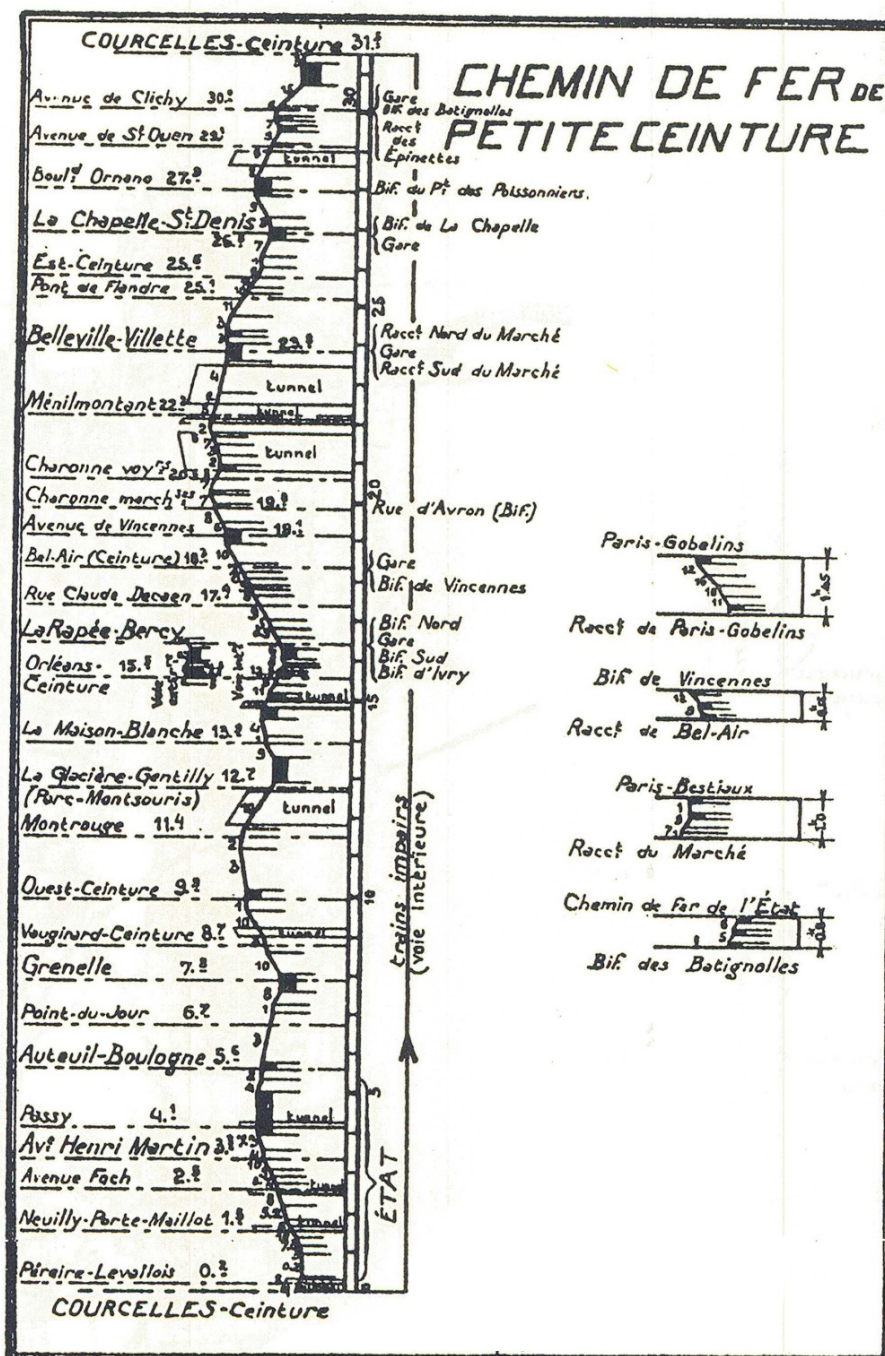
**Image 17.** Relèvement du chemin de fer de ceinture, Station du Bel Air et rue Montempoivre, in what would become eastern Paris, 12<sup>th</sup> Arr. near Square Charles Péguy. (In English: Rise of Belt Railway, Bel Air Station and Montempoivre Street), an oil painting by Paul Désiré Trouillebert.



# SECTION N°200 PETITE CEINTURE

PROFIL en LONG

Document de 1914.



**Image 18.** The Section 200 Petite Ceinture, lists out the 28 passenger stations and the 4 commercial stations as well as illustrating the profile of the rail line against the land. 1914.

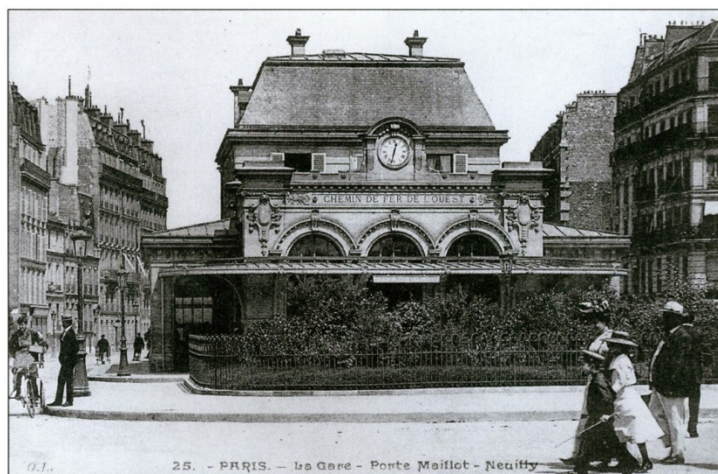
Since the tracks require minute grade changes as the locomotives cannot handle steep slopes, there are various typologies along the entire route. Paris is a river basin with steep hills on its periphery all leading towards the Seine River. So there are numerous deep trenches, tunnels, embankments, trestles, bridges etc. all along the route. There are very few sections where the tracks are at grade. The commercial yards and slaughterhouses were placed strategically throughout the city where being at grade was possible, thereby economizing the transfer of merchandise between the railroad and the urban fabric.

The local topography commanded how the station needed to be built to connect with the city. A few types of buildings will be discussed to illustrate the many different kinds. Of these topographical differences a majority of the passenger stations were bridge stations, meaning the station conveyed people from the street level to the tracks below. As Image 21 shows the building weight straddled the tracks below and it was generally two stories tall. Typically there were two tracks wide below, though in some cases there were more. Many of the bridge stations both in the west and east have been reused for other purposes including restaurants, cafes and current Réseau Express Régional [RER] stations as shown in Image 20. The RER is utilized for the majority of the Auteuil line including some branch lines in the west as well as the former passenger stations of the PC. The most common arrangement is that the building is located at street level, and the tracks are unseen behind and/or below it. For illustrative purposes included here are a few examples of these kinds of stations.

## Gare Neuilly Porte Maillot – Neuilly Porte Maillot Station : 17<sup>th</sup> Arr.

Porte Maillot Station, Image 19 and 20 was a typical station built by the West Railway Company along the Auteuil Line, it went into service on May 2 1854.<sup>18</sup> The station was designed by French architect, Jean Juste Gustave Lisch. He designed and built many train stations including, Gare Saint-Lazare and Gare de l'Avenue Foch which still stands today. Though the station has gone through some changes over the years including retrofitting from steam traction to electric service, it is in use today by the RER C line with the same Station name. The RER C line

currently incorporated the western part of La Petite Ceinture into its commuter line bringing in regional traffic into the heart of Paris. Some of the larger stations may share space with a restaurant, café or something similar.



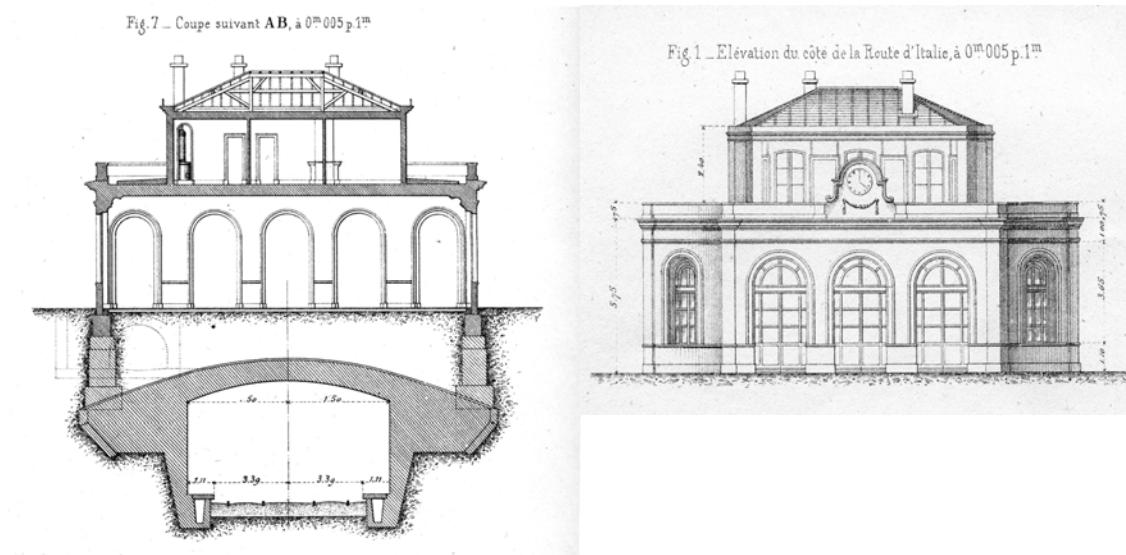
Le bâtiment voyageurs de la station Neuilly-Porte Maillot vu au début du XX<sup>e</sup> siècle. Le bâtiment d'origine était similaire à ceux de Pereire-Levallois ou de l'avenue Henri Martin.

**Image 19.** Neuilly-Porte Maillot Station at the beginning of the 20<sup>th</sup> Century. It is located in western Paris on the border of the well to-do 16<sup>th</sup> Arr. and the 17<sup>th</sup> Arr. beginning on boulevard Périère.



**Image 20.** Neuilly-Porte Maillot Station as seen today. Photo by author.





**Image 21.** Architectural drawings of a bridge type station, this architectural style was typical along the Auteuil line in western Paris, such as Gare Foch, Gare Passy-La Muette, Gare Porte-Maillot etc. The section on the left illustrates the foundation resting on the tunnel itself.

### **Gare Passy-la Muette – Passy Station: 16<sup>th</sup> Arr.**

This station was part of Batignolles branch at Auteuil Line, commissioned on May 2, 1854, image 20. The station opened February 25, 1867. This passenger station was in service, as were the rest of the western lines, until all of the PC officially closed its passenger service in 1934. On January 2, 1925 the steam trains gave way to electric service, and the western part of the PC was converted to accommodate the new trains. However, this station was not needed for the new RER C line service and now is being used as a restaurant, La Gare. Although, the station is a typical example of an Auteuil Line bridge station, at this particular location the rails go underground and a tunnel begins. The tunnel is still in use today by RER.<sup>19</sup>



**Image 22.** View at Gare Passy platform looking southwards circa 1900s.



**Image 23.** View of platforms into Gare Passy situated just above the tunnel entrance with a locomotive 230T in the station; street level is visible. Photo circa 1900s.



**Image 24.** La Petite Ceinture Nature Walk, 16th Arr. Image of where the tracks used to be looking northwards towards Gare Passy Station. Image by author.



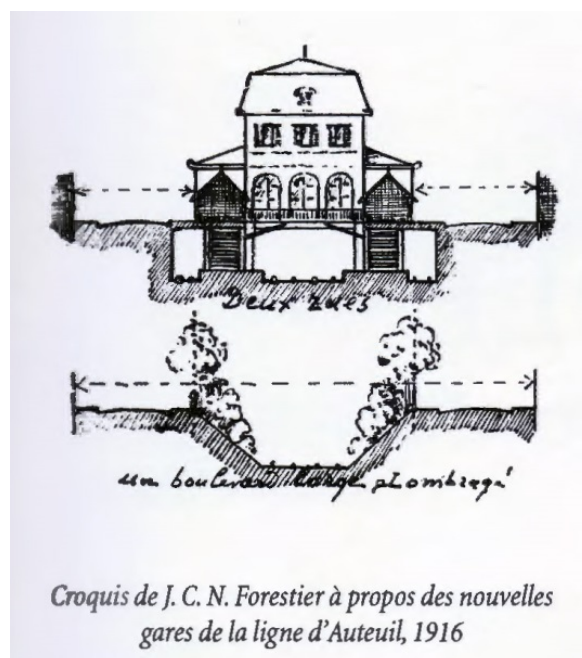
**Image 25.** Façade of Gare Passy Station today, the station is home to La Gare Restaurant. Image by author.

The restaurant La Gare, fully uses all levels of the original building, including the lower levels and the former platforms. Although the architecture remains, other than the name one would hardly guess its former use as a train station. The main floor opens to an outdoor space that overlooks the park, Jardin du Ranelagh. The tracks behind the station and southbound were no longer needed; this area was converted into a small nature trail in 2007, Sentier Nature Petite Ceinture [PC Nature Walk]. Although the image shows the linear nature of the space, it does little to convey the actual width hidden by vegetation. The former Passy-la-Muette station is not visible due to the heavy foliage.

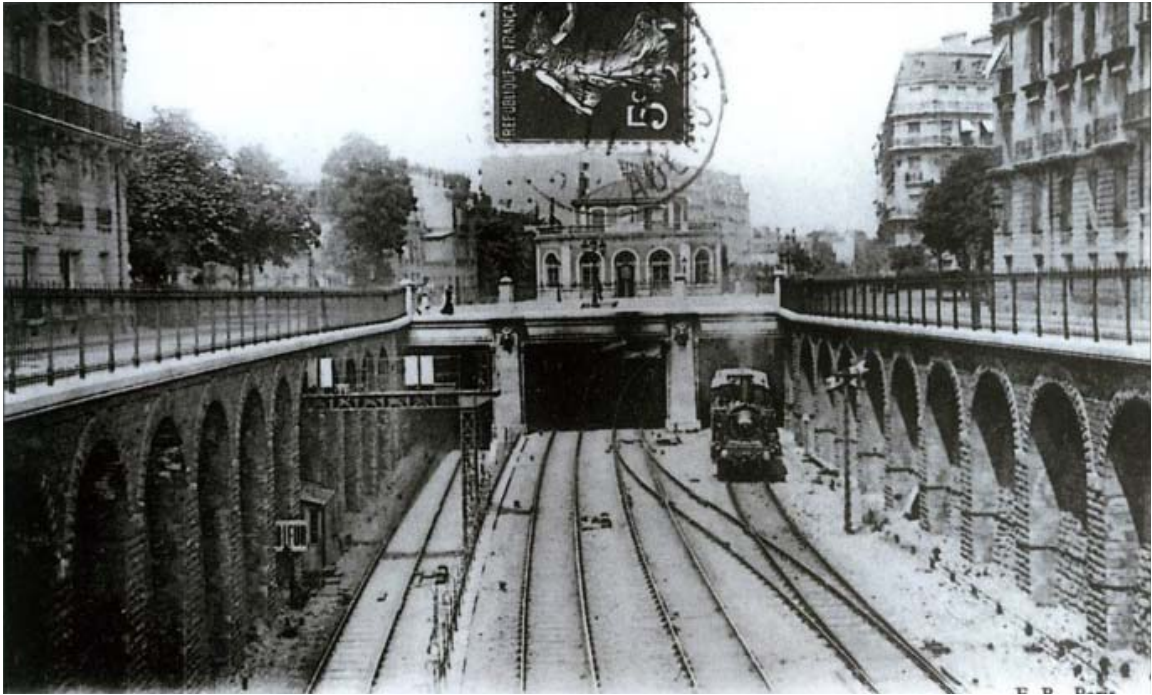
According to the Parisian Visitors Bureau, La Petite Ceinture is host to more than 200 species of plants including a rare diversity of wildflowers and more than 70 animal species. The walk is specifically designed to allow biodiversity to be first and foremost while the public foot print is lessened. This was the first section of La Petite Ceinture to become open to the public. Currently the 1.2 km (.6 miles) nature trail is open to the adjacent Jardin de Ranelagh [Ranelagh Gardens]. The Jardin de Ranelagh was intended to be a dancehall, however as the original development fell through, it was converted into a public garden.<sup>20</sup>

### **Gare Henri-Martin – Henri Martin Station: 16<sup>th</sup> Arrondissement**

The next station north along the PC line is Gare Henri Martin. This station with the same architecture as Gare Passy-la Muette is currently being utilized as a train station of the RER C line. Although this station built in the same architecture style of the other western line stations, it required additional track lines and in the course of its use, lost the sloping walls as illustrated in Image 26. This addition made use of the full right of way along the track length in the 16th arrondissement.<sup>21</sup>



**Image 26.** The landscape changes as Gare Henri-Martin added additional tracks.



**Image 27.** Gare Henri-Martin looking northwards.

The boulevards on either side were re-made to accommodate the needed expansion. The photographs in image 23

show the stone arches and the high wall

required to support the boulevards above. The additional tangent to Champs-du-Mars station was added especially to accommodate the added service for the 1900 Exposition Universelle – the World Exposition of 1900, was held in Paris from April 14 to November 12, 1900.



**Image 28.** Gare Henri Martin façade.



### **Gare Batignolles – [Batignolles Station] & Pont du Cardinet 17<sup>th</sup> Arr.**

Similar to Porte-Maillot, Gare Batignolles was commissioned by West Railway Company [Compagnie des Chemins de fer de l'Ouest] in May of 1854, and opened February 25, 1867, the date of the commissioning of the PC Rive Gauche, the Left Bank Line. The station is an important connection point between lines and was used for both freight and passenger traffic. The station was located at the intersection of Rue de Rome and Péreire Boulevard and Rue Cardinet in the 17<sup>th</sup> Arr.. In the 1920s the station was rebuilt in an art deco style after the circulation of the lines was changed. Today the Art Deco station is standing and being used by the RER.<sup>22</sup>



Remorqué par une loco, côté tender à l'avant, ce train se dirige vers Saint-Lazare.

**Image 29.** 1884, The back of the Gare Batignolles looking westwards.



Les chevaux sont les rois des attelages.

**Image 30.** In 1884, the front façade of Gare Batignolles at street level.

Le nouveau bâtiment (Pont Cardinet) a remplacé le précédent (Batignolles).



**Image 31.** In 1920s, the Art Deco replacement station, Pont du Cardinet, 17<sup>th</sup> Arr.

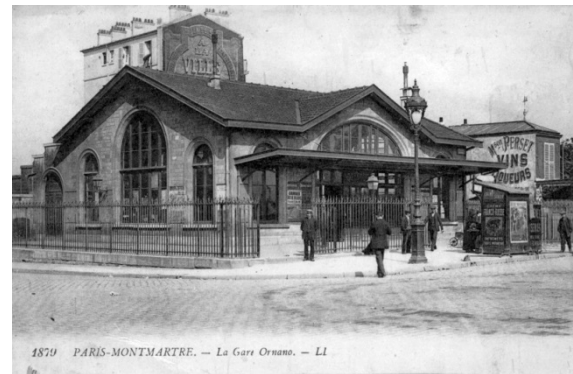


### **Gare Charonne – Charonne Station: 20th Arr.**

Of the north and eastern lines, Rive Droite, Charonne was a typical type of station, and was opened on July 14, 1862. This station including a few others along the Rive Droit Avenue de Clichy, Belleville-Villette, Ménilmontant participated in the workers lines, meaning that they serviced trains early and later in the day to convey workers to and from work. The workers were offered a reduced rate, thereby illustrating how these passenger stations served not just as a pleasure line, but also were the beginnings of urban commuter traffic. La Petite Ceinture became a precursor to the Métro.<sup>23</sup>



**Image 32.** Gare Charonne, 20<sup>th</sup> Arr. looking north towards platform and station at street level.



**Image 33:** Gare Ornano façade at street level, 18<sup>th</sup> Arr. the same architectural style as Gare Charonne.

The architecture of the bridge stations on the eastern line [Rive Droit-Right Bank] differed from their Auteuil line cousins. These buildings used more metal and less stone, making them less costly to build. The architectural style of the building offered façades at right angles, had a large bay window and a two sided roof. Additionally at the rear there was a metal gangway that placed stairs directly down to the platforms on each side of the tracks.



**Image 34.** Gare Charonne façade as it looks today, 20<sup>th</sup> Arr. Right. Image by author.



**Image 35.** Gare Charonne as it looks today at the track level. The tunnel entrance may be seen in the background underneath the short tunnel of the station. Image by author.

Gare Charonne went through a series of uses after it was no longer used as a passenger station. For a time it was a courier office with SNCF in the early 1990s. Directly after this, it became a restaurant-bar called La Flèche d'Or and was popular until it closed in April 2009. The restaurant owner has plans to reopen soon, with the main part of the station at street level and no planned use for the tracks or platform below it. This area is commonly used by Parisians who know where the holes in the fence are located.

Within a block from Gare Charonne directly adjacent to the dual tracks and on the other end of the platform, there lies a vacant and boarded up service building. This two story building is situated on the corner of rue Florian and rue Vitruve in the 20<sup>th</sup> Arr.



**Image 36.** Gare Charonne service building. Rue Florian is on the right. Image by author.



Adjacent to the building, the tall wall hides a flat space level with the street, inside the courtyard there are a few stairs up to the track and platform level. The wall hosts a large metal garage door for vehicular access. Currently and unofficially many of the locals use the space for a vegetable garden.



**Image 37.** Gare Charonne service building, from rue Florian. Image by author.



**Image 38.** Gare Orléans-Ceinture, 13<sup>th</sup> Arr. taken from Blvd General Jean Simon at would be track level. Image by author.

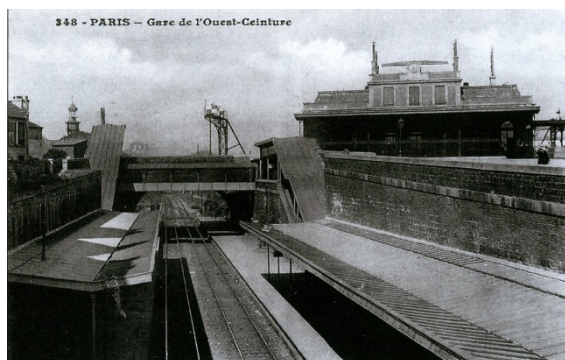


**Image 39.** Gare Orléans-Ceinture, rear of building, main entrance at street level, from rue Regnault, 3 stories lower. Image by author.

**Gare Orléans-Ceinture, Gare Vaugirard,**

**Ouest-Ceinture Stations: 13<sup>th</sup> Arr & 15<sup>th</sup> Arr.**

Among the larger train stations that were built are the Orléans-Ceinture [13<sup>th</sup> Arr.], Vaugirard-Ceinture and Ouest-Ceinture stations, [15<sup>th</sup> Arr.] which were built at the same time with same architecture. These stations connect people from the street level to the tracks at a higher elevation than most stations, with a difference of 3 stories. Currently these stations are not in use.<sup>24</sup>



La gare de Ouest-Ceinture est enjambée par la ligne de Montparnasse.

**Image 40.** Gare Ouest-Ceinture, 15<sup>th</sup> Arr., La Petite Ceinture tracks and platform



**Image 41.** Gare Ouest-Ceinture, the rear of the main level and the platform to the Paris-Montparnasse connection.

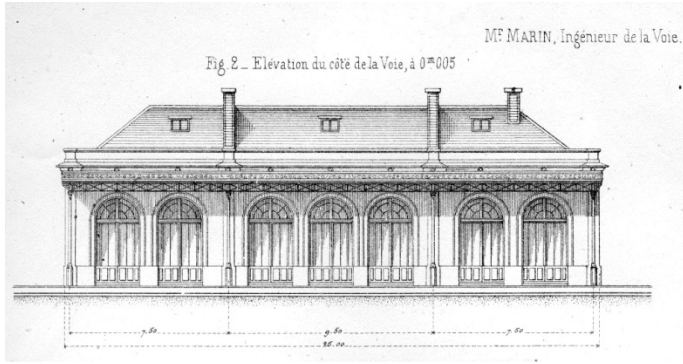


**Image 42.** Gare Ouest-Ceinture, 15<sup>th</sup> Arr. Left, side of façade, track level is an additional two stories below main street level. Image by author.



**Image 43.** Gare Ouest-Ceinture, façade. Image by author.

Gare Ouest-Ceinture, is currently bordered up and not in use, though behind the station the tracks are actively used by the RER. The PC tracks are three stories down from street level on the left of the building and perpendicular to the active lines. This station provided correspondence between the Paris-Montparnasse line and la Petite Ceinture. The building was built in 1866 with red brick and white limestone accents around the windows, doors and edges of the building. This was a typical design used in western suburbs and Normandy and a few stations of the PC lines.



**Image 44.** Architectural plans used for a few stations including, Ouest-Ceinture, Vaugirard Station, Orleans-Ceinture station.

These buildings had three levels: the ground floor held the ticket office and well as luggage and courier offices, the mezzanine held accommodations for the station master and the last floor was at the platform level with an accompanying

waiting room for the travelers. In addition, the station master's office was on this level.<sup>25</sup>

### **Gare Grenelle – Grenelle Station: 15th Arr.**

A smaller station, Grenelle, has its main building at the street level with the platform and track access above. Initially this passenger station when first built in 1867 was built of wood and considered to be a 'light installation'. Later in the 1920's it was replaced with the concrete structure seen today. This station provided a connection with the Champs-de-Mars line, which was needed to get to the Eiffel Tower and the Universal exhibition of 1867. Today the external connection is being utilized by the RER, but the building and original petite Ceinture track is not in active use.<sup>26</sup>

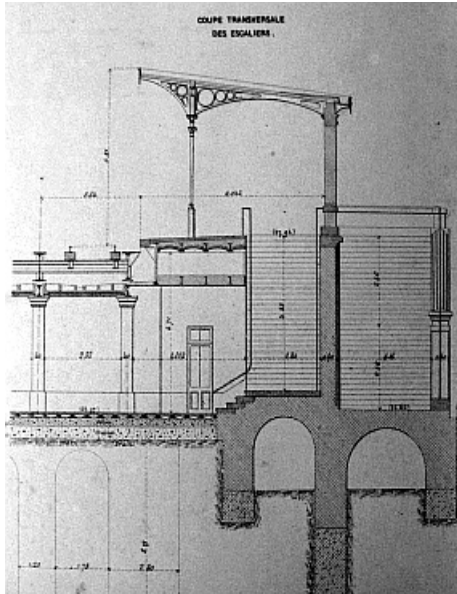


**Image 45.** Gare Grenelle at track level showing the original wooden station.

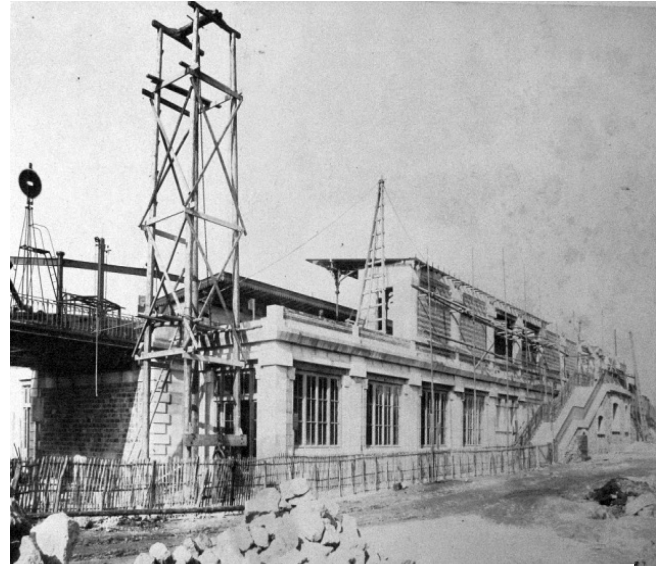


**Image 46.** Façade of Gare Grenelle today, May 2016. Image by author.





**Image 47.** Architectural drawings of Gare Cours-de-Vincennes.



**Image 48.** View of construction work of Gare Cours-de-Vincennes from street level, tracks are above, 1887-1889.

### **Gare Cours-du-Vincennes: 20<sup>th</sup> Arr.**

This station is located in eastern Paris right on Cours de Vincennes which is the border between the 12th and the 20th arrondissement. The station opened on April 29, 1869. It was under construction between 1887 and 1889 which at the time was considered the outskirts of Paris. This building was two stories and conveyed people from the street level to the open platform and tracks above the perpendicular crossed street. The building was unlike other stations in that it was located under the tracks with the roof made up partly of the metal viaduct for the tracks. The building was stone with cast iron columns.

Today the area is the terminus of both the new surface light rail, tram lines, T3a and T3b as well as the underground Métro line 1. It is also a short distance from Bois de Vincennes which contains the Parc Zoologique [zoo], Parc Floral-Jardin Botanique de Paris [Botanical Gardens] and the Arboretum de l'École du Breuil.<sup>27</sup>



**Image 49.** View the façade of Cours-de-Vincennes at street level, in 1909.



**Image 50.** Cours-de-Vincennes, remaining 1<sup>st</sup> story of station from street view. The viaduct continues over the avenue, Cours-du-Vincennes the border between the 12<sup>th</sup> and the 20<sup>th</sup> arrondissements in eastern Paris. Image by author.



**Image 51.** Cours-de-Vincennes street view today, right of track. The ROW land and area that was used as freight transfer space is still being used by the city for vehicular storage etc. Image by author.

Today only the platform and the lower level of the original building remains, the upper section has since been removed. The connecting ROW land along the east side of the station and track is still being utilized by the city. Just as with other areas, the tracks are kept clear and free of vegetation.



**Image 52.** -View from the street level of the viaduct and the tram in the station. The old Cours-de-Vincennes Ceinture station is behind it unused today. Image by author.

In addition to the vacant buildings there are many ‘right-of-way’ [ROW] spaces. There are a few ROWs that have officially converted into local community gardens. Yet there are still more unofficially used spaces. The majority of the are commercial yards adjacent to active tracks. Some are being utilized but the majority of them are not in use. Parc Martin Luther King in 18<sup>th</sup> Arr. was built from adjacent rail ROW and tracks that were not longer in use. Parc de la Villette was built from the space that served as the northern slaughterhouse station for Paris. Over time as manufacturing and industry has moved out of the capital many of these spaces present the opportunity for reuse. The sheer amount of underutilized and unused ROW space along the connecting spine that is the Petite Ceinture, sets up a huge potential for an urban greenway in one of the densest cities in Europe.

## Today

The City of Paris is looking to buy the unused stations and service buildings from SNCF, and delegate the renovations, and is actively calling for proposals. Many of the local residents are expressing their interest to the neighborhood councils to preserve and rehabilitate these old stations. This awareness was reflected in 2008 by the adoption of the Commission of Old Paris to classify all the train stations as protected. Thereby including all the stations and buildings of the PC as part of the larger Heritage group, illustrating the ‘network effect’ of the Petite Ceinture. If the buildings are not left vacant, they could provide an opportunity to add to the neighborhood and local economy. The Réseau Ferré de France, RFF is the public body that is responsible for the management of the railway network and the ownership of the stations. In the winter of 2011-2012 the RFF sold the buildings of the railway stations Charonne [20<sup>th</sup> Arr.] and Passy-la-Muette [16<sup>th</sup> Arr.] to their current tenants, the café-restaurant “The Golden Arrow” and café-restaurant “La Gare” respectively. Along the western Auteil Line, the majority of the stations are being used by the RER for service. However, there are still many passenger stations and service buildings of the PC that are currently boarded up and not in use. Table 1 highlights the many buildings and stations of the PC, illustrating the current status.<sup>28</sup> As these structures are already located with a dialogue between the PC line and surrounding dense city, they may more readily be renovated to communicate again. The majorities of the structures were built to last with concrete and stone. Even though they are in need of some repair, they have been fairly well maintained.

**Table 1:** La Petite Ceinture Stations and Buildings, Current Status  
[beginning in the Northwest going clockwise]

Arr.	Stations & Buildings	Building Type	Status
17 <sup>th</sup>	Avenue de Clichy 190 avenue de Clichy,	Station and platform all above street level, accessed via ramp Built: 1862	Blg Demo'd-1960 Tracks in use, RER
17 <sup>th</sup>	Avenue de Saint-Ouen 128 avenue de Saint-Ouen	Bridge Type Station: tracks below Built: 1863, rebuilt 1888	Blg Survives, leased by Paris – currently under renovations
18 <sup>th</sup>	Boulevard Ornano 81 boulevard Ornano	Bridge Type Station: tracks below [same architecture as Charonne and St Denis]	Blg Survives, bought privately – Restuarant – La Recyclerie
18 <sup>th</sup>	La Chapelle St. Denis 165 rue de la Chapelle,	Bridge Type Station: tracks below -station bombed April 1944. Built 1871	Blg Demo'd
19 <sup>th</sup>	Est-Ceinture 99 Rue Curial	Blg St Level-Platform, tracks above Architect: Edmond Delaire	Building Demo'd-1968, but some remains are present
19 <sup>th</sup>	Pont de Flandre 1 Ave Corentin Cariou	Blg at track level, ramp up to building, set back from street Commissioned: 1869	Blg Survives, platform remains
19 <sup>th</sup>	Belleville-Villette 4 rue de Lorraine	Wood and brick structure, unlike other stations. Commissioned: 1862	Blg demo'd 1947 for housing [after War II]
19 <sup>th</sup>	Menilmontant 9 rue de la Mare	Blg and Platform-Grade level	Building gone, Platform remains
20 <sup>th</sup>	Gare Charonne 102 bis rue de Bagnolet	Bridge Type Station: tracks below	Building sold, café-restaurant-mid 1990s
20 <sup>th</sup>	Charonne Service 1 rue Florian	Not Station – Service Blg	Blg Survives –Boarded up
20 <sup>th</sup>	Rue d'Avron 4 Rue Ferdinand Gambon	Blg Street level, platform above Boardered Up	Blg Survives –Boarded up
20 <sup>th</sup>	Avenue de Vincennes 101 cours de Vincennes,	Blg two stories both at Street Level and Platform above Built: 1887-1889	Building partly demo'd, platform removed
12 <sup>th</sup>	Bel-Air Ceinture 27 rue de Montempoivre	Wood & brick station, blg at track level above street, ramp to blg. Commissioned: 1863	Building Demo'd Platform remains
12 <sup>th</sup>	Rue Claude Decaen 7 Rue Claude Decaen	Stone, terracotta and brick. Architects: Edmond Delaire Comissioned: 1907 [last to be built]	Building Demo'd –late 1960s-some archs and foundation remains
12 <sup>th</sup>	La Rapée Bercy 5 boulevard Poniatowski,	Blg two stories, at street level and above at track level	Building Demo'd –late 1960s
13 <sup>th</sup>	Orléans-Ceinture 1 rue Regnault,	Blg 3 stories, street level entrance, track level above street. Pink brick white facade and white merlons, same as Vaugirard-Ceinture. Built: 1867	Blg Survives –Boarded up



<b>Table 1: [con't] La Petite Ceinture Stations and Buildings, Current Status</b>			
<b>Arr.</b>	<b>Stations &amp; Buildings</b>	<b>Building Type</b>	<b>Status</b>
13 <sup>th</sup>	Maison-Blanche 131 avenue d'Italie,	Bridge Type Station: tracks below Same as: La Glacière-Gentilly and Montrouge. Opened: Feb 1867	Building Demo'd
14 <sup>th</sup>	Glacière-Gentilly 67 rue de l'Amiral Mouchez [renamed Parc de Montsouris]	Bridge Type station, tracks below Opened: Feb 1867	Building Demo'd
15 <sup>th</sup>	Montrouge 113 Avenue du Général Leclerc.	Bridge Type station, tracks below Same as: La Glacière-Gentilly and Maison-Blanche. Opened: Feb 1867	Blg Survives –Boarded up
15 <sup>th</sup>	Ouest-Ceinture 232 Rue Vercingétorix	Blg 3 stories, street level entrance, track level above street. Pink brick white facade and white merlons, same as Vaugirard-Ceinture. Built: 1867. Built: 1867	Blg Survives –Boarded up
15 <sup>th</sup>	Vaugirard-Ceinture 397bis rue de Vaugirard,	Blg 3 stories, street level entrance, track level above street. Pink brick white limestone facade and merlons, same as Ouest-Ceinture. Built: 1867.	Blg Survives –Boarded up
15 <sup>th</sup>	Grenelle 87 Rue Leblanc	Blg at street level, platform above Opened: Feb 1867.	Blg Survives –Boarded up
16 <sup>th</sup>	Pont-du-Jour 17 of boulevard Exelmans	Iron and glass built on top of stone foundation	Viaduc of Auteuil and station demolished in 1960s.
16 <sup>th</sup>	Auteuil-Boulogne 78 Rue d'Auteuil,	Two story blg tracks above street level. Opened: May 1854	Building sold, café- restaurant
16 <sup>th</sup>	Boulaivilliers 52 Rue des Vignes	Bridge Type Station: tracks below Architect: A. Barret [branch to Champs-de-Mars]	Blg Survives – in use by RER
16 <sup>th</sup>	Passy-la-Muette 2 Boulevard Beauséjour,	Bridge Type Station: tracks below Built: 1854	Building sold, café- restaurant
16 <sup>th</sup>	Henri-Martin 4 place Tattegrain	Bridge Type Station: tracks below Commissioned: 1854	Blg Survives – in use by RER
16 <sup>th</sup>	Ave de Bois de Boulogne [Ave Foch] 92 Boulevard Flandrin	Bridge Type Station: tracks below Architect: Jean-Juste Lisch Built: May 1854	Blg Survives – in use by RER today-Avenue Foch
17 <sup>th</sup>	Neuilly Porte Maillot 82 Boulevard Pereire	Bridge Type Station: tracks below	Blg Survives – in use by RER
17 <sup>th</sup>	Courcelles-Levallois 4 Place du Maréchal Juin	Bridge Type Station: tracks below Service: 1854	Blg Survives – in use by RER today – as Péireire Levallois
17 <sup>th</sup>	Courcelles-Ceinture 2 rue Alfred-Roll [connection to Right Bank]	Bridge Type Station: tracks below	Blg demo'd
17 <sup>th</sup>	Pont du Cardinet Previous Batignolles 1 Boulevard Péreire	Art Deco Street level Blg, tracks and platform below [extension to Gare St. Lazare]	Blg Survives – in use by RER

## Public Urban Transportation vs. The PC

The PC was commissioned in several stages and built over time 1852-1869; it became the ideal method of transport for both for pleasure and work. At the time of the 1889 Exposition, the existing transportation was not able to handle the massive numbers of people. A branch line was then created

between Courcelles and Champ de Mars to service this central area of Paris, Image 53.<sup>29</sup>

This branch provided easy connection between the World Expo, the city and regionally. It was heavily used for the various World Expositions thereafter in Paris, 1867, 1878, 1889, 1900, 1925 and 1931. Over time, such lines as the Courcelles extension doubled the numbers of tracks, and expanded the two-lane trench to four lanes. Additional

passenger stations were created, Bougainvilliers and Quai de Passy. All of this

was due to an increase in the ridership and the peak of travel was during the 1900

Universelle Exposition when it transported more than 39 million passengers. Thereafter the numbers declined dramatically, 14 million in 1913 and 7 million in 1927.<sup>30</sup>



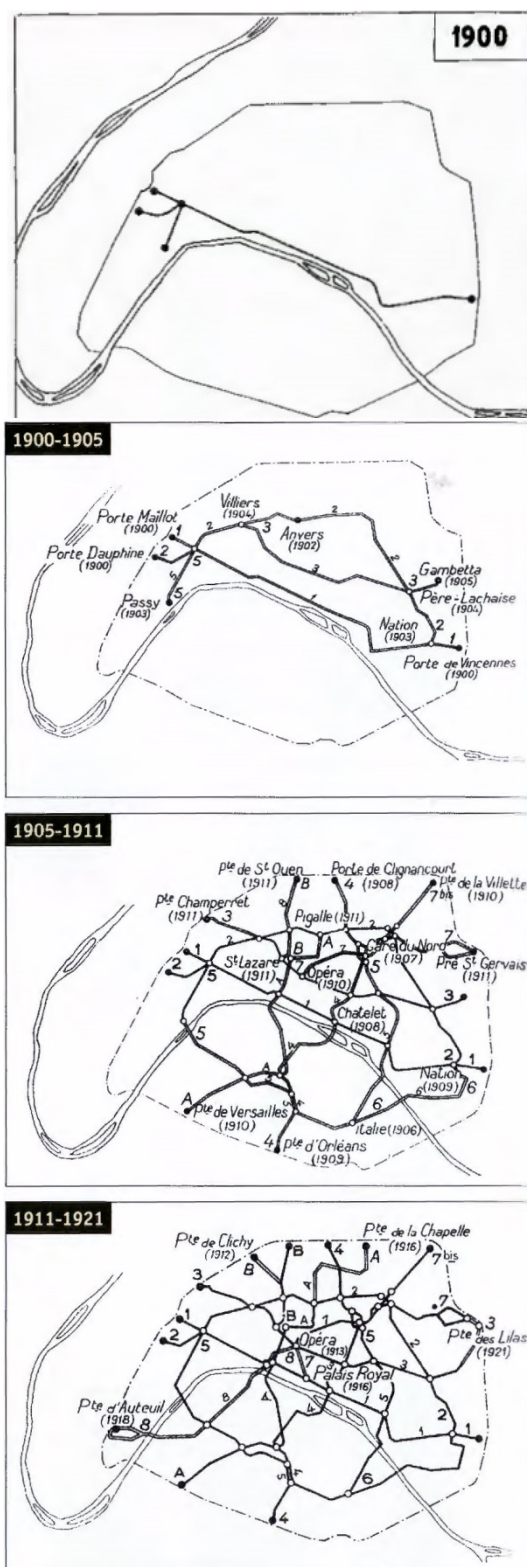
**Image 53** The line of Courcelles-de-Mars in green, resulted from the connection of La Petite Ceinture to Les Invalides for the World Expo.



**Image 54.** La Grande Ceinture in red around Paris. It was a connection of separate lines.

PC was crucial to freight traffic and it was heavily utilized. In 1877 approximately 780,000 tons of goods were transported. However the usefulness was not to last, in 1863, just outside the city limits, a link between Villeneuve St-George and Juvisy, and in 1877, the junction of the station of Argenteuil and Ermont were connected. These constitute the first links of the second belt way, the Grand Ceinture, Image 55.<sup>31</sup> The Grand Ceinture loops 15 km outside of the city limits and effectively replaced the PC for main freight use in 1886. Although some freight traffic remained on the PC, the usage dropped considerably. The PC was infrequently used for commercial traffic until the 1980s when it ceased entirely. It was in use for the circulation of long trains infrequently from 1864 to 1989.

Prior to the Métro and the PC, the omnibus, and other horse drawn trams were the most common method of urban transport. A slow and crowded system that was less than ideal. Discussion about an additional rail lines to



**Image 55.** -The lines of the Métro.

penetrate into the heart of the city were in discussions as early as 1845. There were many conflicting ideas, concerns about safety expense etc. The city wished to build a new an independent rail line, while the state wished to extend existing rail lines into Paris. It was eventually agreed upon in 1872 to construct underground lines with a different track gauge than the state lines. It was thought that if the new rail lines possessed a different gauge, it would prevent a merger or a take over from the state. While in London in 1854 the North Metropolitan Railway Company was created, creating a rail way into the heart of the capital, crossing dense urban districts, built underground in trenches away from and not crossing with street level traffic. Additionally the London Métro offered a high train frequency of every five minutes. The success of the London helped to push decisions in Paris. National prestige and patriotism is were called into question. By 1900 ten major cities already had subway lines, including New York, London, Glasgow, Budapest, Vienna and Berlin. The work in Paris commenced on October 4, 1898. La Compagnie du Chemin de fer Métropolitain de Paris, [CMP] or The Métropolitain Railway, the Métro strategically opened with the first line on July 19, 1900 for the Exposition Universelle [World's Fair]. This was the start of the decline of passenger traffic for the PC. The first Métro line opened in 1900, then in 1905 Line 1, 2 and 3 were opened. The core of the Métro were the first 10 lines, lines 1-9 respectively, Image 55.<sup>32</sup> In the opening year the Métro carried 17,660,286 people. In 1905 the number of passenger rose to 149 million and by 1914 the



**Image 56.** Gare St Lazare circa 1910 with horse drawn omnibuses and carriages awaiting passengers in front of the station.



Métro carried 400 million passengers annually. In July of 1934 the Métro was being fully utilized by Parisians with ten lines at the time. Essentially the PC circulated slowly around the city, whereas the Métro was efficient with faster service direct into the heart of the city. The PC ridership quickly dropped and it closed to passenger traffic in July of 1934. When the rail line officially closed, a similar route along the roads was offered with a horse drawn omnibus, Image 57.<sup>33</sup>



**Image 57.** A cartoon by Honoré Daumier on certain discomforts of the Paris omnibus. The legend reads, “Beginning to find out that the omnibus’ *impériale* is not as pleasant an invention as first imagined.”

## Notes:

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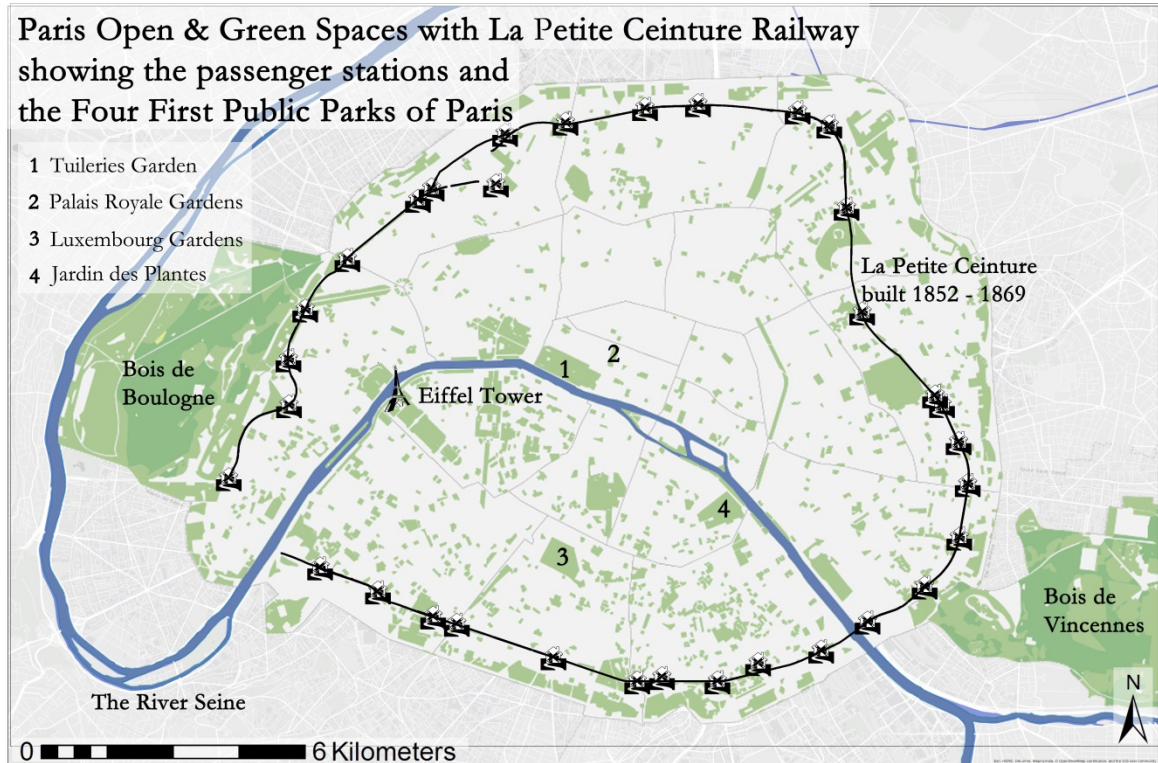
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### 3. Paris Parks and Open Spaces

*“The desire to make Paris a truly grand capital required consideration of what kind of city it, in fact, was and what altering it could or should produce. In the early stages of the public works projects in the 1850s, an article appeared in Le Monde Illustré concerning the construction of Square du Temple located in the working class capital. “It is not enough to embellish the city,” the newspaper reported, “it is necessary that the embellishing cleanses; this is what now ardently preoccupies Parisian city planners.””<sup>1</sup>*



**Image 1.** Paris shown today with la Petite Ceinture in black just within the city limits and showing all the open and green spaces of the city. Map composed by author.

The French verb for walking is ‘marcher’, but ‘to take a walk’ is different entirely; promener; promenade, a word from the mid 16<sup>th</sup> century, denotes a leisure walk in public. Taking a walk has been an integral part of the Parisian society, their livelihood and culture for centuries and it has not changed. Although public spaces and parks have become engrained in Parisian society, this research shows the ratio of public spaces, plazas and parks in each of these arrondissements are in favor of the built environment. It wasn’t until the time of Emperor Napoléon III that the number of public spaces changed.

Emperor Napoleon III wished to change the city, modernize it and make it a capital that beamed with national pride. He envisioned greenspaces in every section of the city. The new green spaces, the gardens, the woods and the squares aided in the attraction of foreign visitors. This was also economically important as the tourist industry was quickly growing in the 1850s.<sup>2</sup>

In 1856, during the Second Empire, Baron Haussmann established and oversaw the Municipal des Travaux Publics [Municipal Service for Public Works]. This agency carried out all the massive renovations of the capital and was comprised of three divisions, Voie Publique [Streets and Roads], Eaux et Égouts [Water and Sewers] and Service des Promenades et Plantations [Parks and Squares]. Service des Promenades et Plantations was responsible for not only building and maintaining the parks, but also for reshaping the open and green spaces of the city. Haussmann brought in Jean-Charles Adolphe Alphand as head of this division and the lead designer-engineer along with Jean-Pierre Barillet-Deschamps as Jardinier en Chef [Chief Gardener] of Paris. Together Alphand and Deschamps created most of the parks, gardens and open spaces during this time.<sup>3</sup> Although Haussmann preferred the French formal style of gardens in the tradition of Le Nôtre, he gave Alphand a free hand in his designs while he worked on roads, buildings, transportation and sewers. Napoléon III preferred the 'Jardin Anglais' style as did Alphand and so many of his designs reflected that. When Baron Haussmann fell from grace in 1870, his successor and the new Prefect Léon Say, kept Alphand and appointed him as Director of Public Works, where he continued his work for another 13 years until his death in 1891.<sup>4</sup>

Many of the earlier promenades, gardens and parks were only available to the aristocracy, the bourgeoisie, or by invitation of the crown. “The Tuileries Garden was often described as a public garden but admission was at the “pleasure of the crown” and therefore it limited access to people of quality through devices such as dress codes”. In the seventeenth and eighteenth centuries allowing public access of the Tuileries was a heavily discussed topic among the aristocracy, who and why would be let in.<sup>5</sup> Thereby there were no truly public gardens in Paris until 1843. Prefect Rambuteau, opened the first public garden Square de l’Archevêché [Archbishopric Square]. Today it is known as Square Jean XXIII, located on the east and south sides of Cathédrale Notre-Dame [Notre-Dame Cathedral] on Île de la Cité in the heart of Paris. The garden was enlarged in 1911.<sup>6</sup>

Among the first new green spaces in the Haussmann-Alphand era were the first four major parks to be created on each point of the compass for the capital: the Parc des Buttes-Chaumont in the North, Parc de Montsouris in the south, the Bois de Vincennes in the east and the Bois de Boulogne to west. Parks and open spaces were greatly needed, at the time as there were only four semi-public parks in the center of Paris; the Tuileries Gardens, Palais Royal Gardens, The Luxembourg Gardens and Jardin des Plantes [Garden of Plants].



**Image 2.** Tuileries Gardens in Paris. Photos by author.





**Image 3.** Paris, Tuileries Garden. Drawing by Saint-Aubin, 1760.

## **The First Four Gardens of Paris**

### **The Tuileries Gardens – 1<sup>st</sup> Arr.**

The Tuileries Gardens received their name from tile factories that used to stand in its place.

Queen Catherine de Medici built the Palais des Tuileries in 1564. In 1664 the famous landscape gardener of Versailles, André Le Nôtre, then redesigned them in the French classical style. Since its inception the Tuileries has been a cultural place to walk. During the Second Empire, the gardens were redesigned for Napoleon III and his family in the English Style and closed to the public. In 1667, this became the first royal garden that was opened to the public, except for beggars and soldiers.<sup>7</sup> As the Saint-Aubin drawing illustrates above the gardens were the place to see and be seen among society.<sup>8</sup>

### **The Palais Royal Gardens – 1<sup>st</sup> Arr.**

Eager to get closer to the Louvre and the royalty, Cardinal de Richelieu acquired the Hotel d'Angennes in 1624 and replaced it with Cardinal Palace (1627-1639) built by Jacques Lemercier. Upon the Cardinal's death it was bequeathed to the king, at which time it

became the Palais-Royal in 1643. In the late eighteenth century, the garden was enclosed and made smaller when the palace was enlarged. Today the courtyard [Cour d'Honneur] is surrounded by colonnades and contains a large contemporary sculpture, The Colonnes de Buren by Daniel Buren. In 1992 the French Government planned to restore the gardens and hired an American gardener living in Paris, Mark Rudkin. Mark had a well-earned reputation from designing a garden attached to Château de Blérancourt in Picardy in 1989 and then the gardens of Musée d'Art Américain in Giverny, Monet's Garden. Mark appreciated the lines and proportions of the Palais Royal garden and wished to revive the original 1730s plan. The garden has a central fountain along with double row of *Tilia cordata*, little-leaf linden trees, planted in 1992, replacing the 1910 planting of *Aesculus carnea*, red horse-chestnuts. Additionally the perennial flower beds were redesigned and replanted.

### **The Luxembourg Palace Gardens – 6th Arr.**

The Luxembourg Palace was created by Marie de Medici, widow to King Henry IV, in 1612 for a royal residence; the gardens were built to accompany the palace. The palace replaced the Luxembourg Hotel which she purchased in 1611. The garden has changed in size since its inception, it is now considered the largest public park in Paris with 22.45 hectares [55.5 acres] of land. Tommaso Francini began the gardens, they were expanded by Jacques Boyceau de la Barauderie, the gardener of the Tuileries and Versailles royal garden in 1630. Following the French Revolution [1789-1799] the gardens were in need of renovation. Architect Jean Chalgrin, the architect of Arc de Triomphe, restored the gardens keeping the formal French style. From 1865 to 1867 Alphand and Deschamps redesigned the garden. The construction of rue Auguste-Comte cut through a southern section of the park. An



Consequently the Medici Fountain had to be moved to its current location. Today the gardens are still filled with over a hundred statues, monuments and fountains.<sup>9</sup>

### **Jardin des Plantes – 5<sup>th</sup> Arr.**

Jardin des Plantes is the ancestor of the public garden. In 1626, King Louis XIII acquired a piece of land near the abbey of Saint-Victor [in what is today the 5<sup>th</sup> Arr.] and ordered his doctor, Gui de La Brosse, to install plants for a medicinal garden. Although it began as a royal garden, it was soon opened to the public in 1640. Then from 1739 to 1788 the garden underwent its first extension and the renewal of its plantations, reclassified according to the nomenclature of Carl Linnaeus, the binomial nomenclature system that is the basis of all names of plants and animals today. In 1782 Buffon succeeded, by purchase of land and exchange with the monks of the abbey of Saint-Victor, in doubling the garden and extending to the Seine, establishing the future Rue Buffon. The allées were redrawn and extended. The quinconces [staggered rows] and squares were arranged for the School of Botany. Today the Botanical Gardens are a beloved park and are one of the largest in the heart of Paris at 24 hectares [59 acres].

### **Napoleon III & Baron Haussman Era – Woodlands [Bois]**

It was during the Napoleon III & Baron Haussman era that the two largest woodland parks, of Paris were designed and created, Bois de Boulogne in the west and Bois de Vincennes in the east. These woods were created in the picturesque style, the 'Jardin Anglais' [English Garden] style rather than the strict formal garden styles that many public squares had followed. At this time, Alphand preferred the Jardin Anglais style for larger sized areas. Bois de Vincennes was once one of the hunting grounds for royalty. After the Revolution

the land became the property of the State. Alphand dug out space for three lakes Lac des Minimes, Lac de Gravelle and the Lac de Saint-Mande, created the Paris Horticulture school and the Arboretum de Breuil.



**Image 4.** Bois de Boulogne, Paris. A lithograph by Théodore Muller, 1875.

Also a former royal hunting ground, the redesigned Bois de Boulogne was built between 1852 and 1858 covering an area of 845 hectares [2,090 acres]. In 1727 Mademoiselle Le Maure a famous opera singer retired to the Abbey of Longchamp located in the woods. Her singing would draw crowds making the woods a fashionable promenade, thereby causing the Archbishop to close the abbey to the public as the crowds were coming for the singing and not due to devotion. In spite of the closure, the woods were still a popular gathering space for the public and a popular walk. Over the years the popularity of the woods never decreased. Though the park was in need of renovations after the French revolution and the

French campaign, the woods were occupied and sacked, animals were hunted and trees were felled. Napoléon III wished to bring life back to this honored and revered space, create an English landscape that rivaled that of London's Hyde Park. He oversaw the renovations carefully and both he and the Empress took to riding in the park with their people close behind. It quickly became the strolling grounds of the elite as illustrated in the lithograph by Théodore Muller.<sup>10</sup> A Sunday afternoon in the park was soon extended to the entire week. The lower classes would flock to see society and the 'affluent visitors' that the park would draw when they could. Just as fashions come and go, as the crowds of the lower classes would gather, the higher society moved their promenading elsewhere so they wouldn't be in such company.

The change of the dense medieval street city to wide boulevards, the views and the openness of what one sees today was drastic. At the time, the demolitions and construction of the city was devastating. The aim was to develop green spaces for the city to breathe, so that Parisians might live in a healthy modern city. Moreover, Paris was to be a gem of a capital city for all the world to see and admire. The reconfiguration of Paris has been attributed to the human body, and like the human body, the city had its circulation system, the geometric grid of wide boulevards and avenues, the waste disposal system, the new network of sewers under the city. The Second Empire had converted many spaces for public use with the goal of increasing the green and open spaces of the city and setting a precedent for city living. Table 1 lists the parks and gardens created and renovated at this time.<sup>11</sup> These spaces, the twenty-four squares, four large gardens, four parks and two woodlands all added over 1,971 hectares [4,871 acres] of green space to the city, not including the wider tree lined avenues and boulevards.

**Table 1. Paris Gardens, Parks, Squares, Woodlands, Opens Spaces, Built or Recreated during the Second Empire**

<b>Name</b>	<b>Built</b>	<b>Notes</b>
<b>Square</b>		
Square d'Ajaccio – 7 <sup>th</sup> Arr. 4,472 m <sup>2</sup> [5,324 yards <sup>2</sup> ]	1865	Square just outside Hôtel des Invalides English Style
Square Louis XV – 8 <sup>th</sup> Arr. 4,184 m <sup>2</sup> [4,981 yards <sup>2</sup> ]	1865	Built after Blvd Haussmann. English Style
Square de la Trinité – 9 <sup>th</sup> Arr. 3,767 m <sup>2</sup> [3,164 yards <sup>2</sup> ]	1865	Designed as a viewpoint and perspective from the Chaussée-D'Antin. The garden is structured around 3 lawns. English Style
Sq Saint-Vincent-de-Paul – 10 <sup>th</sup> Arr. 1,980 m <sup>2</sup> [2,357 yards <sup>2</sup> ]	1867	Built at the foot of Saint-Vincent-de-Paul Church at a junction of streets enhancing the perspective and viewpoint.
Square de l'Observatoire – 6 <sup>th</sup> Arr. 2.2 Hectares [5.5 Acres]	1867	Composed of two gardens: Jardin Robert- Cavelier-de-la-Salle – [1.12 hectares], and Jardin Marco-Polo – [1.09 hectares] created as the Luxembourg Gardens were redesigned: English Style
Square Marcel Pagnol – 8 <sup>th</sup> Arr. 3,764 m <sup>2</sup> [4,481 yards <sup>2</sup> ]	1867	Created in 19867, was formerly known as Square Laborde, again renovated in 1969 English Style
Square Paul Langevin – 5 <sup>th</sup> Arr. 4,328 m <sup>2</sup> [5,152 yards <sup>2</sup> ]	1868	English Style
Sq. Boucicaut – 7 <sup>th</sup> Arr. 7,202 m <sup>2</sup> [8,574 yards <sup>2</sup> ]	1870	Built 1870 inaugurated 1873, a former leper-house site. English Style
<b>Bois = Woodland / Forest</b>		
Bois de Boulogne – 16 <sup>th</sup> 845 Hectares [2,088 acres]	1852	Rouvray Forest, Longchamp Abbey, Château de Madrid, Château de la muette & Château de Neuilly, Grounds became State property 1852 – Napoléon III
Bois de Vincennes – 12 <sup>th</sup> 995 Hectares [2,459 acres]	1857	Hunting grounds French Royalty

**Table 1 [con't]: Paris Gardens, Parks, Squares, Woodland, Opens Spaces, Built or Recreated during the Second Empire**

<b>Name</b>	<b>Built</b>	<b>Notes</b>
<b>Jardin = Gardens</b>		
Jardin des Tuileries – 1 <sup>st</sup> Arr. 28 Hectares [70 Acres]	1564	Resdesigned in English style for Napoleon III and his family, and closed to the public during this time.
Jardin du Luxembourg – 6 <sup>th</sup> Arr. 22.5 Hectares [56 Acres]	1612 1866	Gardens split between French & English styles. In 1866 Napoléon III added 12 hectares.
Jardin des Plantes 28 Hectares [69 acres]	1626	Botanical Garden, was Jardin Royal des Plantes Médicinales [Royal Garden of the Medicinal Plants]
Palais Royal Gardens 2 Hectares [5 acres]	1629	Classical Garden
Jardin Marco-Polo– 6 <sup>th</sup> Arr. 1 Hectares [2.7 Acres]	1867	A formal garden designed by Alphand, an extension of the Luxembourg Gardens.
Jardins des Champs-Élysées – 8 <sup>th</sup> Arr. 13.7 Hectares [34 Acres]	1792 1858	Designed by André Le Nôtre in 1792 Alphand in 1858 changed to an English style including lawns.
Jardins de l'avenue Foch – 16 <sup>th</sup> Arr. 6.62 Hectares [17 Acres]	1864- 1865	Napoléon III designed the this to connect L'Arc de Triomphe and the Champs-Élysées to Bois de Boulogne, nearly a mile long and over 450 feet wide, ample room for coaches, two side alleys, horseback and pedestrians.
<b>Parcs = Parks</b>		
Parc Monceau – 8 <sup>th</sup> Arr. 8.25 Hectares [20 Acres]	1789 1860	1860 the City of Paris took 20 hectares of the old park, half developed for estates the rest was to be park designed by Alphand.
Parc Montsouris – 15.5 Hectares [38 Acres]	1867- 1878	Construction delays due to the 1870 war. Alphand designed in the English style.
Parc du Ranelagh – 16 <sup>th</sup> Arr. 6 Hectares [15 Acres]	1860	English style, designed by Alphand as well as the small Ranelagh Puppet Theatre in the park.
Parc des Buttes-Chaumont – 19 <sup>th</sup> Arr. 24.7 Hectares [61 Acres]	1865 - 1867	Prior to the park it housed a Limestone quarry, a garbage dump and Montfaucon Gallows.



**Table 2. Green Spaces added during the Grand Project of Président Mitterand and other spaces added in the 1980s and 1990s in Paris.**

<b>Name</b>	<b>Built</b>	<b>Notes</b>
Jardin du Bassin de l'Arsenal – 12 <sup>th</sup> 1 Hectares [2.5 acres]	1983	<u>Designers:</u> Arch: Phillippe Mathieux et Land Arch: Serge Eyzat <u>Formerly:</u> (and is) canal edge
Parc Georges Brassens – 15 <sup>th</sup> Arr. 7.75 Hectares [20 acres]	1984	<u>Designers:</u> Landscape Arch: Collin Architects: Ghiulamila et Milliex <u>Formerly:</u> slaughterhouses, rail ROW
Parc de la Villette– 19 <sup>th</sup> Arr. 55.5 Hectares [14 acres]	1984- 1987	<u>Designers:</u> Bernard Tschumi <u>Formerly:</u> slaughterhouses, rail ROW
Jardin Sauvage Saint-Vincent – 18 <sup>th</sup> 1,480 m <sup>2</sup> [1,770 square yards]	1985	Montmarte Chapel, garden was over grown, redone as bio preserve, guided tours only.
Jardin des Halles – 1 <sup>st</sup> Arr. 3.42 Hectares [8.5 acres]	1986- 1988	<u>Designers:</u> Land Arch: Vergely, Arch: Arretche. Sculptors: Francois-Xavier et Claude Lalanne. <u>Formerly:</u> market place [mall and market moved underground]
Parc de Belleville – 20 <sup>th</sup> 45,000 m <sup>2</sup> [53,819 square yards]	1988	<u>Designers:</u> Architect François Debulois and the Landscape Architect Paul Brichet. <u>Formerly:</u> hill former cottages, area home to vineyard
Parc de la Turlure – 18 <sup>th</sup> Arr. 4,715 m <sup>2</sup> [5,639 square yards]	1988	<u>Designers:</u> Grumbach <u>Formerly:</u> on the back hill of Sacre Coeur, site was Montmarte Hill with many windmills.
Square Charles – Péguy – 12 <sup>th</sup> Arr. 1.3 Hectares [3.5 acres]	1989	<u>Designers:</u> Gillot et Grunig-Tribel <u>Formerly:</u> rail and ROW from old Vincennes branch line of La Petite Ceinture.
Parc André Citroën – 15 <sup>th</sup> Arr. 14 Hectares [34.5 acres]	1992	<u>Designers:</u> Land Arch: Gilles Clément and Alain Provost, Architects-Patrick Berger, Jean-François Jodry and Jean-Paul Viguier. <u>Formerly:</u> Citroen car manufacturing plant
Promenade Plantée – 12 <sup>th</sup> Arr. 65 Hectares, 4.5 km [160 acres]	1993	<u>Designers:</u> Landscape architect Jacques Vergely and Architect Philippe Mathieux <u>Formerly:</u> old Vincennes rail line
Parc de Bercy – 12 <sup>th</sup> Arr. 14 Hectares [34.5 acres]	1994- 1997	<u>Designers:</u> Arch: Ferrand, Feugas, Huet, LeRoy, Land Arch: Le Caisne et Raguin <u>Formerly:</u> former wine depot and rail RoW
Jardin Atlantique – 12 <sup>th</sup> Arr. 3.42 Hectares [8.5 acres]	1994	<u>Designers:</u> Land Arch: Brun, Pena et Scnitzler. <u>Formerly:</u> Covers the tracks of Gare Montparnasse
Jardin de Reuilly – 12 <sup>th</sup> Arr. 1.5 Hectares [3.7 acres]	1998	<u>Designers:</u> Arch: Pierre Colboc et Landscape Arch: Thierry Louf <u>Formerly:</u> former grounds of Reuilly train station

## The Grand Project of Président François Mitterrand

Through the years parks and gardens fell into disrepair, after the wars of 1870, WWI, WWII. Housing developments and other necessities became a priority over parks and gardens for the city. To celebrate the bicentennial of the Revolution, Président François Mitterrand put together an urban renewal project to revitalize the city. The Grand Project consisted of many projects across the city that ranged from architectural projects, new monuments, monument renovations and reinventing green spaces, listed out in Table 2.<sup>12</sup> The plan commenced in 1982 and continued after Mitterrand was out of office. Among those green spaces and gardens built were, Parc Georges Brassens, Parc de Belleville, the Jardin des Halles, Parc de Bercy, Parc André Citroën, Promenade Plantée, Daumesnil or Reuilly-Bastille tree-lined promenades, the Jardin Atlantique over Gare Montparnasse, and Jardin Diderot.<sup>13</sup> A majority of these spaces were created from sites that were no longer used for their original purposes. They were created from industrial areas, rail right-of-ways, abandoned track lines, etc., these works added 172 hectares [425 acres] to the city of Paris.

### Place de la République

Currently Paris is considering adding more open and green spaces within the city limits. The most recent project was Place de la République; it borders on the 10<sup>th</sup>, 11<sup>th</sup> and 3<sup>rd</sup> arrondissements. The Place contains a monument with a statue of Marianne at the top, the embodiment of France.



**Image 5.** Place de la République as seen today, with the statue of Marianne.



**Image 6:** Before and after photos of Place de la République respectively.

Since the Haussmann era, the area has been a roundabout for cars and vehicles, with asphalt taking up the most of space. Place de la République was recently re-envisioned and the work was completed in 2013 with designs by TVK Pierre Alain, Trévelo & Antoine Viger-Kohler urban architectes; Martha Schwartz Partners et Areal, landscape architectes [Paysagistes]. Essentially the redevelopment of the plaza allows automobile traffic on the south and the north side a vast square for the pedestrians with a limited access for taxis and public transportation. The area was immediately occupied and used heavily. As seen in Image 5, the added trees and clear differences of the lighter paving bring light and give a fresh look to the space and to the beloved Marianne.<sup>15</sup>

### **The Next Green Open Space of Paris**

Paris has actively been developing and building projects with the goal of adding green open spaces to the city, such as the development of Place de la République, completed in 2013. La Petite Ceinture loops around the city with 32 km of currently unprogrammed and underutilized space. This does not include the vast number of ROWs and parks, squares and gardens this ribbon through the city connects. It could serve to be the next project and one of the largest additions of green open space to a dense modern city in a long time.

Many citizens have been unofficially utilizing some of the ROWS for community gardens or for gardens of their own. These spaces are getting more attention from the city and the owners of the railway. In January 2003, a Paris

council meeting was held and from that meeting a community garden was granted to the neighborhood. This



**Image 7:** View of la Petite Ceinture Community Garden located along the small belt line, beyond Ernest Roche Street, between Pouchet Streets, Colonel Manhès and Dr. Paul Brousse in 17<sup>th</sup> Arr.

particular ROW space was being used before the official permission was granted. Once official permission of use was granted, proper access was built along with a small shed with toilets and a room for the gardeners. It was made very clear that although this was permitted, this garden would in no way compromise the possibilities of short, medium and or long term evolution of train traffic, especially since the garden lay adjacent to the neglected line.<sup>16</sup> This space is one of many that are being utilized along the tracks and on the ROWs along La Petite Ceinture.

The state has relinquished command of additional places along the route in the past, including, the area above the tracks in the 17<sup>th</sup> Arr. adjacent to Blvd Péreire. A long series of promenades, the Péreire Promenades were created from Rue Courcelles to Avenue de la Grande Armée in, 1990 and the rest between 1988 and 1989. The gardens off the promenade contain, spaces for children, lawns, rose gardens, perennial beds, dog runs, ping pong tables, chess tables, and in the lower sections tennis courts. These gardens and the promenade are used heavily by residents. The name pays homage to the Brothers' Péreire,



Jacob Emile P  reire (1800-1875) and Isaac P  reire (1806-1880), both bankers and parliamentarians, who founded in 1852 Credit Mobilier, a bank specializing in long-term loans to industrialists. They played an important role in the development of the railways especially the PC.<sup>17</sup>



**Image 8:** View of tennis courts in the P  reire Promenade on the Blvd P  reire in the 17<sup>th</sup>. Arr. Image by author.



**Image 9:** View walkers and gardens sections along the P  reire Promenade on the Blvd P  reire in the 17<sup>th</sup>. Arr. Image by author.

As mentioned earlier, located in the 16<sup>th</sup> Arr. south of the P  reire Promenades is Sentier Nature Petite Ceinture, the nature walk. In 2007 this 1.2 km section, currently without tracks creates a green space of 2.2 hectares [5.5 acres] adjacent to Jardin Ranelagh. It is considered to be an ecological corridor for plants and animals. It has an unpaved wooded path that passes through meadows and thickets. There are limestone walls and slopes that collect rainwater and contribute to the existing aquifer below. Currently the City of Paris and the Mairie [Mayor's office] of the 16th Arrondissement have plans to expand the nature trail to 10 km by 2020.<sup>18</sup>

In April 2012 work began on 1.3 kilometers [.8 miles] section of the PC in the 15<sup>th</sup> Arr. that is also not in use. This small section was completed and opened to the public in 2013.





**Image 10:** View of steps between street level and new walking section of the PC in the 15<sup>th</sup>. Arr. Image by author.



**Image 11:** View of covered tracks for new walk way on the new section of the PC in the 15<sup>th</sup>. Arr. Image by author.

The realization of this green space took time, given the bitter negotiations between the City and Réseau Ferré de France, owner of the rails. The implementation of this green space must take into account an important constraint: the reversibility of this construction requested by the network manager in case the trains should circulate again. As a result, a light design layout that could be reversed was agreed upon, a layer of wood laths cover the existing tracks. The vegetation surrounding the new promenade will be of 'light' vegetation and fairly open and free. The other lane will be left in its current state to allow the possibility of train traffic returning. The RFF was most adamant about this point. Benches may be added and placed along the promenade, and stairs and a few elevators may be added to assist with access. The train station present along this section will not be part of this project and use is not permitted at this time. Currently the Mairie 15<sup>th</sup> [Mayor's District Office of 15<sup>th</sup> Arr.] has been trying to extend the promenade and garden section another 300 meters to the east. The Mairie 15<sup>th</sup> has held public meetings to generate awareness of the project and to discuss possible programming ideas for the extension.

**Table 3. La Petite Ceinture connections with open spaces, parks, gardens and squares of Paris.**

<b>12<sup>th</sup> Arr. PC Stations</b>	
<b>Direction Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Bel-Air Ceinture - 27 Rue de Montempoivre</b>	
Coulee Verte René Dumont	Square Emile Cohl
Promenade Plantée	Square Georges Melies
Square Charles Péguy	Jardin Ilan Halimi
Community Garden Charles Péguy	Cimetière de Saint-Mandé Sud
	Square Van Vollenhoven
	Square des Anciens Combattants d'Indochine
	Bois de Vincennes
<b>Gare Rue Claude Decaen - 7 Rue Claude Decaen</b>	
	Cimetière de Bercy
	Stadium Léo-Lagrange
	Cimetière Valmy
	Bois de Vincennes
<b>Gare la Rapée Bercy - 5 Boulevard Poniatowski</b>	
Porte de Bercy	
Seine River	Parc de Bercy

<b>13<sup>th</sup> Arr. PC Stations</b>	
<b>Direction Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Orléans-Ceinture - 1 rue Regnault,</b>	
Square Ulysse Trélat	Université Paris Diderot
Jardin de la Dalle d'Ivry	Parc Square Cyprian Norwid
	Avenue de France
	Skateboard Park
	Place du Docteur Yersin
<b>Gare Maison-Blanche - 131 avenue d'Italie,</b>	
Jardin du Moulin de la Pointe	Jardin Juan-Miro
Jardin Charles Trenet	Square Hélène Boucher
Parc Petite Ceinture-Kellermann	Square Robert Bajac
Jardinet de la rue de l'Amiral-Mouchez	Parc Kellermann
	Cimetière de Gentilly
	Jardin Jean-Claude-Nicolas-Forestier
	Paris Universié Club
	Comité National Olympique Sportif
	Square Paul-Grimaud

<b>13<sup>th</sup> Arr. PC Stations [con't]</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Glacière-Gentilly - 67 rue de l'Amiral Mouchez [renamed Parc de Montsouris]</b>	
Parc Montsouris	Stade Dalmasso, CIUP
Cité Internationale universitaire de Paris	

<b>14<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Montrouge – 113 Avenue du Général Leclerc</b>	
Jardin la Petite Ceinture	Jardin de la place Jules-Hénaff
Community Garden-rue de Couimiers	Jardin Lionél-Assouad
Jardin rue des Arbustes	Parc Square du Serment de Koufra
Square rue des arbustes	Cimetière de Montrouge
	Square Jean Moulin

<b>15<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Ouest-Ceinture - 232 Rue Vercingétorix</b>	
	Square Julia-Bartet
	Square Castagnary
<b>Vaugirard-Abattoirs – Slaughterhouse [today Parc George Brassens]</b>	
Parc George Brassens	Square des Péirchaux
	Square du docteur Calmette
	Square de la Porte de la Plaine
<b>Gare Vaugirard-Ceinture – 397 bis Rue de Vaugirard,</b>	
	Square du Clos-Fequières
	Le Dome de Paris- Palais des Sports
	Paris Expo Porte de Versailles
<b>Gare Grenelle - 87 Rue Leblanc</b>	
Square Carlo Sarrabezolles	Parc André Citroën
The Seine	

<b>16<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Pont-du-Jour - 17 Boulevard Exelmans</b>	
Seine River	Parc Sainte-Périne
	Cimetière d'Auteuil
	Jardins des Serres d'Auteuil
	Square des Poètes
	Bois de Boulogne

<b>16<sup>th</sup> Arr. PC Stations [con't]</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Auteuil-Boulogne – 78 Rue d'Auteuil</b>	
Sentier Nature Petite Ceinture	Square Alfred Capus
Place de la Porte de Passy	Square Tolstoi
Jardin du Ranelagh	Square Henri Bataille
	Sq. des Écrivains Combattants Morts pour la France
	Bois de Boulogne
<b>Gare Passy-la-Muette – 2 Boulevard Beauséjour</b>	
<b>Gare Henri-Martin – 4 Place Tattegrain</b>	
Skateboard Park	Square Lamartine
Jardin Blvd Flandrin	Square Robert Schuman
Tennis Club-Blvd Flandrin	Square du Général Anselin
Porte Dauphine	Jardins de l'avenue Foch
<b>Ave de Bois de Boulogne [Ave Foch] – 92 Boulevard Flandrin</b>	
Square A et R Parodi	Université Paris-Dauphine
Place de la Porte Maillot	Square Anna de Noailles
	Bois de Boulogne

<b>17<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Neuilly Porte Maillot – 1 rue des Dardanelles</b>	
Place de la Porte Maillot	Bois de Boulogne
Square Alexandre et René	Square Olave et Robert Baden-Powell
Square A et R Parodi	Square Sainte-Odile
Parc Péreire	Square Jérôme Bellat
Promenade Péreire	Square Anna de Noailles
<b>Courcelles-Levallois - 4 Place du Maréchal Juin</b>	
	Square Place du Maréchal Juin
<b>Courcelles-Ceinture - 2 rue Alfred-Roll</b>	
	Jardin André Ulmann
<b>Pont du Cardinet – Previous Batignolles – 1 Boulevard Péreire</b>	
	Square Alexis Clérel de Tocqueville
	Square Paul Paray
	Square des Batignolles
<b>Gare Avenue de Clichy - 190 Avenue de Clichy</b>	
Parc Martin Luther King	Square Saint-Croix
Square Ernest-Gouin	Square des Epinettes
Jardin Paul-Didier	Stade Max Rousié
Jardin Ernest Roche-Community Garden	
Square Jean Leclaire	

<b>17<sup>th</sup> Arr. PC Stations [con't]</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	
<b>Gare Avenue de Saint-Ouen - 128 Avenue de Saint-Ouen</b>	
Square Maria Vérone	Square de la rue Henri-Huchard
Square Dampierre-Rouvet	Square Marcel Sembat
	Square Sainte-Hélène

<b>18<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Boulevard Ornano – 81 Boulevard Ornano</b>	
	Jardin de la rue Ginette Neveu
	Centre Sportif Championnet
	Jardin 122 rue des Poissonniers
<b>Gare la Chapelle St. Denis – 165 rue de la Chapelle</b>	
	Indy Bowling Paris la Chapelle
	Stade et gymnase des Fillettes
	Square Raymond Queneau
	Le Five Paris – Soccer Field
	Square Charles Hermite
	Jardin Anaïs-Nin
	Square Claude Bernard

<b>19<sup>th</sup> Arr. PC Stations</b>	
<b>Direct Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Est-Ceinture – 99 rue Curial</b>	
	Parc de la Villette
<b>Gare Pont de Flandre - 1 Ave Corentin Cariou</b>	
Place rue de l'Argonne	Bassin de la Villette
Quai de la Marne	Square Marcel Mouloudji
Community Garden 6 rue de l'Ourcq	Square Dampierre-Rouvet
	Parc de la Villette
<b>Gare Belleville-Villette - 4 rue de Lorraine</b>	
Parc des Buttes-Chaumont	Centre Sportif Hautpoul - Sports
<b>Gare Menilmontant - 9 rue de la Mare</b>	
Square du Sergent Aurélie-Salel	Square des Saint-Simoniens
Parc de Belleville	Square Elisa Borey
Square du Docteur-Grancher	Square des Amandiers
Parc Square Samuel de Champlain	
Cimetière du Père Lachaise	



<b>20<sup>th</sup> Arr. PC Stations</b>	
<b>Direction Connections of Parks, Squares &amp; Open Spaces</b>	<b>Connections within a 5 minute walk:</b>
<b>Gare Charonne - 102 bis Rue de Bagnolet</b>	
Community Garden rue florian (unofficial)	Square Henri Karcher
<b>Gare Charonne – 1 Rue Florian (service building )</b>	
	L’enclos des Oiseaux
	Cimetière de Charonne
	Square de la Salamandre
	Jardin Naturel Pierre-Emmanuel
<b>Gare Rue d’Avron - 4 Rue Ferdinand Gambon</b>	
Jardin de la Gare-de-Charonne	Square Paganini
<b>Gare Avenue de Vincennes - 101 Cours de Vincennes</b>	
	Square de la Paix

### **The City Agreement for La Petite Ceinture**

The future usage of the PC has been in heavy debate for years, but community interest and awareness is growing and project proposals are multiplying. In 2015 the city of Paris had finally reached an agreement with SNCF-Reseau and RFF. The agreement discusses the spaces used by the RER, the spaces already ‘loaned’ to the city and the possible spaces the city may use for open space to benefit Parisians. It was heavily stated that any amenities to the space would be temporary in case the rails needed to be used for train traffic again. It further permitted temporary use by the City for a term of 5 years with the possibility of reusing the rail and defining permanent or temporary local development principles on the rights of way. Prior to this time a protocol was established in 2006 for a period of 5 years with similar constraints, until 2011, an application was made at that time to extend it to June 2015. Once the protocol ended in 2015, a review of the spaces used was made and studies of possible future uses were conducted. This new agreement of 2015 has finally defined an agreed upon common goal to enable the PC in the largest possible sections, to be opened to the public. Further studies must be conducted to identify initial conditions of structures, the tracks, infrastructure, etc. Additionally for any sections that will be opened to the public an

agreement must be reached as to the nature of the improvements, the manner of the implementation and the phasing of the projects. The trestles and infrastructure will be maintained by SNCF and RFF while any additional amenities such as benches, any access points such as stairwells and elevators will all be funded, installed and maintained by the City. All of which must be agreed upon ahead of time by all parties concerned.



**Image 12:** MIT Treepedia Study: Identifying the Canopy Density in Paris.

### **La Petite Ceinture and the Potential Impact On Paris**

Massachusetts Institute of Technology [MIT] has been conducting an ongoing study with the World Economic Forum [WEF] examining the canopy density of major cities around the world. It highlights the percentage of the built environment versus the open spaces. “In fact, in 2015, the WEF Global Agenda Council [GAC] on the Future of Cities included increasing green canopy cover on their list of top ten urban initiatives: “Cities will always need large—infrastructure projects, but sometimes small scale infrastructure from cycle

lanes and bike sharing to the planting of trees for climate change adaptation can also have a big impact on an urban area.”. MIT studies have identified Paris as to have an 8.8% green index as depicted in Image 12. Of the major cities studied thus far, as illustrated in Table 4, Paris ranks as one of the cities with the least amount of urban canopy density. The map at the beginning of the chapter, Paris Open & Green Spaces in Image 1 further illuminates the minority of park and open spaces in the city. Together they highlight just how much the built environment dominates the city.<sup>19</sup>

<b>Table 4. MIT Treepedia Study: Comparing the Canopy Density of Cities Around the World.</b>	
<b>City</b>	<b>Green Index</b>
Singapore	29.3%
Oslo, Norway	28.8%
Vancouver, Canada	25.9%
Frankfurt, Germany	21.5%
Geneva, Switzerland	21.4%
Amsterdam, Netherlands	20.6%
Boston, Mass, US	18.2%
Tel Aviv, Israel	17.5%
Turin, Italy	16.2%
New York City, NY, US	13.5%
Cape Town, South Africa	13.4%
London, UK	12.7%
Sao Paulo, Brazil	11.7%
Quito, Ecuador	10.8%
Kobe, Japan	9.4%
Paris, France	8.8%

In Paris, the existence of vacant or undeveloped lots are minimal to none. APUR, the city urbanism agency of Paris is actively conducting studies identifying areas of the public domain looking at streets and boulevards with the goal of identifying areas for potential development of green open spaces. This includes adding bicycle lanes and Velib stations, the city bicycle program. Completed in 2013, the recent reinvention of Place de la Republique in 10<sup>th</sup> and 11<sup>th</sup> Arr. took an active vehicular roundabout and developed it into a 3.3 hectare [8 acres] urban plaza. The new plaza kept some existing trees and added London plane and thornless honey locust trees thereby contributing to the canopy density of the city.<sup>20</sup> Although the streets and boulevards may contribute to the open spaces of Paris, La Petite Ceinture has the potential to make a much bigger contribution.

La Petite Ceinture has potential to be one of the resources for the open and green space the city is searching for, continuing to set a precedent. The PC has 32 kilometers [20 miles] currently unoccupied, over 40 hectares [100 acres] of open space that could be traveled by Parisians. As illustrated in Table 3, the number of parks, squares and gardens to which this promenade could connect is vast. As this PC line traverses at the perimeter of the city through suburban neighborhoods, passing schools hospitals, and schools and universities it is postulated that a walking and a biking promenade would service the communities it connects. With this green ribbon connecting all these spaces in the city, it would heighten the use of these small spaces and have a renewed effect on all that it connects. Moreover, with the exceptions of the Parc de la Villette and Parc Montsouris the local squares and parks that the PC would connect are not considered tourist attractions. Additionally the long length would aid in spacing out park visitors to the site.

In the west, the RER C uses only 11 kilometers [7 miles] of the PC and part of it is covered by the Périère Promenades. This could be linked to the unused remaining part of the PC. The small section of 1,400 meters [.8 mile] between the end of the line in the 15<sup>th</sup> and the remaining PC in the 16<sup>th</sup>, connect over Boulevard Exelmans. The small distance over a wide boulevard has potential for a connection to truly make the PC a complete circuit once again. Along the PC today there are shared gardens that have already been created in certain sections, in the twelfth, fourteenth and eighteenth, as well as promenades laid out in the fifteenth and sixteenth arrondissements. This is an opportunity not to miss, and the amount of potential green space that could be connected without any vehicular interruption is unparalleled in any modern city.

## Notes:

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#### 4. Case Studies: Parks and Linear Spaces

*“Public promenades are among the most important embellishments [of a city]... because they contribute to health of its inhabitants. It is appropriate and necessary for large cities ... to have many beautiful promenades”.<sup>1</sup>*

The PC site poses a question with many different possible solutions, “What to do with such a space?” The question then becomes how to select the best solution for everyone. Looking at similar green spaces and greenways [case studies] are a way to ascertain the best approach for the desired goals.

The PC is a long linear site that weaves through buildings, blocks and streets with ease. It



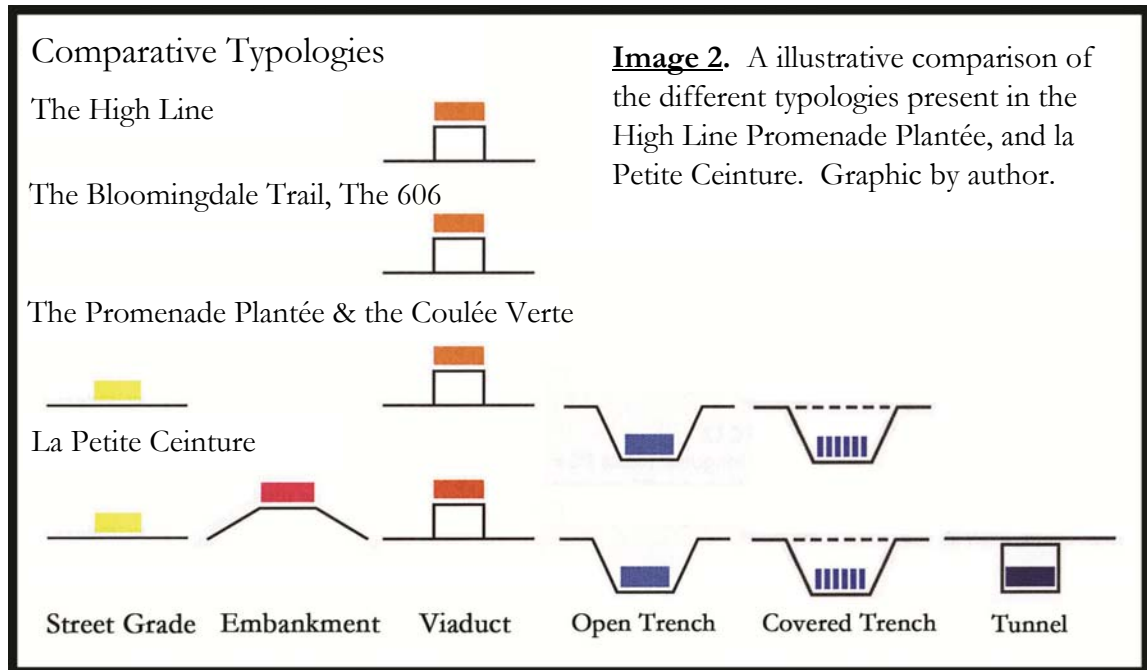
**Image 1.** Looking down onto La Petite Ceinture trench as it cuts through Parc Montsouris in the 14<sup>th</sup> Arr.

crosses over and under busy streets without interruption. Spaces like this are highly desirable by cities to create walkable and bikeable greenways. Greenways have been defined as “networks of land that are planned, designed and managed for multiple purposes including ecological, recreational, cultural, aesthetic, or other purposes compatible with the concept of sustainable land use”.<sup>2</sup> Greenway popularity has increased because it not only reuses and revitalizes derelict spaces, but brings ecological benefits as well as social, economic and health benefits to the neighborhoods that it services.

Approximately fifteen linear open spaces were investigated. Three specific projects were studied in detail and depth because of their similarities to the PC. These crucial similarities are:

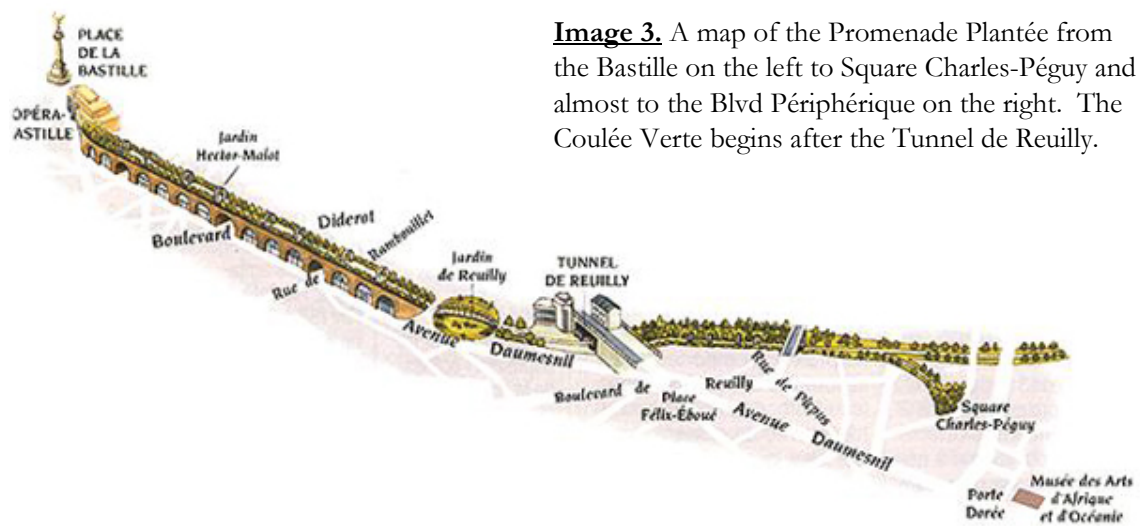
- A long linear nature;
- A continuous length throughout;
- Similar typologies, the relationship between the linear space and the urban fabric;
- Location in a large dense city;
- Abandoned rail lines with existing infrastructure ;
- Vegetation – ecological design, spatial definition, planting opportunities

The parks that have been developed exist without vehicular interruption due to their locations either above or below the city streets or a mixture thereof. These spaces were designed to be connecting links through the cities. Because of its significant length, the PC presents six different typologies; at grade, an embankment, a viaduct, an open trench, a covered trench and a tunnel. The parks chosen and discussed here are the Promenade Plantée in Paris, the first rail line converted into a promenade, the High Line in New York City, and The 606-Bloomingdale Trail in Chicago. Included in this selection is the Coulée Verte which is an eastern extension of the Promenade Plantée.



## Case Studies

### Promenade Plantée & The Coulée Verte, Paris.







The Promenade Plantée was part of an urban renewal project. This work revitalized the 12<sup>th</sup> arrondissement.

**Image 4.** An aerial view the Viaduc-des-Arts, the Promenade Plantée and Avenue Daumesnil in front.

During this time, some 1,040 new dwellings were built, 75,000 square feet of commercial space as well as other civic features and public areas. Of the public spaces, the redevelopment included avenue Daumesnil, a tree lined promenade, adjacent to the viaduct and the Promenade Plantée. Some squares along the way were added such as Square Hector Malot and the Jardin de Reuilly, [Reuilly Garden]. Hector Malot is a brick terrace roof garden above a parking garage that contains seven stories of parking spaces.

The area of the Jardin de Reuilly was set aside for future development from an earlier urban revitalization project from 1986. Jardin de Reuilly was built on the old ground of Reuilly train station and a freight storage yard that was in use until the mid 1980s. The station of Gare de Reuilly still stands today.<sup>3</sup>





**Image 5.** The original viaduct of the Promenade Plantée. The Viaduct was named Viaduc des Arts and houses commercial space.



**Image 6.** The new more modern viaduct with commercial space below, and the Promenade Plantée above.

The Promenade Plantée was built on the former Vincennes branch line of La Petite Ceinture, a brick and limestone rail viaduct 10 meters high [32 feet]. This branch line communicated between the Bastille Station, the PC and to the greater rail network. The Bastille station is no longer standing today, in its place is the opera house, L'Opéra Bastille which opened in July 1989. This Promenade was the first to be built in a



**Image 7.** Drawings of proposed Promenade Plantée.

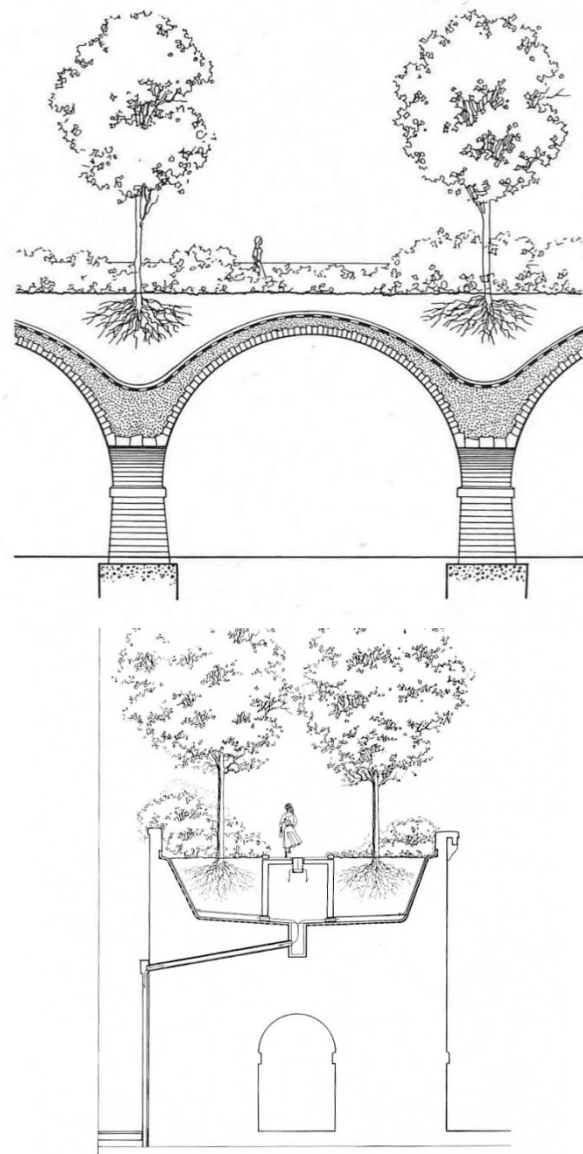
city on an old rail viaduct. This branch line was inaugurated in 1859, it serviced many trains during its time and as the need fell away the line was decommissioned in 1969. This land and the associated structure were sold by SNCF to the city. The city had in mind a neighborhood development project which included the promenade.

The structural layout of the Promenade is composed of five sections, from west to east, the original viaduct, the new connecting viaduct, the Jardin de Reuilly [Reuilly Garden] and the Allée Vivaldi. Where Allée Vivaldi ends, the Coulée Verte, [green way] begins. The Coulée Verte is also built on the rest of the branch line that continues to Blvd Périphérique. This bike path and walkway passes directly under La Petite Ceinture rail line. The final part, not yet established is the connection to the Bois de Vincennes.

The original viaduct section is 122 meters [400 feet] long and was restored by architect Patrick Berger to host artist workshops or atelier's and stores in the 67 archways below. The shops signs are

recessed to emphasize and show off the simple beauty of the structure and the archways.

The whole area was renamed 'Viaduc des Arts' [Viaduct of the Arts]. This connects to a footbridge and the new viaduct that has 366 meters [1,200 feet] of new buildings and stores. This addition architecturally copies the essence of the original viaduct but with a modern style. This leads into Jardin de Reuilly the largest space attached to the Promenade at 1.5 ha



**Figure 8.** Drawings of proposed Promenade planting bed and water drainage.

[3.7 acres]. The Jardin de Reuilly was not completed until 1998. The design process of the Promenade Plantée began in 1986, and was opened to the public in 1993. The inauguration of the Viaduct-des-Arts and the opening of some stores below were in 1994 but fully completed in 1997.<sup>4</sup>



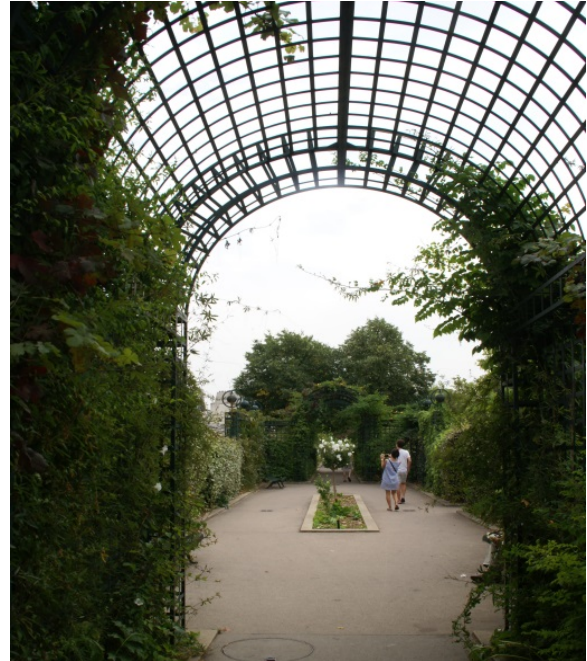
**Image 9.** Green metal trellises, the material, color and style, became one of the signatures of the Promenade Plantée.

The Promenade was designed and built by landscape architect Jacques Vergely and architect Philippe Mathieux. Walking from the Bastille eastwards one begins with a set of stairs leading up to the formal linear path. The path moves around garden beds and the formality continues until it breaks tradition to show picturesque curves later on. The arbor and gates are green metal with a design that is repeated throughout the Promenade. All the furniture, lights, benches and fencing use the same vocabulary as other public Parisian parks. Throughout the whole promenade a wide and varied plant palate is expressed including Mexican oranges, azaleas, hollies, rhododendrons, roses and various small trees. Vines on the Promenade include blue and white wisteria, trumpet vines, honeysuckle, Virginia Creeper, ivy, and roses. The perennial beds are carefully planned and well-tended. There is a bamboo garden it frames the walk and breaks up the following plant section on the pathway. Along the formal hedges, perennial beds and shrubbery, there are a series of rooms and sections that are defined with vegetation, they reveal themselves as one moves through. A long reflecting pool edged with lavender, framed by small hedges and trees creates a unique formal feature. Many of these

rooms off the path entice walkers to sit for a moment. All through the design it is clear that the intended purpose was to practice the art of the promenade.



**Image 10.** One of the arbor gates along a formal section of the Promenade Plantée, that help to distinguish outdoor rooms.



**Image 11.** One of the arbor gates along a formal section of the Promenade Plantée, that help to distinguish outdoor rooms.

Like all Parisian parks the Promenade Plantée is patrolled and closed at night. The length after the Jardin de Reuilly is not a planned formal garden space; it is allowed to grow wild and organically. The walking trail continues, and here the bike trail begins. Although bicycles are not permitted on the viaduct, many people do ride them anyway. The Promenade Plantée is interrupted by the Jardin de Reuilly. At this junction, the park becomes the meeting point for both the Promenade Plantée and the Coulée Verte. The Coulée Verte is very different from the Promenade Plantée both in design, and in function. The Coulée Verte is allowed to grow more wildly similar to the Jardin de Reuilly. Additionally it has a bicycle path and a pedestrian only pathway. At the end of the Coulée Verte, there is a connection to another bicycle trail.



After the formal beginning in the west, one crosses the foot bridge and onto the modern viaduct in between the apartment building and as knife through butter and the path loses its formality. This building is part of the new construction that houses the commercial space and the connection to the Jardin de Reuilly. The path curves and sways indulging in the picturesque. It is here that the Promenade becomes more of a 'jardin anglais' style and moves more freely without the strict rules of the formal design. All elements are maintained throughout the entire length of the Promenade and the Coulée Verte. Unlike the New York High Line this Promenade holds fewer entrances and they are not always obvious. They are not as clearly defined and according to many reviews are easily missed by tourists. The various stairways in Image 14 illustrate a wide variety of entrances to the Promenade. Seen from a street view some are wide and obvious as park entrances, while others are hidden amongst buildings and around corners. The signage for the Promenade is similar to other park signs around the city. The signs are hung on fences or on a gate and are not large or lighted.



**Image 12.** The Promenade continuing through a new apartment building.



**Image 13.** Park signage for the Promenade.



**Image 14.** Various stairway entrances to the Promenade.







**Image 15.** Viaduc des Arts and Promenade Plantée above from Avenue Daumesnil.



**Image 16.** Runner along the Promenade Plantée.



**Image 17.** A seating niche along the formal section of the Promenade Plantée.



**Image 18.** A seating niche along the formal section of the Promenade Plantée.



**Image 19.** A cozy place to read is easily found, this spot on the Promenade has hosted yoga and Tai Chi classes on occasion.



**Image 20.** Walkers on the Promenade Plantée.





**Image 21.** The reflecting pool lined with lavender, framed by formal hedges and small trees.



**Image 22.** One of the crossings of the reflecting pool, viewed down along length.



**Image 23.** Hector Malot Garden, the roof deck above the 7-story parking garage for the neighborhood.



**Image 24.** A break in the viaduct and an entrance to the Promenade just before the Jardin de Reuilly.



**Image 25.** Jardin de Reuilly, and the Promenade walk continues above right.



**Image 26.** The Avenue Daumesnil entrance of Jardin de Reuilly with stone archways and a walk above, continuing the idea of the Promenade connection.





**Image 27.** Looking east along Allée Vivaldi, towards the fountain.



**Image 28.** The fountain at the end of the mall, and Allée Vivaldi, looking west towards Jardin de Reuilly.



**Image 29.** At the end of Allée Vivaldi, looking east, as the Coulée Verte begins.



**Image 30.** The Coulée Verte, promenade at left and the bike path on the right.



**Image 31.** Left, the bike path of the Coulée Verte. The trestle above is the abandoned line of La Petite Ceinture.

**Image 32.** Right, the end of the Coulée Verte at the Blvd Périphérique.



## The High Line, New York City

The High Line [HL] is half as long as the Promenade Plantée in Paris at 2.4 km [1.5 miles]. This was a derelict rail line of the New York Central Railroad on the western side of Manhattan parallel to 10<sup>th</sup> Avenue. The rail infrastructure is completely raised 9 meters [30 feet] above the street level. The line opened for freight use in 1934 and the last train to run on the line was in 1980.

Over time the infrastructure became either ‘terra incognita’ or an eyesore for others, especially shop keepers. Sections of the line were demolished in 1960 and again in 1991. Some residents formed a group called The Chelsea Property Owners Group with hopes of continuing to tear down the

aging infrastructure. However, two locals Robert Hammond and Joshua David, wish to preserve the infrastructure and stopped further demolition. Through their grass roots organization, “Friends of the High Line” [FHL] they created in 1999, the group spread awareness of their quest and gained support. A key element to gaining such wide support was a book put together with the help of photographer Joel Sternfeld.<sup>5</sup> His images illustrated the meadows, the openness and the unique features of such a space. This captivated many and helped to gain strong support of locals and captured the attention of



**Image 33.** A map of the High Line on the west side of Manhattan from the High Line Pocket Guide.





The HL will curve around the southern and western end adding to views, perspectives, and a large public space not to mention additional commercial connections.<sup>8</sup> This is the last phase of work that will be associated with the High Line directly. Although there are only four access points in the southern part between Gansevoort and 20<sup>th</sup> streets, there are 11 access points in the full length of the High Line, including 5 elevators for the disabled.

An architectural critic for the New York Times, Nicolai Ouroussoff wrote in 2009, “it is the most thoughtful, sensitively designed public space built in New York in years. He further discusses how walking along one experiences an ‘unexpected degree of how it alters one’s perspective of the city’, ‘being lifted three stories off the ground’, yet able to witness the city’s hustle and bustle.”<sup>9</sup>

Tapered concrete pavers are a main element of the design, inspired by the rails of train tracks. These concrete pavers emphasize the linear nature of the site and guide walkers. The layout is geometric although the slim nature



**Image 35.** Sketch of a wider section of the High Line.

of the pavers allows them to create a curved pathway with ease. The typography is played with as the path goes up and down within the linear confines of the space. Along the way there are benches and places to rest and sections that entice walkers to reflect. Among the prominent features of the park are, a lawn section at 23<sup>rd</sup> street, a sun deck overlooking the Hudson River as the path curves between 14<sup>th</sup> and 15<sup>th</sup> streets, the Chelsea Thicket, a section of the walk through lush plantings and a miniature forest in the city. A unique feature is the

framed window of 10<sup>th</sup> avenue. Large wooden steps set up like a small theatre allow viewing of traffic, the city and people. Other spaces include a wooden amphitheater next to the lawn section, a viewing spur on 26<sup>th</sup> street. In addition to wider sections, spurs veer off to an observation point that one may sit and view the city from high. The many benches along the path also come up out of the ground and veer into a holding position. The benches are made of both wood and concrete forms and all retain the same character of the design.



**Image 36.** The southernmost entrance to the High Line, the stairs go up underneath and enter onto to the middle of the viaduct.



**Image 37.** Stairs on 30<sup>th</sup> Street just south of the Hudson Yards. This HL goes right onto the sidewalk.



**Image 38.** The 14<sup>th</sup> Street stairway entrance to the High Line.



**Image 39** One of the various elevator entrances to the High Line.





**Image 40.** Left, another various stairway entrances to the High Line.



**Image 41.** Right, one of the signs of the High Lin, with the NYC Parks Dept logo on top and the High Line logo at the bottom.



**Image 42.** Walkers on the High Line.



**Image 43.** Walkers on the High Line, the straight lines of the pavers not in sync with the direction of the main pathway.



**Image 44.** Walkers on the High Line. A section where the pavers dip into the vegetation and the vegetation bleeds into the hardscape spaces. The benches rise up out of the ground in similar ways to how the pathway plays with height in earlier sections. This is a section in the northern part where one may overlook the Hudson River and Hudson Yards once they are completed.



**Image 45.** Tracks left with birches growing up through them.



**Image 46.** Wooden pavers changing into benches along the High Line.



**Image 47.** Some of the tracks remain to hint at the park's past.



**Image 48.** The pavers thin out into the vegetation blurring the lines between the pathway and the planting beds.



**Image 49.** A view of the High Line from the street level.



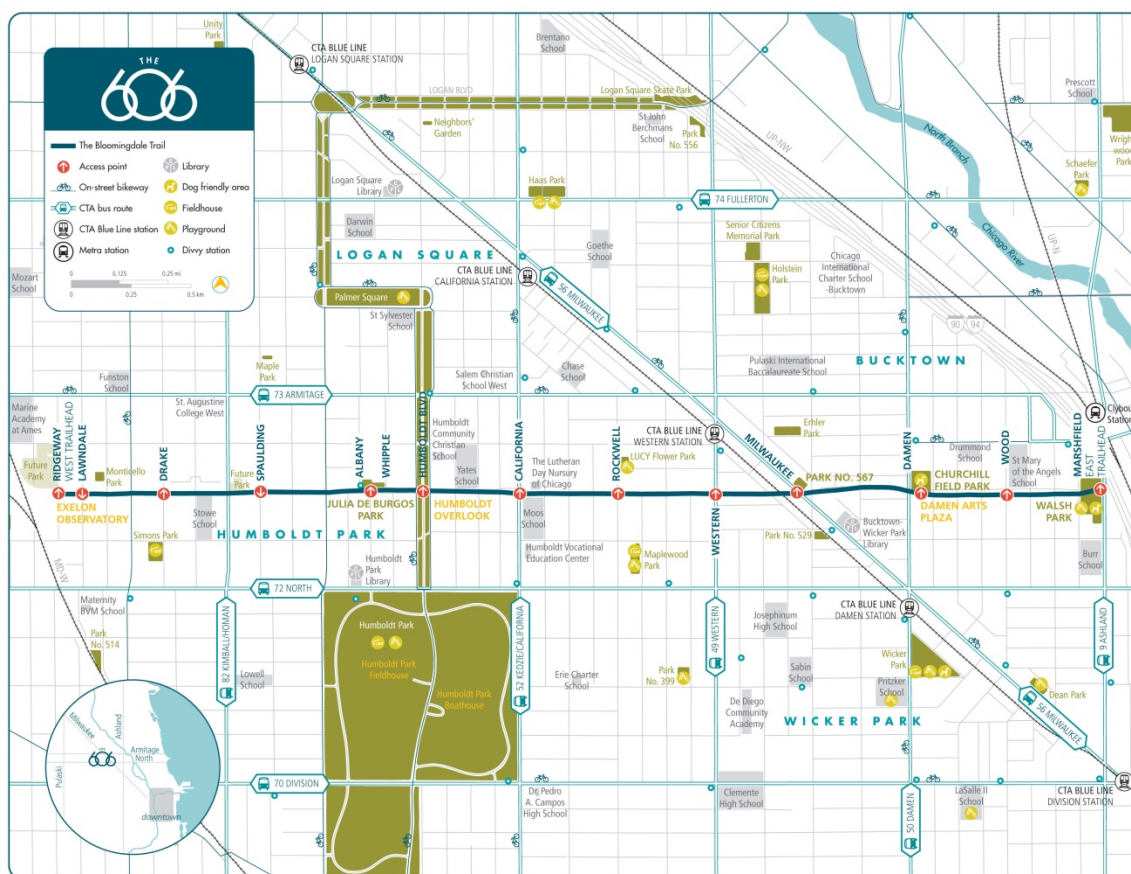
The success of the High Line has created a so called “High Line Effect”. The immediate area around the High Line has experienced increased development, higher real estate values and higher rents. The HL has inspired other cities to develop their own derelict spaces for renewal.



**Image 50.** Underline Coffee Advertisement as seen from the High Line.

The Great Rivers Greenway, a regional agency is working on creating a greenway on a 1.5 miles elevated abandoned rail spur in downtown St. Louis called the Iron Horse Trestle. This would be part of a larger Great Rivers Greenway, a 600 mile network of trails.<sup>10</sup> Philadelphia is fund raising for a mile long Reading Viaduct, an abandoned rail segment into a park.<sup>11</sup> Jersey City is working towards the Bayfront Redevelopment Plan with a park along the waterfront.<sup>12</sup> Singapore is planning the Green Corridor Project.<sup>13</sup> Atlanta has the Beltline, a greenway that would encircle the city.<sup>14</sup> Miami is planning the Underline, a ten mile segment underneath a raised Metrorail Line.<sup>15</sup> In Queens, New York City there is a project called the Queensway<sup>16</sup> and Chicago has built the 606 line, the Bloomingdale Trail.<sup>17</sup>

The biggest obstacles all these cities are facing is fundraising, finding the money for these big ticket projects. Witold Rybczynski, an author and a UPenn urbanism professor, commented on the High Line Effect. He warns other cities that they should not necessarily expect a quick fix of their own derelict landscapes and neighborhoods as it is not easy to match such fund raising abilities as one could in Chelsea in Manhattan.<sup>18</sup>



**The 606, Bloomington Trail, Chicago Illinois.**

**Image 51.** Map of The 606 Line, Chicago.

The trail is built on the former Bloomington freight trail line and nicknamed The 606 for the first three digits of the Chicago zip code. The west to east line

runs 4.3 km [2.7 miles] long almost connecting to the North Branch of the Chicago River. For over a

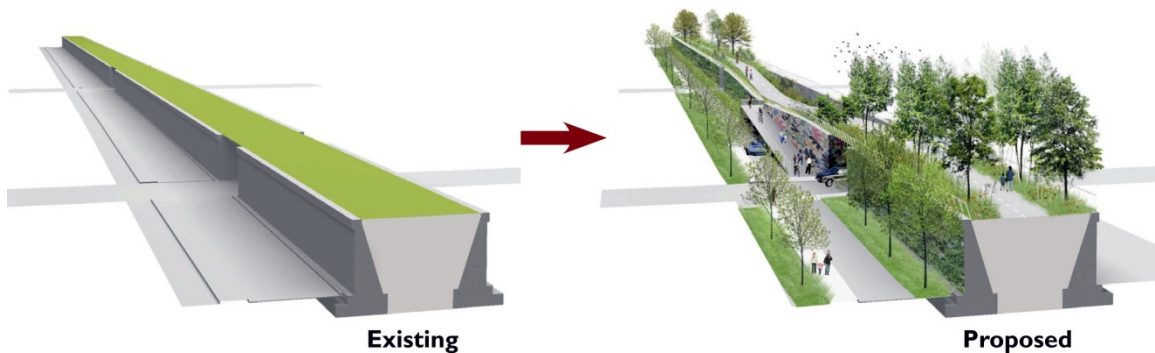
hundred years the trains transported freight through the manufacturing district that included furniture, bicycle, candy and instrument makers. The freight was active until the 1980s and then traffic became minimal and it finally ceased in the 1990s. The 606 line traverses through four neighborhoods, with 12 access points, four of which are surrounded by parks.

They include, from west to east, Julia de Burgos Park, Spire Garden-Park No. 567, Churchill



**Image 52.** The logo of The Bloomington Trail, nicknamed The 606 for the area code of Chicago.

Park at North Damen Avenue and the line ends at Walsh Park. Additionally the line crosses Humboldt Blvd, a tree lined Blvd that connects to Humboldt Park.



**Image 53.** Proposed rendering of before and after from The Bloomingdale Trail and Park: Framework Plan, the Press Release for the City of Chicago.

In 2003 Friends of the Bloomingdale Trail [FBT] a non-for profit group was formed from locals who wished to create a park from the abandoned line viaduct. They began by reaching out to the Trust for Public Land in 2006. FBT worked on community outreach and fundraising.<sup>19</sup> In 2011, Michael van Valkenburgh Associates Inc. took the lead on the project and helped to develop the Framework Plan which was the design development blueprints and a guideline for the city and all the interested parties. It became the City's Public Press Release as well.<sup>20</sup> Today the FBT continues in its mission as a liaison for the Bloomingdale Trail, promoting awareness and fundraising for resource enhancements, however, the Chicago Park District is responsible for upkeep and maintenance of the park.

This line was designed specifically to cater to bikers and walkers, as most of their funding for the project came from Federal monies from the Federal Highway Administration [FHWA] and from Congestion Mitigation and Air Quality Program [CMAQ]. It was predicated that adding this bike path that connects to others would remove 300 cars a day from the

roadway, helping to alleviate commuter congestion. It intersects with five existing bus lines and six surface bicycle paths. Moreover the eastern end of the path terminates next to a METRA commuter rail station. In addition to the added health benefits, this line reaches 80,000 people across four neighborhoods.<sup>21</sup> The first phase of the line and the majority of the park opened on June 6, 2015, the date 6-06, being a nickname for the trail.



**Image 54.** Aerial view of The Bloomingdale Trail once completed from MVAA.



**Image 55.** Aerial view of The Bloomingdale Trail and the Milwaukee Leavitt Bridge.

This simple layout is a 4.3 km [3 mile] greenway that has a 14 foot paved pathway down the length of the middle with vegetation flanking the sides. About half of the width of the infrastructure is given over to a shared paved bike and walking lane, with a line in the middle to guide traffic flow. Part of the 14 foot width, has a rubberized blue jogging strip on each side, the two-foot wide strip is wide enough for a single person. Unfortunately this strip is not continuous throughout the 606 and in some areas such as trestles and over roadways the jogging strips temporarily disappear. This greenway was designed with a low maintenance plant palette with perennials and trees that would take hold and not require much additional upkeep. The plants will either take hold and be part of the ecosystem or phase out through natural competition.



Just as expected, as the Bloomingdale Trail took hold in the neighborhoods and has reported over 1.6 million visitors in 2016.<sup>22</sup> This has been noticed by developers and they have already started to propose development projects.<sup>23</sup> Additionally, the local YMCA has announced an expansion plan and that it will provide bathrooms for visitors of The 606.<sup>24</sup> It is possible that in time that the Bloomingdale Trail will continue eastward over the Kennedy Expressway and over the Chicago River via an 1899 swing bridge.<sup>25</sup>



**Image 56.** Left-The YMCA currently located at the western end of the Bloomingdale Trail, plans an expansion of its facilities. The YMCA is experiencing higher membership and attendance they give credit to the Bloomingdale Trail.



**Image 57.** An apartment building, 1741 N. Western Ave, scheduled for demolition.



**Image 58.** The developers proposed apartment building for 1741 N. Western Ave, located within walking distance to the Bloomingdale Trail.





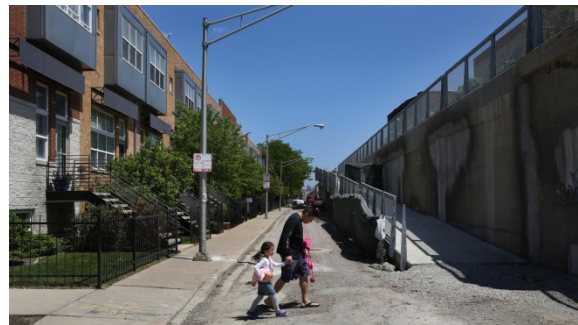
**Image 59.** The Bloomingdale Trail before the new park was installed.



**Image 60.** The Bloomingdale Trail before the new park was installed.



**Image 61.** One of the access ramps to The Bloomingdale Trail.



**Image 62.** A street view of one of the access ramps to The Bloomingdale Trail.



**Image 63.** One of the access ramps to The Bloomingdale Trail.



**Image 64.** A section along the trail just before the Milwaukee Leavitt Bridge.





**Image 65.** Typical sections along the Bloomingdale Trail, illustrating one of the characteristic full arc light posts.



**Image 66.** Typical sections along the Bloomingdale Trail, illustrating one of the characteristic half arc light posts.



**Image 67.** Along the trail there are no benches or places to rest except in the adjacent parks or where the trestles and bridges cross avenues.



**Image 68.** These benches along side the trail offer perpendicular views out to the streets and parks below.



**Image 69.** View of the western end of trail, adjacent to Exelon Observatory.



**Image 70.** An aerial view of the western end of trail and Exelon Observatory.

## Conclusions

Each linear space studied in this chapter is successful in conveying people from point A to point B without any vehicular (cars or trucks) interruptions. It is a key point to be able to walk or bike uninterrupted, this allows the visitor to gain a better sense of safety as well as peace of mind. The Coulée Verte, the eastern most section of the Promenade Plantée has both a bicycle path and a pedestrian way. However, The Bloomingdale Trail, puts walkers, joggers and bikers together on one undivided path. Within such a limited space and with the visitors moving at different paces it would be difficult not to have conflict. In fact due to the heavy volume of visitors there have been several accidents between bikes and people.

Although the High Line is on a trestle and the Bloomingdale 606 trail is on a concrete viaduct, they share the same typology, being raised approximately 9 meters [30 feet] above the city streets. The High Line was built with a riveted steel structure to move the rail traffic above the street and to avoid collisions with cars and pedestrians. Similarly the Bloomingdale Trail was built to separate the rail traffic; this solid viaduct was built with steel reinforced concrete. The Promenade Plantée is built on a stone viaduct, standing 10 meters [32.5 feet] above the street, also separate from traffic below. The eastern section of the Promenade Plantée, the Coulée Verte is mostly grade or below grade.

The Promenade and the High Line do not permit bicycles, although sometimes riders have been seen using the Promenade on the western part. The designs of both the High Line and the Promenade Plantée do not encourage bicycle riding, due not only to the short length, but to the narrowness of the trail. The primary access points for both the Promenade and the High Line are stairs. Narrower pathways and the movement of the path, the configuration

and the alignment encourage a slower pace as illustrated in Image 8 and Image 9. In contrast the relatively straight and wide path of The Bloomingdale Trail encourages bicycle riding and running especially with full ramp access at every point. Similarly the Coulée Verte, the eastern half of the Promenade Plantée, also has a straight, wide bicycle path and a separate path for pedestrian use as shown in Image 25, 26 and 27. The design aids in directing usage of the space.

Each one of these linear open spaces possesses its own unique design character. Although they all have historical roots to trains and railroads only the design of the High Line used the rail theme as inspiration. This is expressed through the incorporation of the narrow tapered pavers [Image 36] which imply rails as a dominate element of the design. These tapered pavers allow the lines to be blurred between the vegetation and the hardscape. The long and linear nature of the pavers as they move from side to side, define the edge between path and planting, easily creating an illusion of the pathway curving through the space. The benches and furniture all play on similar themes. Seating niches, located throughout the open space offer views to and along the High Line and out to the surrounding community. The design utilizes the shape of the trestle that supports it. It plays with the immediate context, the views and perspectives of the space.

The Bloomingdale Trail was inspired by the success of the High Line. Although its design is more simplistic and straight forward, it emphasizes different goals. It has a wider more direct pathway to allow for faster movement of bikers and walkers framed by vegetation. The Bloomingdale trail was built with federal monies to allow commuters a safe way to bike to work and it estimated this project would remove 300 cars from the road and improve air

quality. Just as with the High Line and the Promenade Plantée, The Bloomingdale Trail was designed with the intent to save the existing railroad infrastructure. Improvement in the ecology of the open space and surrounding community was a concern for all three projects. The Bloomingdale Trail and the Coulée Verte were designed with the intent of allowing the new plantings to grow and compete in their own ecological succession, thereby encouraging for minimal maintenance of the planting beds, trees and shrubs. On these two trails the plantings are located on the periphery of the pathway and are not major design elements. Among the unique features of The Bloomingdale Trail are the characteristic long lighting posts of half arc and a full arc over the path as well as the blue soft surface jogging strip framing the main pathway.

The plantings along the High Line and the Promenade Plantée, are a more intricate part of the design, they work with the pathways to create views, define open spaces and seating niches, observation points all while framing views out to the larger landscape. The edges of vegetation are of varying widths which guide view of the visitor to different areas, concealing and revealing the city in turn.

The Promenade Plantée is remarkable for design elements such as the green metal arbors, trellis and gates that along with vegetation help to define individual 'rooms' and garden niches along the Promenade. Both the High Line and the Promenade host a variety of creative niches through vegetation to rest and enjoy a viewpoint with a different perspective than the pathway. They encourage the park user to rest for a moment and to contemplate the surroundings. The narrow path encourages a slower pace for walking and strolling. Although, the Bloomingdale does have benches that provide street viewpoints perpendicular



to the trail, there are a few places to sit on the trail itself. Most of the benches and sitting niches exist in parks connected to the trail. Therefore all the various spaces and entry ways that the linear park connects to are important points to the visitor.

The Promenade's formality of design is only present on its western portion and along the original viaduct. As the linear park moves eastward and as the elevation changes so does the design. Once the modern viaduct supports the Promenade Plantée, the style becomes more 'jardin anglais', with curved pathways. As it traversed the Jardin de Reuilly it becomes a suspension bridge above the main lawn area, Image 21. At the main entrance to the Jardin de Reuilly from the Avenue visitors must pass through a series of arched entries that connect visually to the Promenade as seen in Image 22. East of the Jardin de Reuilly, along the Coulée Verte there are fewer characteristics, formal design elements, of the Promenade Plantée.

Each of these linear open spaces was built because the community took an interest in preserving and utilizing the resource and reinventing these spaces for the community as open public space. Master plans were developed for each project to establish the long term vision, with the intention that they be built in stages or phases as money became available. Both the FHL and the FBT organize events for each of the parks and fund raisers are helping to engage the community in development, planning and stewardship of these spaces. This not only increases awareness and popularity of the space but will afford the chance for further improvements or amenities in the future.

Many different criteria can be used to determine the success of a park or project. However they are usually based upon perspective. An investor or shopkeeper would attribute success to the surrounding commercial development of the area. An ecologist would be looking at the plant palate and the ecology. Although there are many ways to discern and distinguish success, either objective or subjective, one of the most telling is attendance and usage, the number of visitors a park would receive each year. Although The Promenade Plantée, does not have an official count of visitors to the park, there are always significant numbers of people using the Promenade. The FBT has reported 1.6 million visitors in 2016, only one year after the opening day of The Bloomingdale Trail. Similarly FHL have documented 1.3 million visitors in the first year it was open, but most recently the number has grown to 7.6 million visitors, nearly six times from the first year.

During the planning stages of projects like the High Line, Bloomingdale Trail and the Promenade Plantée, it is best to involve the neighborhood and community early in the process. Their involvement in the act of planning and programming helps them to develop a sense of ownership and stewardship for the place. The community takes ownership of such a space and helps to ensure long term survival. Design goals need to include future maintenance plans.

Each of these linear spaces is successful in its own way. They all host many visitors during the year and are well used. After looking at each of these projects, it is clear that a pedestrian path and multi-modal path is most beneficial for users [bicyclists and joggers/walkers] to be separated to minimize collisions and conflicts.

Each of these linear spaces must address opportunities and constraints. The main constraints and opportunities are the narrow linear space and the elevated position in the landscape. The urban fabric communicates with each of these rail lines in different ways, illustrating the variety of possibilities. Through design, the entries and the spaces along the linear spine connect with and become an important contribution to the new linear park. The niches and spaces that were created help to direct usage and establish an identity for the new space. Entrances communicate to the visitor the type of space they are entering and hints at expectations to be met. Design elements or a theme that uniquely identifies the new space are a way of creating an identity and should also speak to the vernacular and the genius loci of the place.

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## 5. The Future of La Petite Ceinture - The Little Belt Way

*“Linear parks are dynamic rather than static; they are not peaceful retreats but ways, ... in fact, they are both. As such they provide a completely new experience of the city, one the others are hoping to emulate.”<sup>1</sup>*

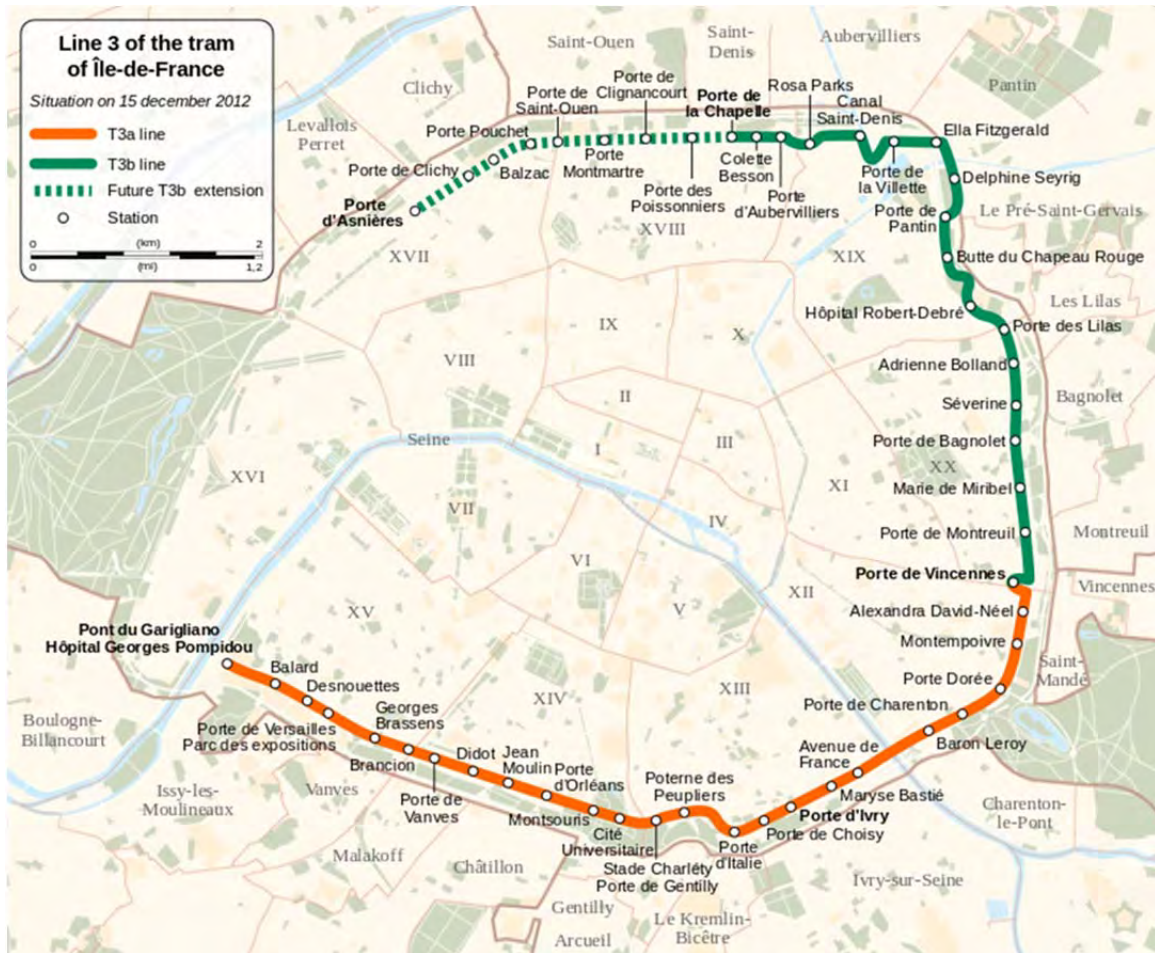
*We would do well to heed [Adolphe Alphand] Alphand’s advice: “Analyze the creations of the past, separating out the transient parts, and recognize the elements which can be used in modern art: this should be the preoccupation of the artist who devotes himself to the study of gardens.”<sup>2</sup>*

La Petite Ceinture is starting to become a topic of discussion in Paris. The city of Paris and the individual Mairie [each arrondissement Mayor’s office] have been engaged with APUR, the city planning agency of Paris,



**Image 1.** Image of Tram Line T3a coming into a station along the Blvds des Maréchaux in the 15<sup>th</sup> Arr. in the south of Paris. Image by author.

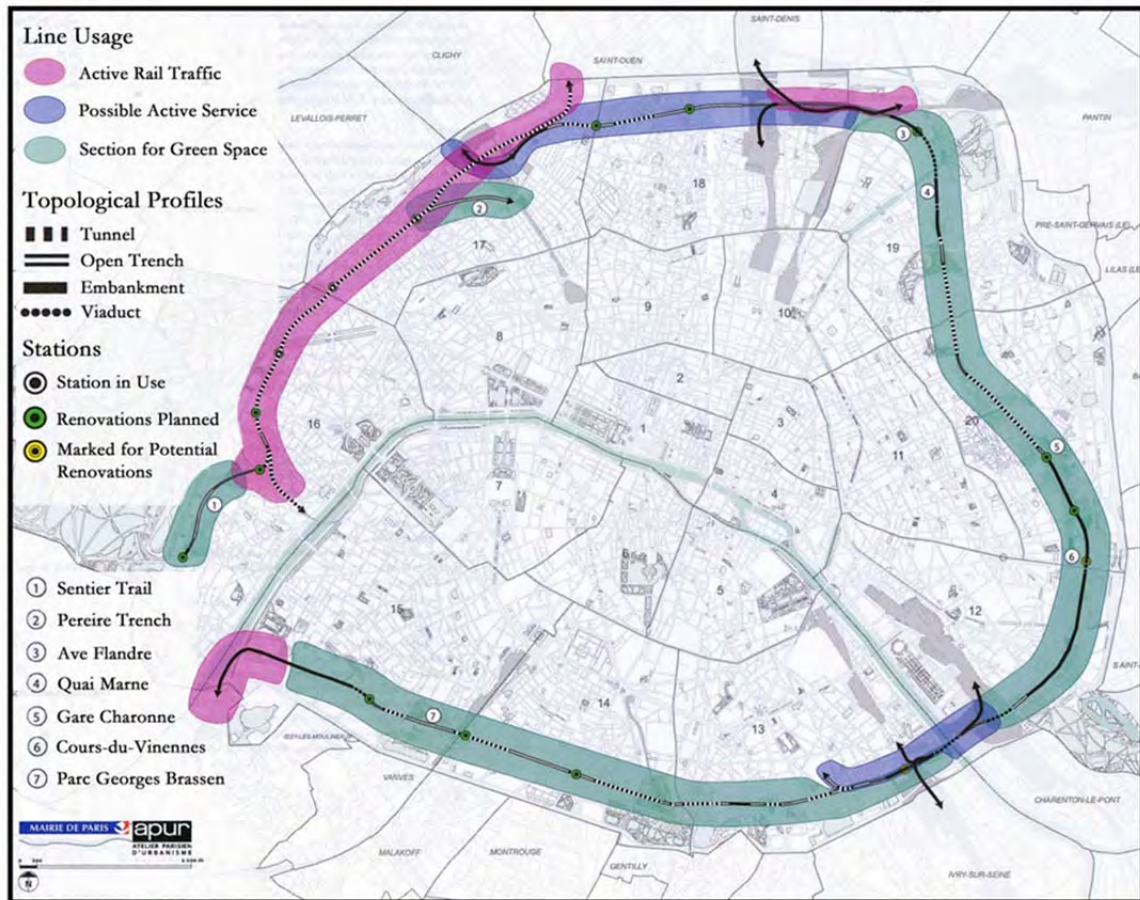
in community outreach and discussion, by way of public meetings and walking tours etc. APUR is currently involved with an ongoing analysis of the entire site including, the ROWs [Right-of-Ways], empty buildings and the ecology, examining the effects to the local arrondissement and to the city as a whole. APUR is also considering, social concerns, economics, historical and pedestrian, bicycle and traffic flow. In spite of the tireless efforts of L’Association Sauvegarde Petite Ceinture [ASPCRF] to return the PC to active train service, both APUR, the City of Paris, and SNCF have determined that at this time it is not the best option, as the new light-rail line Tram 3, has been servicing the needs of the citizens for commuter traffic and transportation along this route.<sup>3</sup>



**Image 2.** Map of the Tram Line T3a [orange] and T3b [green], the latest line of the light rail in Paris, opened to passengers in 2007.

The new light rail tram in Paris as visible in Image 2, the route is almost identical to the path of La Petite Ceinture. Each line originates from Cours-du-Vincennes [#6 Image 3 Map] in the 12th Arr., T3a moves south to Pont du Garigliano, at the western edge of the 15th Arr. While the T3b travels north to Porte de la Chapelle in the 18th Arr. Plans are currently in the work to extend the northern route by 5.5 km [3.5 miles] west to Porte d'Asnières in the 17th Arr. . In 2007 both lines of the light rail, T3a and T3b carried 25 million passengers, averaging 100,000 every weekday, and 70,000 at the weekends. These numbers have only been increasing steadily suggesting the line is successfully servicing the city of Paris much to ASPCRF's chagrin.<sup>4</sup>





In a current study of Parisian regional and local metro rail traffic,

**Image 3.** The Current and Projection use of the track line of la Petite Ceinture.

APUR has concluded that some sections of the PC would be beneficial to the city as active rail line connections.<sup>5</sup> Only a few areas in active service are being considered. As shown in Image 3, the majority of the PC is intended for open space for the city and not for active service. In the western region of the city, RER is using a section of the PC. However, the majority of the 17<sup>th</sup> is covered and has already been converted to park and open space. The Pereire Promenades, with the exception of the Pereire Trench, #2 in Image #3. In the 16<sup>th</sup> there is some coverage being utilized as parking spaces. However, there are many sections that are open trenches and not being used as illustrated with Image 4 and 5.



**Image 4.** Above-An open PC trench in the 16<sup>th</sup> Arr. Image by author.

**Image 5.** Right -A covered section of the PC in the 16<sup>th</sup> just north of an open trench segment. Image by author.

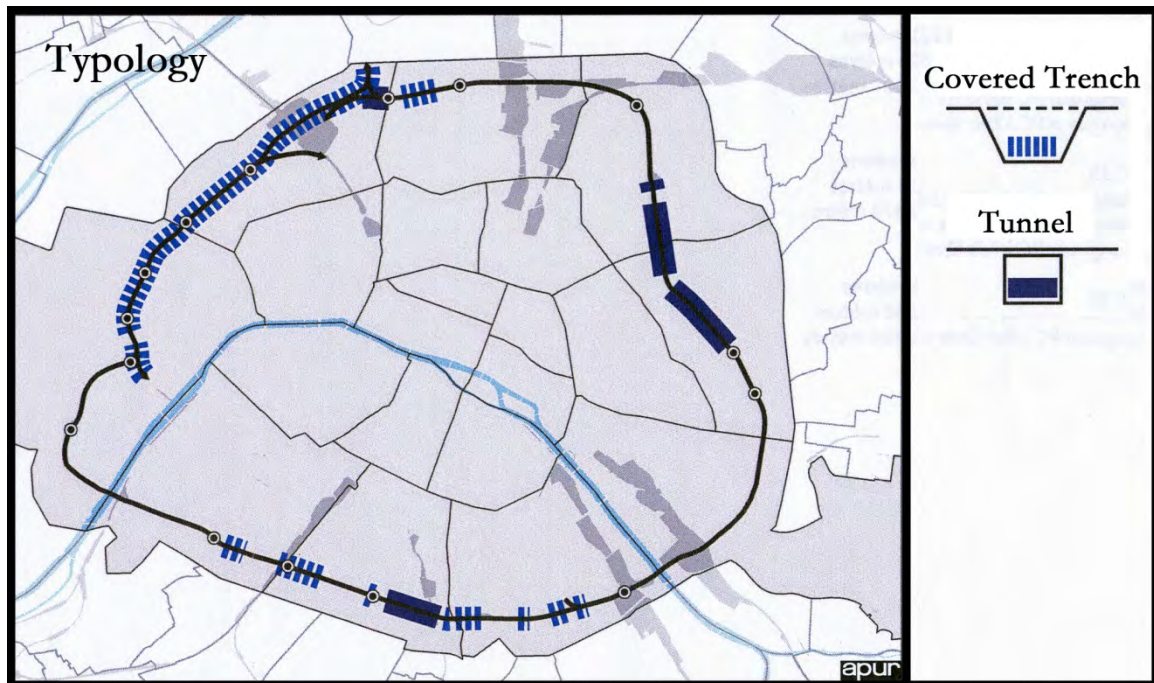


This study is one of many that illustrate that Paris is examining the PC thoroughly for future open space and

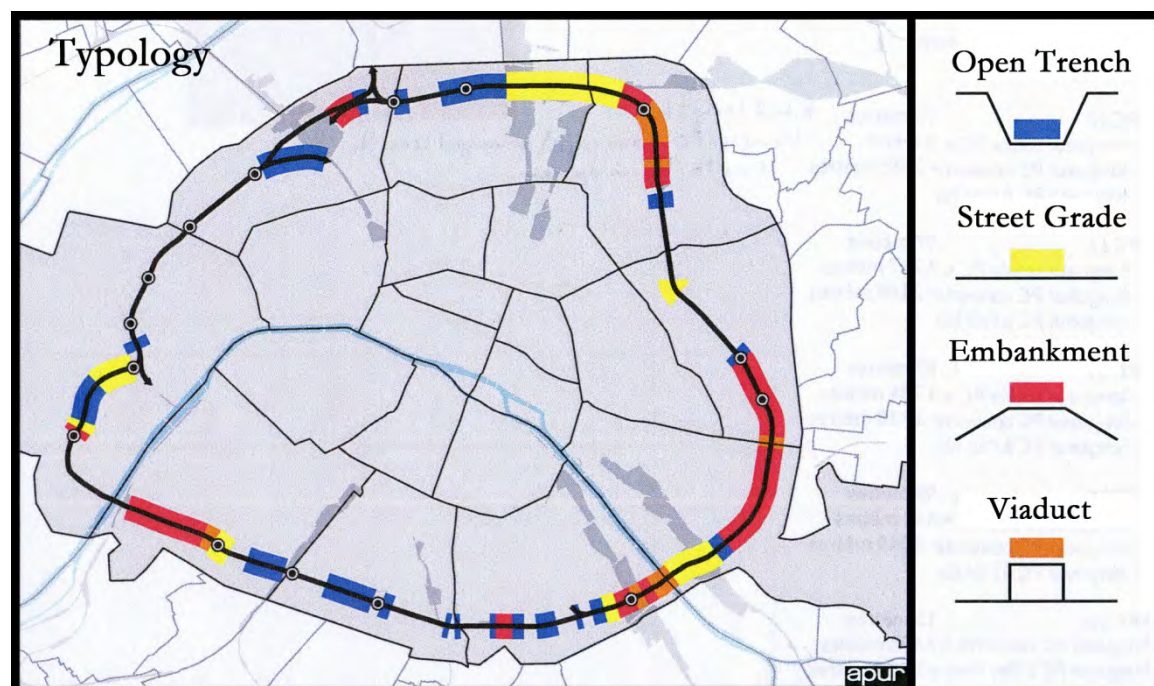
considering areas that may become such and not an active rail line. The need for an active rail line is currently being addressed by the new tram line. As we have looked at with other linear spaces, it has proven prudent to design and plan as a whole and then execute the development of the new linear park and open space in stages as money becomes available. However where does one begin along such a lengthy site?

Different aspects of the PC were reviewed. The PC was broken down into areas and various types of connections that the PC currently has with the city. Additionally various site criteria was identified to choose sites for initial design development.





**Image 6.** Above, a graphic representation of the various covered typologies in 40% of the total length of La Petite Ceinture



**Image 7.** Above, a graphic representation of the various open typologies in covering 60% of the total length of La Petite Ceinture.



## Present Typologies

The typology of the PC, the various ways it lays with the urban fabric may be broken down into six [6] categories; below grade via tunnel, trench or covered trench, grade, and above grade by either an embankment or a viaduct. As illustrated in Image 6 the covered sections of the PC including covered trenches and tunnels equate to 13 km [8 miles], 40% of the total length. <sup>6</sup> Image 7 highlights the remaining 19 km [11.5 miles] of the 32 km. [20 miles] consist of deep trenches, embankments, viaducts and bridges and sections that are level with the street. <sup>7</sup>

In addition to elevation typologies there are communication typologies, the various connections between the PC line connection the street. Each communication typology offers a variety of conditions and possibilities to consider. Table 1 breaks down the general categories. The three main categories are the PC line running parallel or perpendicular to the street as well as in the middle of a block behind buildings. The variety of examples of communication typologies are illustrated as follows.

<b>Table. 1. Communication Typologies between the PC and the street.</b>	
<b>1. The PC line runs parallel the street level</b>	
	The line runs parallel and <u>above the street</u> ... and with a ROW ... and without a ROW ... and with a building, structure [including stairs, ramp] or viaduct present. ... and without a building, structure [including stairs, ramp] or viaduct present.
	The line runs parallel and <u>below the street</u> ... and with a ROW ... and without a ROW ... and with a building, structure [including stairs, ramp] or viaduct present. ... and without a building, structure [including stairs, ramp] or viaduct present.
	The line runs parallel and <u>on grade</u> with the street ... and with a ROW ... and without a ROW ... and with a building, structure [including stairs, ramp] or viaduct present. ... and without a building, structure [including stairs, ramp] or viaduct present.

<b>Table. 1. Communication Typologies between the PC and the street. [con't]</b>	
	<p>The line <u>transitions</u> between conditions.</p> <p>The line transitions between below ground to grade at the street level</p> <p>The line transitions between above to grade at the street level</p>
<b>2. The PC line runs perpendicular to the street level.</b>	
	<p>The line runs perpendicular and <u>above the street</u></p> <p>... and with a ROW</p> <p>... and without a ROW</p> <p>... and with a building, structure [including stairs, ramp] or viaduct present.</p> <p>... and without a building, structure [including stairs, ramp] or viaduct present.</p>
	<p>The line runs perpendicular and <u>below the street</u></p> <p>... and with a ROW</p> <p>... and without a ROW</p> <p>... and with a building, structure [including stairs, ramp] or viaduct present.</p> <p>... and without a building, structure [including stairs, ramp] or viaduct present.</p>
	<p>The line runs perpendicular and <u>on grade</u> with the street</p> <p>... and with a ROW</p> <p>... and without a ROW</p> <p>... and with a building, structure [including stairs, ramp] or viaduct present.</p> <p>... and without a building, structure [including stairs, ramp] or viaduct present.</p>
	<p>The line <u>transitions</u> between conditions.</p> <p>The line transitions between below ground to grade at the street level</p> <p>The line transitions between above to grade at the street level</p>
<b>3. The PC line runs in the block, behind buildings and with no public access.</b>	
	<p>The line runs <u>above grade</u></p> <p>... and with a ROW</p> <p>... and without a ROW</p>
	<p>The line runs <u>below the grade</u></p> <p>... and an open trench with a ROW</p> <p>... and an open trench without a ROW</p> <p>... and tunneled or covered</p>
	<p>The line runs <u>on grade</u> with the street level</p> <p>... and with a ROW</p> <p>... and without a ROW</p> <p>... and with a building, structure [including stairs, ramp] or viaduct present.</p> <p>... and without a building, structure [including stairs, ramp] or viaduct present.</p>



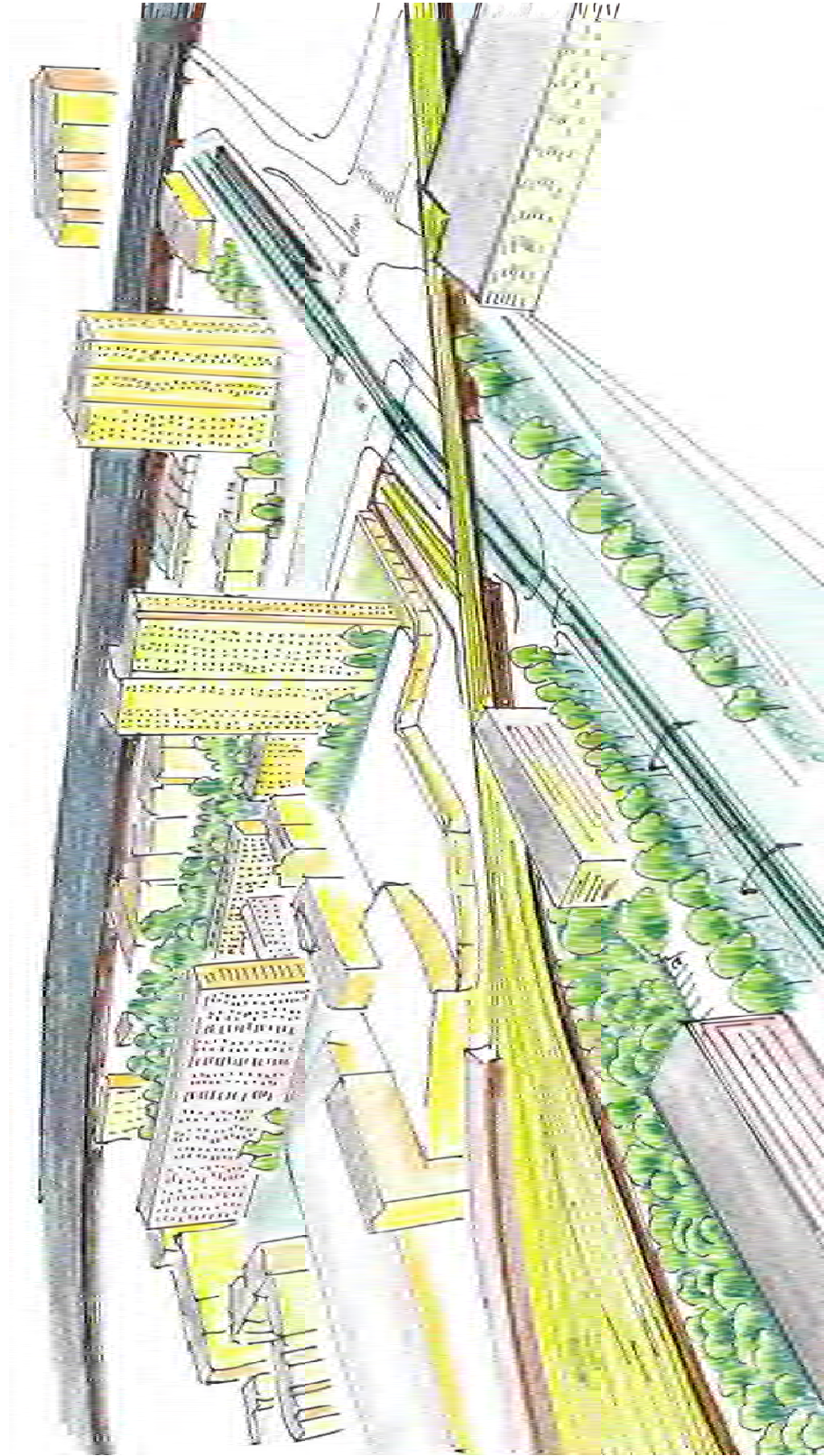
**Image 8.** Transitional Space: The PC line emerges from a tunnel, then proceeds under an old train station that is perpendicular to the street, immediately becomes parallel to the street throughout this block and on the corner are the remains of a service building. At the end of the block the PC line is now above grade perpendicular to the street and running into the middle of the next block. Sketch by author.





**Image 9.** Transitional Space: The PC line flows through the city with both perpendicular and parallel street connections. There is a former bridge-type train station. Sketch by author.





**Image 10.** Transitional Space: The PC line coming from a wide rail yard at grade, the PC splits to continue along the circuit around the city going below grade and to connect with other rail lines above grade. In this area the PC exists directly over the tram line and a bicycle path. Sketch by author.





**Image 11.** Transitional Space: The PC line coming from above grade transitions to street level and then below grade. This sections passes adjacent to athletic sports complexes and active rail line. Sketch by author.

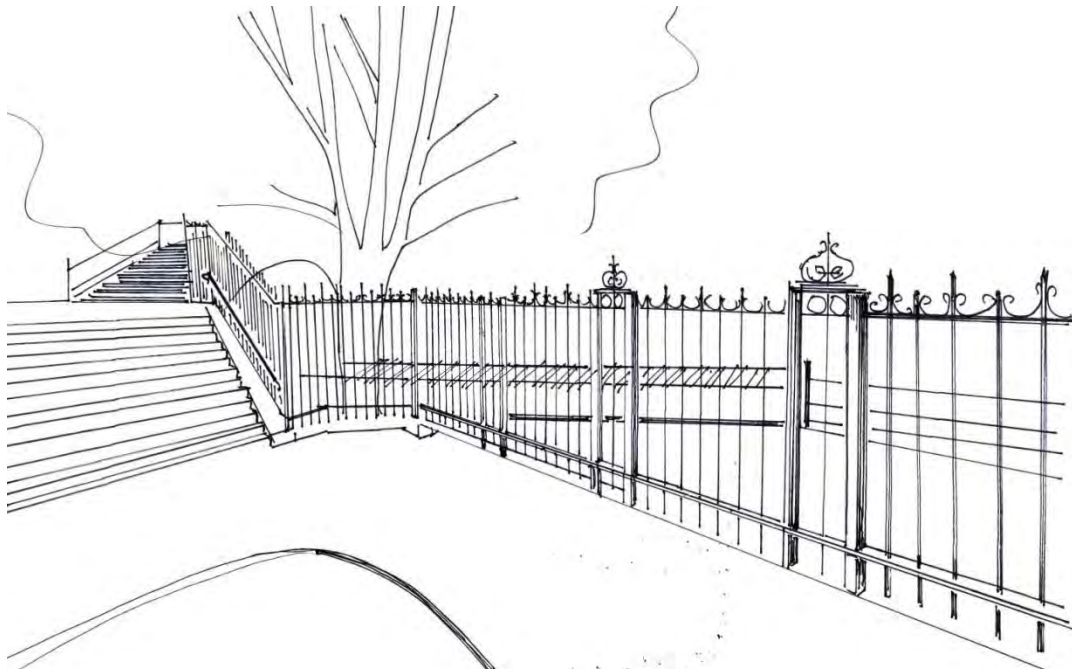


**Image 12.** Transitional Space: The PC line transitions from within the block to being parallel to the street all above grade. Sketch by author.





**Image 13.** Transitional Space: The PC line emerges from a tunnel to an open trench in the middle of a block. Sketch by author.



**Image 14.** Grade: The PC line is perpendicular to two streets and a pedestrian path connects the streets over the PC. The PC here has ROW spaces. Sketch by author.



**Image 15.** Grade: The PC line is parallel to the street with some ROW space. Sketch by author.

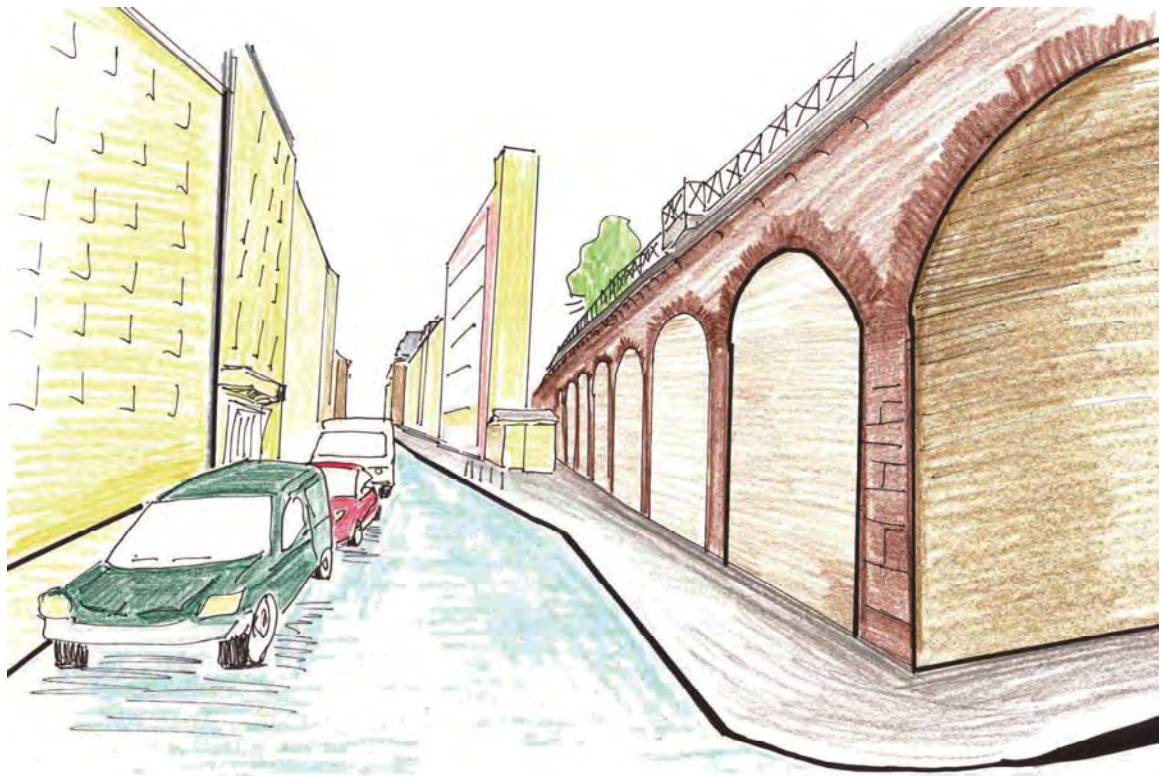


**Image 16.** Above: The PC line is perpendicular to the street with some ROW space. Sketch by author.



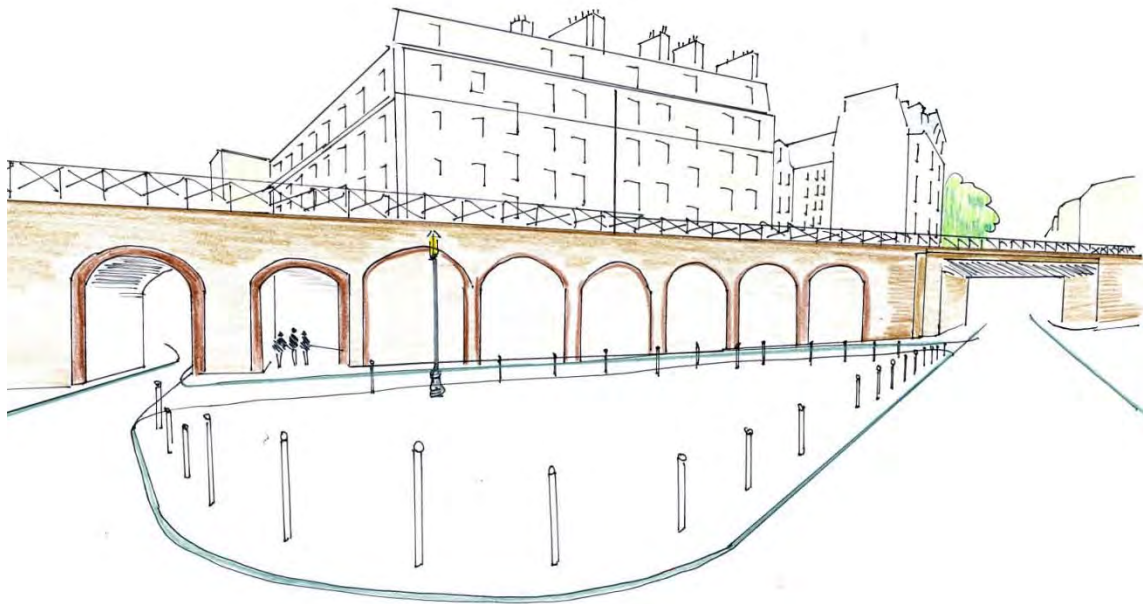


**Image 17.** Above: The PC line is perpendicular and parallel to the street with no ROW space. Sketch by author.

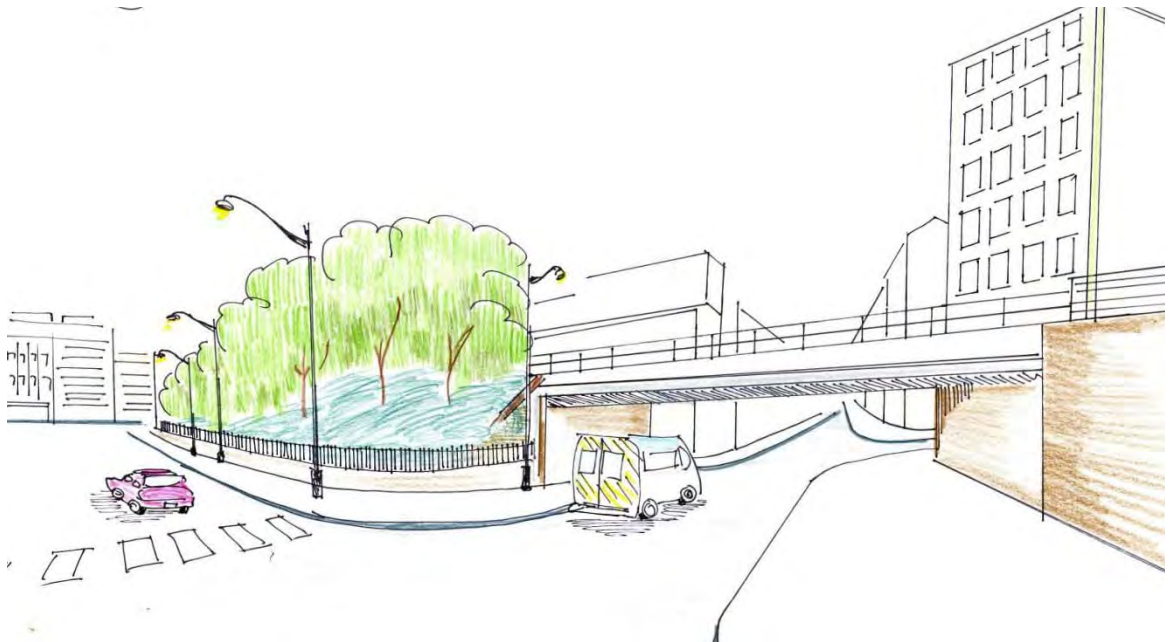


**Image 18.** Above: The PC line is emerges from the middle of the block and is perpendicular to the street, but does reveal a bit of the viaduct. The arches are bordered up except for a view at the sidewalk. Sketch by author.

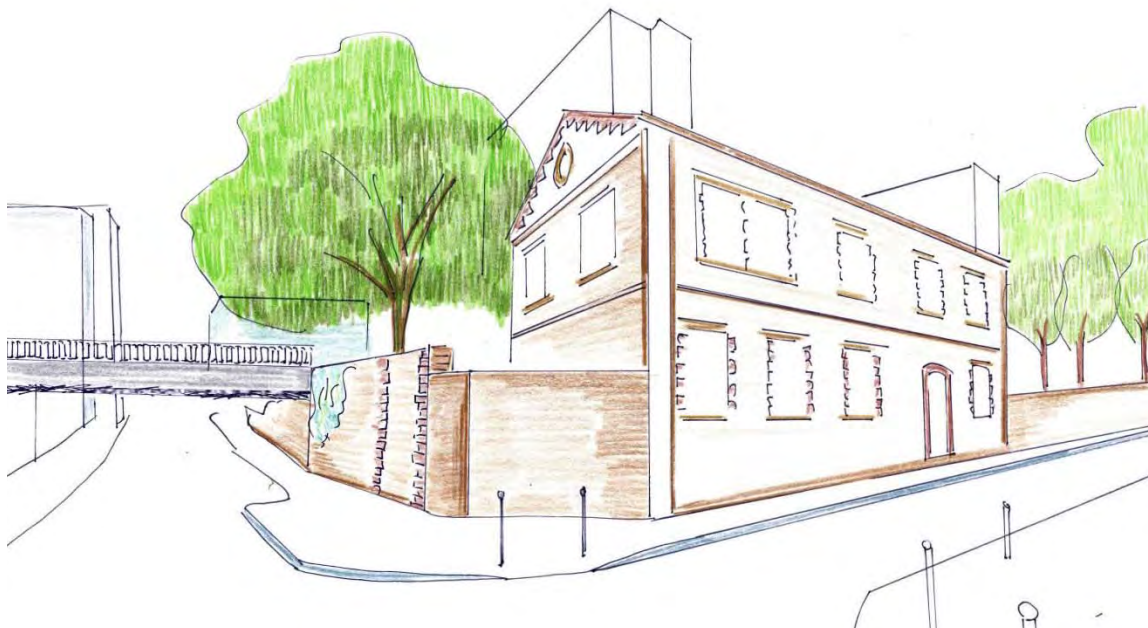




**Image 19.** Above: The PC line is perpendicular to the streets it crosses, with no ROW space but the viaduct is exposed to an empty plaza space. Sketch by author.



**Image 20.** Above: The PC line is perpendicular and parallel to the street it crosses, with ROW space. Sketch by author.



**Image 21.** Above: The PC line is perpendicular and parallel to the street, with a service building at its corner with additional ROW space. Sketch by author.



**Image 22.** Below: The PC line is parallel to the street, with a former train station as the end, with no ROW space. Sketch by author.

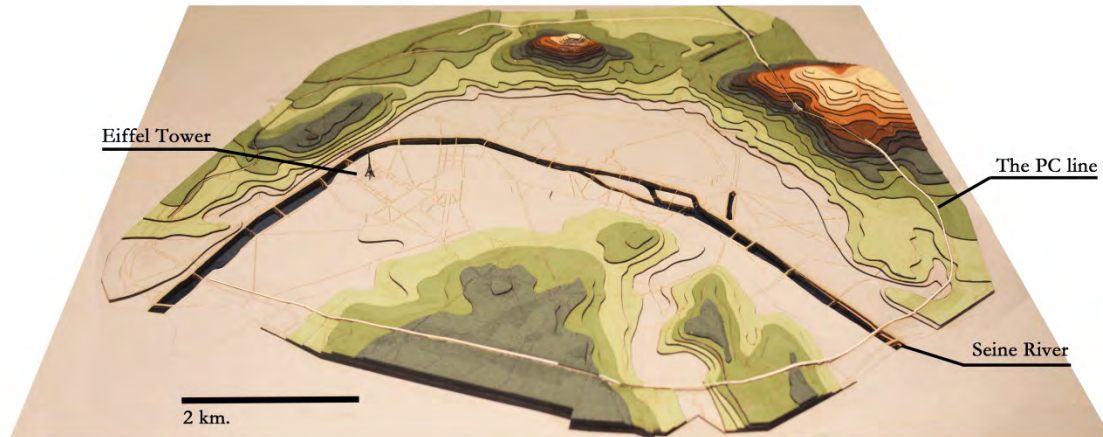




**Image 23.** Below: The PC line is perpendicular and parallel to the street, with no ROW space. Here a tunnel section begins. Sketch by author.



**Image 24.** Below: The PC line runs under a plaza space between apartment buildings and perpendicular to the street. Sketch by author.



**Image 25.** A model of the PC and the City of Paris, by author.

### **Analysis of Criteria for Site Design Selection**

We have examined the elevations, the typologies and the various ways the PC line connects with the street of Paris. The numerous variations of typologies are amplified further with the adjacent amount of land in the form of Right-of-Way [ROW], service buildings, train stations, train platforms etc. The connection with the urban fabric is substantial and frequent. These connections exist today in the forms of ramps and stairs, both out in the open and through buildings. Additional connections may be made through existing adjacent land or ROW places. In addition to topographical considerations, connections with mass transit like bicycle, Velib Stations, Metro and the RER stations were considered. The presence or absence and the quantity of the factors were considered.

The following criteria were selected to establish a framework for opportunities of a site for design development.

<b>Table 2. Criteria for choosing sites for development.</b>
<b><u>LOCATION:</u></b> Location in Paris – West, East, South or North Arrondissement – [district of Paris] Neighborhood – Commercial or Residential
<b><u>TYPOLOGY TYPE:</u></b> Tracks above grade – Embankment Tracks above grade – Viaduct Tracks at grade – Street Level Tracks below grade – open trench Tracks below grade – covered trench Tracks below grade – tunnel
<b><u>STREET COMMUNICATION TYPE</u></b> Parallel to street Perpendicular to street Combination of both Behind buildings or not public access
<b><u>LAND</u></b> SNCF adjacent land or ROW available Neighboring Park or Plaza space available
<b><u>STRUCTURE / INFRASTRUCTURE</u></b> Passenger Station or Service Building Present Viaduct or Archways Present Access Points – Potential or Existing Stairs or Ramp
<b><u>POTENTIAL CONNECTIONS</u></b> Transit Connectivity: such as Métro, RER, Light Rail, Bus, Bike Lane River or Canal Access Parks, Open or Public Plazas, Tree Lined Promenades, Cemeteries Commercial Street, Stores, etc School or University Proximity Large Employer Connectivity: such as hospital, government buildings, etc Popular Tourist Locations



For the purpose of this thesis, the Western half of the rail line was not considered as some of the line has already been developed in certain areas; additionally the western tracks are currently in use by the RER. Therefore with such factors in mind, the following three sites were explored and examined:

1. Parc George Brassens – 15<sup>th</sup> Arr.
2. Gare Charonne, Rue de la Baignole – 20<sup>th</sup> Arr.
3. Quai de la Marne and Canal de l'Orcuq – 19<sup>th</sup> Arr.

### **1. Parc Georges Brassens**

The Park of Georges Brassens possess the following criteria:

LOCATION: 15<sup>th</sup> Arr., in Southern Paris, residential neighborhood

TYPOLOGY: tracks are in a deep trench, below grade

STREET COMMUNICATION: perpendicular to streets on each end of park

LAND: adjacent to a large commercial platform, wide ramp to street level, SNCF ROW,  
adjacent to Parc Georges Brassens, tunnel entrance on western end of park,

STRUCTURE/INFRASTRUCTURE: Buildings present currently in use.

POTENTIAL CONNECTIONS: Tram 3 line, Métro 13 line, Bus lines-19, 39, 58, 62, 80 &  
89, Hospital, Gov't Buildings, TY Station, Cité University, commercial streets with  
shopping along Blvd des Maréchaux.

Parc Georges Brassens covers 8.7 ha [21.5 acres] and served as a slaughterhouse, meat market and a horse market for the southern areas of Paris.<sup>8</sup> The platform that connected to the PC and the adjacent land was built much bigger and stronger than the usual passenger platform to accommodate the repeated amount of heavy traffic of cattle and horses. The meat markets and slaughterhouses were built between 1894 and 1897 and the station and the horse market were built in 1903. All were closed in the mid to late 1970s.<sup>9</sup> The park was opened in 1984 as part of the Grand Project of Président Mitterrand to help rejuvenate the neighborhood.

This is an extremely rich site, filled with history and cultural institutions and is ripe for development to showcase the relationship of the PC to the city.



**Image 26.** A photograph circa 1900, of the front of the meat market and slaughterhouses, les abbatoirs. The two buildings and the two bull sculptures by, Auguste Cain are still present and serve as the entrance to the park.



**Image 27.** A photograph circa 1970, of horses being unloaded from La Petite Ceinture onto the platform of Gare Paris-Brancion which consisted of a platform and a junction serving the slaughterhouses and market of Vaugirard.







**Image 31.** View of Paris-Brancion Station, platform looking west, tunnel entrance in distance.



**Image 32.** View of grass covered track section, and main receiving platform for cattle and horses.



**Image 34.** View of tunnel entrance on western end of park.



**Image 33.** View from lower track level.



**Image 35.** View looking west from platform, row of poplar trees and a fence stand between Parc Georges Brassens and the PC.





**Image 36.** East view of road underpass of rue Brancion.



**Image 37.** View of antique book market, where the horse market used to be in Parc Georges Brassens. Held Sundays during the summer.



**Image 38.** View of railway east from rue Brancion overpass.



**Image 39.** South view the slope at the southern end of park.

## 2. Gare Charonne, Rue de la Bagnole

LOCATION: 19<sup>th</sup> Arr., in Eastern Paris,  
residential neighborhood

TYPOLOGY: This area has tracks in transition, at the northern end of the station they emerge from the tunnel in a trench below grade and as the surrounding landscape recedes, the track emerge at the southern end of the platform above grade on a trestle over a road onto an embankment

STREET COMMUNICATION: this area contains both tracks and ROW space parallel and perpendicular to the street.

LAND: adjacent SNCF ROW

STRUCTURE/INFRASTRUCTURE: passenger station, abandoned service building at street level, service yard with door and stairs up to platform.

POTENTIAL CONNECTIONS: Bus lines-26 & 64, commercial streets with shopping along Rue de Pyrénées, schools adjacent to the tracks.



**Image 40.** Map of location of Gare de Charonne in eastern Paris in the 19<sup>th</sup> Arr.

The area surrounding the passenger station of Gare Charonne, is highly residential with a few commercial streets. The area behind the passenger station and the service building is frequently occupied by students from the adjacent school. The area just behind the main platform is unofficially being utilized as a community garden by two woman. Additionally the variety of typologies and street communication and proximity to commercial development are great assets to consider in the creation of a public space at this site.





**Image 41.** Façade of Gare Charonne on Rue de la Bagnole, now a restaurant bar.



**Image 42.** Back view of Gare Charonne from the platform level, tunnel entrance visible under station.



**Image 43.** View just under of Gare Charonne from the track level, tunnel entrance visible under station.



**Image 44.** View the tunnel entrance just north of Gare Charonne from the track level. The tracks are well walked by visitors.



**Image 45.** View the southern end of the platform and the back of the service building.



**Image 46.** View the service building from street level, the PC trestle on the left.



**Image 47.** View from Parc de la Villette of the PC trestle crossing the canal, the bikeway and walking promenade along the Quai de la Marne.

### 3. Quai de la Marne and Canal de l'Orcuq

LOCATION: 19<sup>th</sup> Arr., in Northeastern Paris, residential neighborhood

TYPOLOGY: tracks are above grade on a trestle, above grade on a viaduct, above grade on an embankment.

STREET COMMUNICATION: perpendicular to the quai and canal, and parallel to street

LAND: large ramp to street level with 11% slope, SNCF ROW,

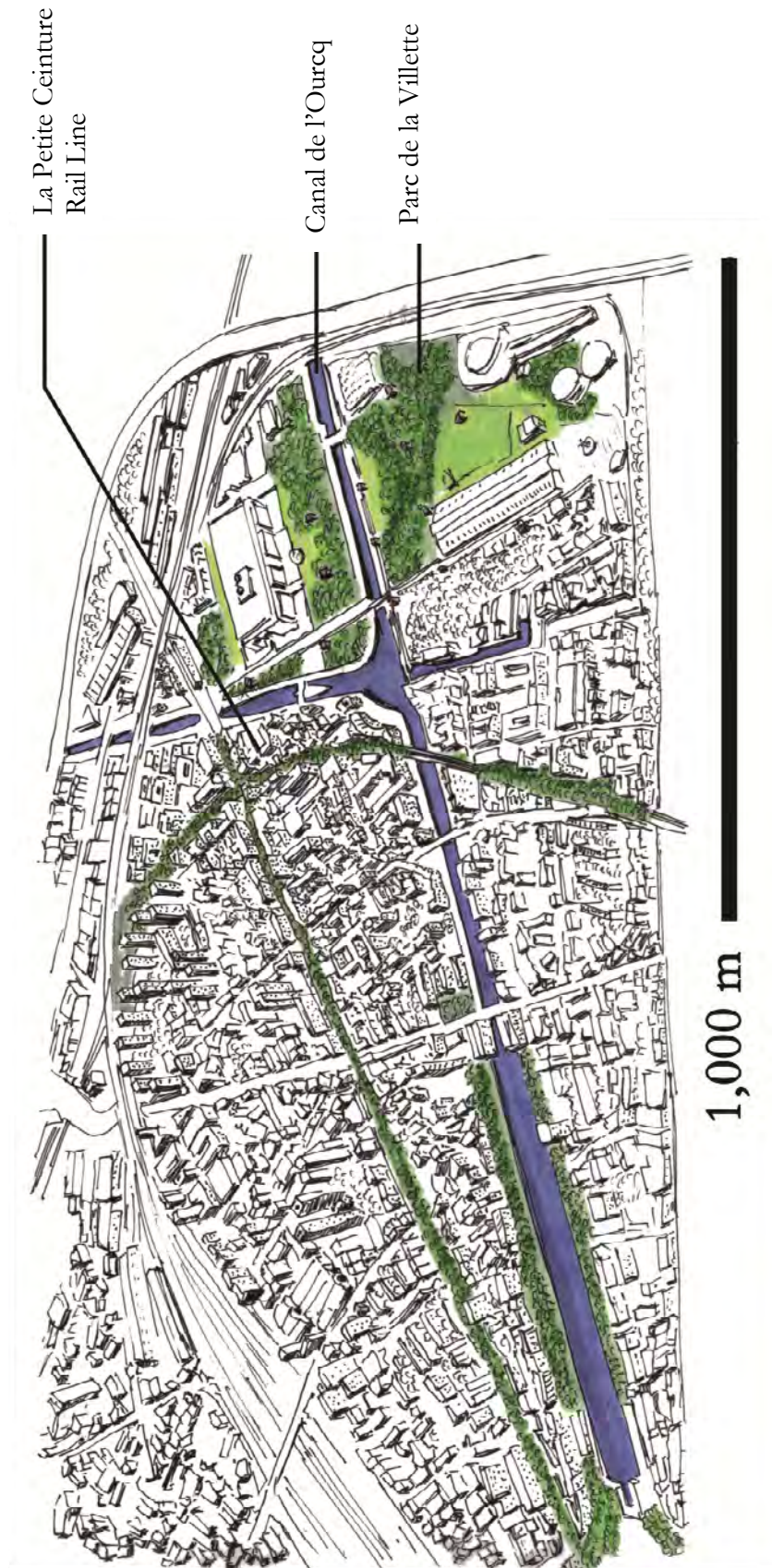
STRUCTURE/INFRASTRUCTURE: No buildings, but viaducts and embankment present, stair and walkway with 30 steps each leading to the trestle that crosses the canal

POTENTIAL CONNECTIONS: Bassin de la Villette, Parc de la Villette, Quai de la Marne, No direct Métro or Bus connection.



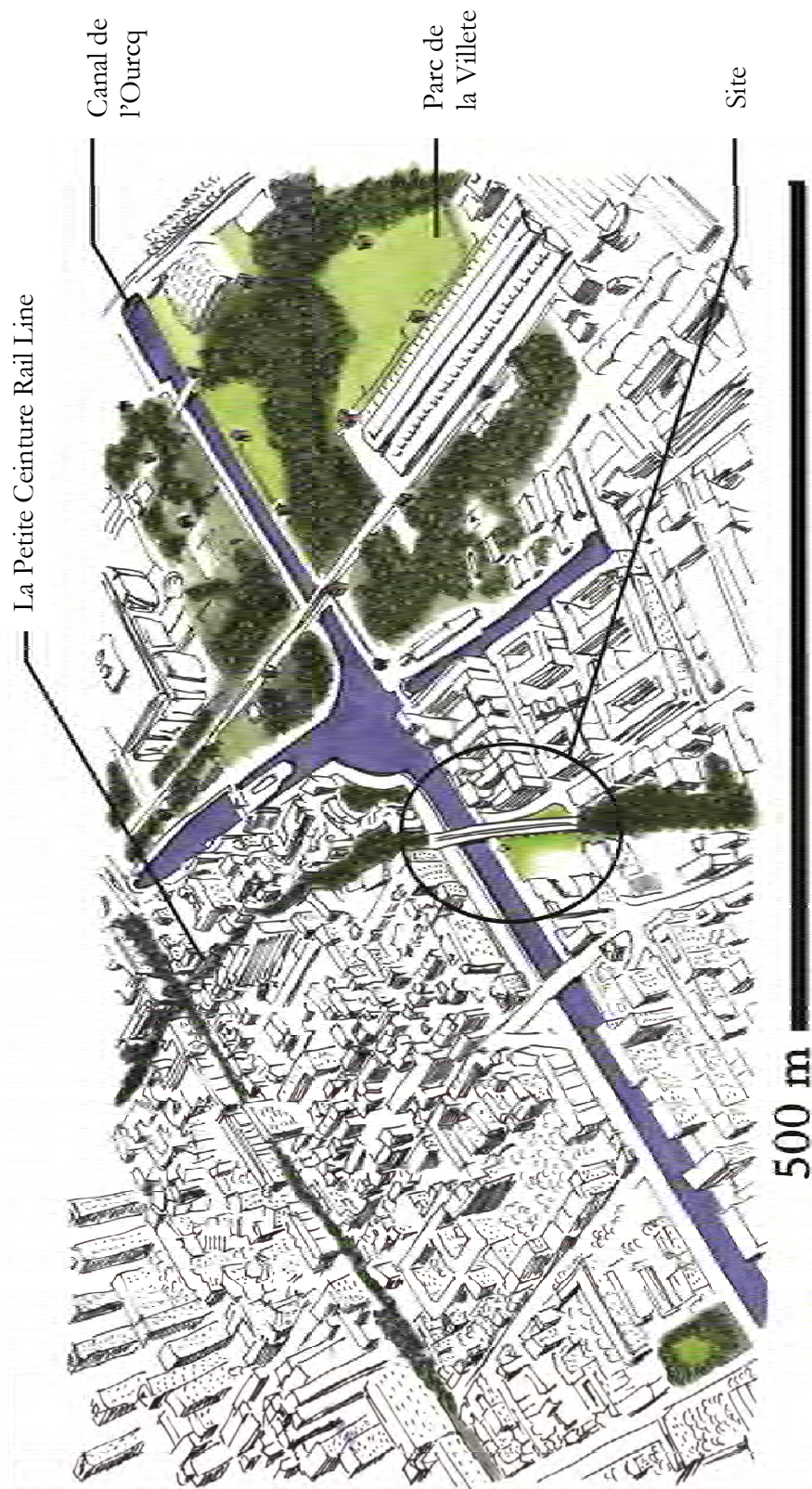
La Petite Ceinture crosses the canal just between Parc de la Villette and the Bassin de la Villette. The canal has a wide walkway and a bike way that is heavily used, especially in the warmer months. Both the areas sponsor a variety of outdoor events, concerts, movies games etc. This juncture of the PC would be a good place to start developments in the eastern section of Paris to help gain local support for a walking and biking trail. Currently in this area there are no direct connections to either the bus, metro or tram directly, however there is public transportation available within a 10 minute walk. The PC could aid in daily commute for locals as well as provide an additional green space for locals. There are schools along the PC in this arrondissement.

The variety of topologies, the structures present and its proximity to popular places, the Basin de la Villette and the Parc de la Villette offer great opportunities. The ROW spaces present on either side of the viaduct each have a wide street presence. The steel trestle over the canal with a stairway provides an additional entryway. The ramp up to the stone embankment on the southern end of the side would benefit disabled visitors. The Viaduct consists of 16 archways in this section, only a few archways on the northern end are currently in use by a bike shop.



**Image 48.** The Built Environment vs. Open Space at Canal de l'Ourcq. An aerial view looking North in the 19<sup>th</sup> Arr. overlooking Canal de l'Ourcq. Public green spaces are illustrated here to show a stark discrepancy in the ratio of buildings to open public green space. Illustration by author.

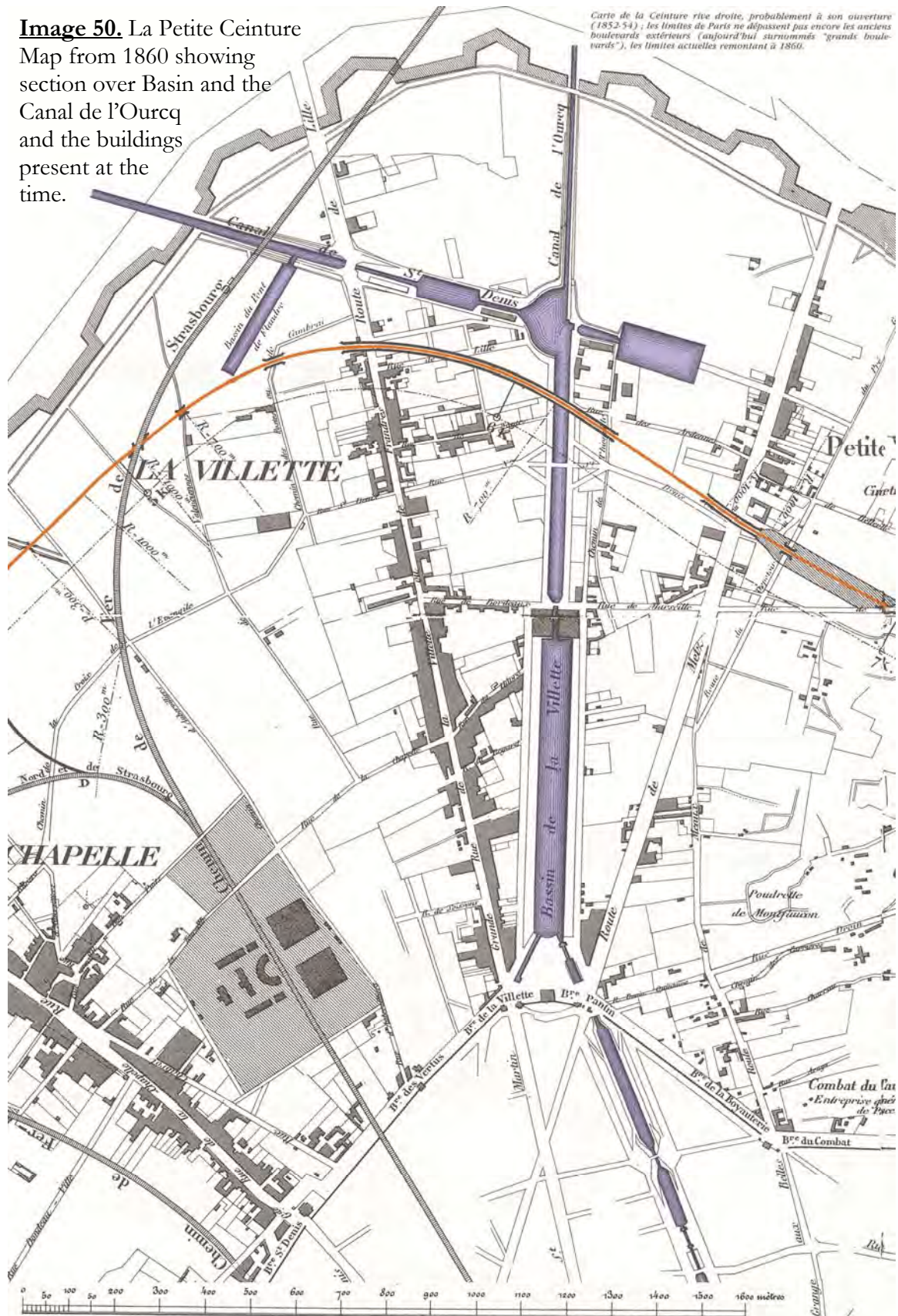




**Image 49.** The Built Environment vs. Open Space. A zoomed in aerial view looking North in the 19<sup>th</sup> Arr. overlooking Canal de l'Ourcq. Illustration by author.



**Image 50.** La Petite Ceinture  
Map from 1860 showing  
section over Basin and the  
Canal de l'Ourcq  
and the buildings  
present at the  
time.







### Site Images:



**Image 52.** Both the images above are existing site conditions looking South at the track level standing on the viaduct. The image below shows the southern view at the ground level, the boarded up viaduct is visible, with the exception of the north end which is being used by a bike shop.







**Image 53.** Existing Right-of-Way land west of the viaduct looking North from the track level standing on the viaduct.



**Image 54.** Existing site conditions from Rue Thionville just before the rail road trestle. The stone wall sits next to an artistically painted wall that covers up the existing service ramp.





**Image 55.** View looking North East to the small space, Right-of-Way land, east from the viaduct

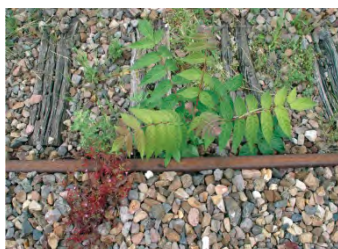
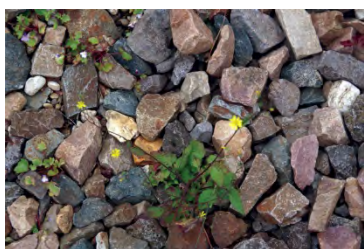
**Image 56.** The current bike shop entrance. There is a thin path boarded by a fence to gain access to the shop located in a few of the viaducts. The location of this bike shop is well suited at this possible juncture of bike paths and promenades for the city. It is adjacent to an existing bike path along the Canal de l'Ourcq between the Bassin de la Villette and Parc de la Villette.







**Image 57.** A view looking South on the tracks. The tracks are frequently mowed and kept clear, although the periphery is not maintained and allowed to over grow.



**Image 58.** Vegetation growing up through the tracks.





**Image 59.** Trestle that crosses Canal de l'Ourcq. The exterior walkway with stairs is open to the public to cross the canal. The tracks are technically closed off, but are still unofficially used by the public, just like the photo shoot above right.



In the history of park and open space design, the redesign of abandoned elevated structures for the specific use of urban open space is a relatively new concept. The large scale abandonment of industrial spaces and mechanized railway corridors has created areas in the Parisian urban landscape that can connect the city through linear parks and greenways.

The process of reclaiming the PC as an urban greenway is already underway through public interest and outreach by the city and the individual arrondissements. This started years ago with the opening of the Pereire Promenades and the Nature trail in the 16<sup>th</sup> Arr., as well as the recent opening of a small segment in the 15<sup>th</sup> Arr.. The current aim of the City of Paris and APUR is to allow access to the PC and create a minimal footprint on the landscape and retain the current wild ecologies. What would be useful to city agencies, planners and designers are design guidelines that preserve the historic character of the line, its unique ecology, and take advantage of the multiple ways of connecting to the street and engage its residents.

Preliminary guidelines that are suggested here were developed from the historic and physical analysis of the PC and the review of case studies, the Promenade Plantée and the Coulée Verte, The Bloomingdale Trail and the High Line, presented in earlier chapters. The analysis led to a specific vocabulary that informs and guides the future design process.

## **Design Guidelines**

The site analysis, historic review and case studies produced a set of seven criteria that should be considered in any future planning and design process.

### 1. Preservation

#### A. Stations and Service Buildings

B. Tracks are to remain, they may be covered, filled in or remain exposed.

### 2. Promenades and Bike Path

3. Materials: paving, site furnishings, lighting.

4. Ecology plants, invasive species to be removed, a sustainable ecology to be established.

### 5. Access and Entryways

6. Commercial adaptive reuse of buildings and viaducts

7. Neighborhoods.

## **Preservation**

La Petite Ceinture is an important part of the rail history and development of the city of Paris. The buildings are constructed in a variety of architectural styles and should be preserved. Among the buildings present along the line are abandoned trains stations, the switch houses that moved the tracks, and the service buildings that housed equipment for the maintenance of the rail line. The infrastructure includes the steel and iron bridges and trestles and the various stairways that went to the platforms. Most of the viaduct and embankments were built of stone and included long ramps between the street and the platform level. Additionally they would serve to move people between the PC and the street. The agreement with the City and SNCF states that the PC may be developed only if the tracks remain, in case active rail traffic returns to the PC.



In addition to the buildings, the significant infrastructure is worth preserving. The stone embankments, the iron and steel trestles, the bridges and the rails are all a major part of the line itself.

### **Promenade and Bike Path**

Community outreach is a key ingredient in successful park design, and the respective agencies, namely the City of Paris, the Mairies, and APUR have been engaged in community meetings to work on programming elements for the space.<sup>10</sup> A walking greenway and a biking greenway were among the requests. Paris is a heavily walked and biked city. Velib, the Paris city bicycle program, holds 23,600 bicycles that are available 24 hours per day. The program began in 2007 there are 1,800 bike stations located every 300 meters throughout the city.<sup>11</sup> In general, the Velib program provides 86,400 bicycle rentals per day. The busiest time is during the morning and evening rush hours which account for 92% of the rentals.<sup>12</sup>

As with the Bloomingdale Trail in Chicago, a separate pedestrian promenade and a bike path is recommended. The bike path should be multi modal and accommodate runners, skaters and those of a set faster pace. As the tracks are to remain, they may be covered or filled in and each track could easily serve as the foundation for one of the pathways. It would be consistent and the connective part of the design. In some areas the tracks could remain exposed to interpret the site's history.

Each path would have clear signage to illustrate use and direction on entry to the PC. The pedestrian promenade and the bike pathway should be constructed of different materials and be consistent throughout the entire park. As the biking promenade is to accommodate a faster pace, it would be best to keep it linear. However, the walking promenade allows for more design alternatives, as the slower pace of the user allows for curves and interesting deviations. Additionally all entry ways to both the promenade and the bikeway should have a clear line of sight for safety.

Wherever possible accessible rest areas should be planned to accommodate travelers along both pathways just off the main corridor. Benches and sitting areas should not be directly on either the promenade or bikeway where people tend to gather. Additionally bike repairs stations should be accommodated to allow for simple repairs such as pumping up a tire.

### **Materials**

The various structures along the PC include stone brick embankments viaducts, steel trestles bridges buildings, ramps, stairs, platforms and shelters etc. They are an opportunity and a resource to be used as inspiration in design and development of the amenities for the space in the future.

For example the ballast stone and exposed soil absorbs water and allows it to infiltrate into the subsoil. It would be beneficial to allow this process to continue by allowing water infiltration on site.

As learned from the study of parks and open spaces in Paris, Parisian open spaces use a threshold to separate from the street and the sidewalk. A visitor to the park must cross through a threshold in the form of a gate, vegetation or a change in materials from the sidewalk or street.

### Site Furnishings and Adjournments

Just as in The Bloomingdale Trail and the Coulée Verte discussed here, the PC may extend the existing park vocabulary of Paris and use similar site furnishing that are used in other city parks. These amenities may be reminiscent or inspired by past use, similar to the site furnishings are along the High Line.



**Image 60.** The wall lizard [*Podarcis muralis*] along the ballast stones.



**Image 61.** Flowers growing along a trench section of the PC.

### Ecology

The corridor has an ecosystem that has adapted to decades of pollutants from diesel, oil coal engines and heavy metals and toxins that have accumulated in the ballast stones soil.

Despite these adverse conditions and occasional maintenance to control of vegetation, the

railways of the PC have an amazing plant biodiversity. More than 460 plant species were recorded there to date; animals include reptiles, mollusks, birds and small mammals. The tunnels support one of the largest wintering colonies of the common Pipistrelle bat [*Pipistrellus pipistrellus*] in France. Over 95 species of insects have been recorded; this helps to support the bird and bat populations along with twenty five different species of birds. The site has been assessed to be an important green corridor for flora, fauna and especially pollinators. The future designs should encourage edge species, species that can tolerate the thinly vegetated habitat and discourage interior species that require more coverage and fewer disturbances. Design development should encourage healthy vegetation that is supportive to the ecosystem and remove or inhibit invasive vegetation.

### **Access and Entryways**

Access points along the corridor include stations, ramps and stairs. Many of the ramps may be too steep for universal access, but in most areas they may be extended for a compliant grade. Each entry point should express a clear line of sight for the user's safety.

The majority of connections between the PC and the city are more than a ramp or a stairwell. There are surrounding spaces or ROW to add to entryways or rest areas to the landscape.

### **Commercial**

There are many commercial areas and shipping districts in close proximity to the stations and viaduct spaces. This can be advantageous for the continued commercial development in and around the viaduct as well as for the establishment of open air eating vendors in



designed open spaces. Many of these spaces should also be considered for hosting a variety of temporary summer events and programs for the city.

### **Neighborhoods**

Each site should be assessed for what is present within a 5 and 15 minute walk.

Transportation hubs and stations such as the metro and RER lines, the buses and the tram as well as rental stations should be considered as well as bike stations and electric car rental stations proximity. Each of the neighborhoods that the PC traverses is potentially a residential or commercial connection that can be developed in the planning phases of the line's design.

### **Conclusion**

The goal of this thesis was to review and assess the importance of the PC as a historic structure and a potential connector of neighborhoods and urban green space. The spatial analysis of the PC was conducted along with a historic review of infrastructure and open space in Paris. The analysis and review revealed the many architectural features such as the stations and the viaducts that are still in existence and could be utilized as a connecting medium between the PC and the city.

Although the original use of the PC is not practical or needed, a revised vision of the PC as a connecting greenway contributes to the discussion of the city's vision for the future. The site's changes in elevation from trenches deeper than 12 meters to embankments at 6 meters in height with over 40 hectares of open space may be considered a significant addition to the city's open space and residential urban planning. The site's typologies provide opportunities

to connect to the city through entryways, architectural landmarks and ecologically rich urban habitats. It is recommended that the PC be divided into segments to facilitate the planning and design process, improve the chances of phased funding and accommodate individual neighborhood needs. The benefits of open space development contribute not only to the ecology of the city but to the reduction of the heat island effect, improvement of air quality and an increase in the amount of green open space for citizens. These benefits outweigh the standard development of hardscapes in a city.

The three areas discussed, Parc Georges Brassens, Gare Charonne and Canal de l'Ourcq are rich with amenities, resources and potential connections between the linear corridor of the PC and the urban fabric. The opportunity to connect this linear space to the various ROW's, rail spurs, adjacent plazas and buildings present in this landscape is significant, specifically through the use of design guidelines that considers historic, topographical and ecological concerns that integrate the Parisian urban fabric. The PC is a unique space in Paris because of its rich biodiversity, history and geography. It is an ecological corridor that offers refuge and access routes within the dense city limits of Paris. The PC will transform neighborhoods and the quality of city life by connecting and inspiring a new public space.

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## Appendix A. Image Credits

All photographs and images are by author, unless otherwise stated.

### Chapter 1 – Introduction

1. La Petite Ceinture Rail Line, in 1911. Source: ASPCRF - l'Association Sauvegarde Petite Ceinture. <https://www.petiteceinture.org>

### Chapter 2 – La Petite Ceinture and the City of Paris.

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9. Rue de Constantine, circa 1865. Source: An albumen silver print photograph from glass negative, The Metropolitan Museum of New York, Charles Marville 2014 Exhibition. Last Accessed December 20, 2017. [https://www.metmuseum.org/exhibitions/view?exhibitionId=%7b21968755-5ddd-4fea-81c5-000d8aaaf6b3%7d&oid=264863&pkgids=236&pg=1&rpp=4&pos=3&ft=\\*](https://www.metmuseum.org/exhibitions/view?exhibitionId=%7b21968755-5ddd-4fea-81c5-000d8aaaf6b3%7d&oid=264863&pkgids=236&pg=1&rpp=4&pos=3&ft=*)
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11. Travaux de relèvement du chemin de fer de ceinture, by Paul Désiré Trouillebert. Source: *Paris et ses Chemins de Fer. Paris et son Patrimoine Collection*. Action Artistique de la Ville de Paris Publications. p. 24.
12. La Petite Ceinture crossing the suburbs, by George Scott. Source: *Mémoire en Images: La Petite Ceinture, Tome II*. p. 81.
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29. Gare Batignolles looking westwards, circa 1884. Source Rigouard, Jean-Pierre. 2002. *Mémoire en Images: La Petite Ceinture*. p. 16.
30. Gare Batignolles façade, 1884. Source Rigouard, Jean-Pierre. 2002. *Mémoire en Images: La Petite Ceinture*. p. 14.
31. Gare Pont du Cardinet, 1920s. Source Rigouard, Jean-Pierre. 2002. *Mémoire en Images: La Petite Ceinture*. p. 17.
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33. Gare du Charonne, façade circa 1920s. Source Rigouard, Jean-Pierre. 2002. *Mémoire en Images: La Petite Ceinture*. p. 110.
34. Gare du Charonne, façade today. Source: Image by author.
35. Gare du Charonne, track view today. Source: Image by author.
36. Gare du Charonne Service Building, today. Source: Image by author.
37. Gare du Charonne Service Entrance, today. Source: Image by author.
38. Gare du Orléans-Ceinture, façade today. Source: Image by author.
39. Gare du Orléans-Ceinture, rear of building today. Source: Image by author.
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42. Gare Ouest-Ceinture, side view today. Source: Image by author.
43. Gare Ouest-Ceinture, façade today. Source: Image by author.
44. Architectural Drawings for Gare Ouest-Ceinture. Source: ASPCRF Article: *Gare de Vaugirard-Ceinture (1867)*. Last Accessed December 20, 2017. <https://www.petiteceinture.org/Gare-de-Vaugirard-Ceinture-1867.html>.
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50. Façade of Cours-du-Vincennes, from Track Level, today. Source: Image by author.
51. Façade of Cours-du-Vincennes with ROW entry, from Street Level, today. Source: Image by author.
52. View from the street level of the viaduct and the tram in the station. The old Cours-de-Vincennes Ceinture station is behind it unused today. Source: Image by author.
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### Chapter 3 – Paris Parks and Open Spaces

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8. Tennis courts in the Péreire Promenade on the Blvd Péreire in the 17<sup>th</sup> Arr. Source: Image by author.
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10. Stairs for the new walking section of the PC Park in the 15<sup>th</sup> Arr. Source: Image by author.
11. Wooden covered walkway for the PC Park in the 15<sup>th</sup> Arr. Source: Image by author.

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5. The original viaduct of the Promenade Plantée. Source: Image by author.
6. The new more modern viaduct with commercial space below, and the Promenade Plantée above. Source: Image by author.
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9. Green metal trellises, the material, color and style became one of the signatures of the Promenade Plantée. Source: Image by author.
10. One of the arbor gates along a formal section of the Promenade Plantée, which help to distinguish outdoor rooms. Source: Image by author.
11. One of the arbor gates along a formal section of the Promenade Plantée, which help to distinguish outdoor rooms. Source: Image by author.
12. The Promenade continuing through a new apartment building. Source: Image by author.
13. Park signage for the Promenade. Source: Image by author.

14. Various entrances of the Promenade Plantée. Source: Image by author.
15. Viaduc-des-Arts with Promenade Plantée above. Source: Image by author.
16. Runner along the Promenade Plantée. Source: Image by author.
17. A seating niche along the formal section of the Promenade Plantée.  
Source: Image by author.
18. A seating niche along the formal section of the Promenade Plantée.  
Source: Image by author.
19. A cozy place to read is easily found, this spot on the Promenade has hosted yoga and Tai Chi classes on occasion. Source: Image by author.
20. Walkers on the Promenade Plantée. Source: Image by author.
21. The reflecting pool lined with lavender, framed by formal hedges and small trees.  
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22. One of the crossings of the reflecting pool, viewed down along length.  
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23. Hector Malot Garden, the roof deck above the 7-story parking garage for the neighborhood. Source: Image by author.
24. A break in the viaduct and an entrance to the Promenade just before the Jardin de Reuilly. Source: Image by author.
25. Jardin de Reuilly. Source: Image by author.
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28. The fountain at the end of the mall, and Allée Vivaldi, looking west towards Jardin de Reuilly. Source: Image by author.
29. At the end of Allee Vivaldi, looking east, as the Coulée Verte begins.  
Source: Image by author.
30. The Coulée Verte, promenade at left and the bike path on the right.  
Source: Image by author.
31. The Coulée Verte bicycle path. Source: Image by author.

32. The end of the Coulée Verte at the Blvd Périphérique. Source: Image by author.
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35. High Line Sketch. Source: Graphic by author.
36. The southern most entrance to the High Line, the stairs go up underneath and enter onto to the middle of the viaduct. Source: Image by author.
37. Stairs on 30<sup>th</sup> Street just south of the Hudson Yards. This High Line goes right onto the sidewalk. Source: Image by author.
38. The 14th Street stairway entrance to the High Line. Source: Image by author.
39. One of the various elevator entrances to the High Line. Source: Image by author.
40. Hotel Stairway entrance to the High Line. Source: Image by author.
41. The High Line Park Sign. Source: Image by author.
42. Walkers on the High Line. Source: Image by author.
43. Walkers on the High Line, the straight lines of the pavers not in sync with the direction of the main pathway. Source: Image by author.
44. Walkers on the High Line. Source: Image by author.
45. Tracks left with birches growing up through them, vegetation. Source: Image by author.
46. Wooden pavers changing into benches along the High Line. Source: Image by author.
47. Some of the tracks remain to hint at the park's past. Source: Image by author.
48. The pavers thin out into the vegetation blurring the lines between the pathway and the planting beds. Source: Image by author.
49. The High Line viewed from the street. Source: Image by author.
50. An advertisement as seen from the High Line. Source: Image by author.



51. Map of The 606 Line, Chicago. Source: The Official Website for the 606 Line, Bloomingdale Trail, in Chicago. Last Accessed October 29, 2017. <https://www.the606.org>.
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61. One of the access ramps to The Bloomingdale Trail. Source: The Official Website for the Bloomingdale Trail: The 606. Last Accessed October 29, 2017. <https://www.the606.org>.
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## Chapter 5 – The Future of La Petite Ceinture – The Little Beltway.

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5. Parking lot above directly above la Petite Ceinture in the 16<sup>th</sup>. Source: Image by author.
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8. Sketch of Transitional Space of the PC as it changes in elevation. Source: Image by author.
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10. Sketch of Transitional Space, the PC splits. Source: Image by author.
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17. Sketch of the PC perpendicular and parallel to the street with no ROW space.  
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24. Sketch of the PC below grade, covered by plaza between buildings. Source: Image by author.
25. Model of the PC and the City of Paris. Source: Image by author.
- 26.. Slaughterhouse and Meat Market circa 1900 in the 15<sup>th</sup> Arr.  
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31. Former Paris-Brancion Station, platform and tracks looking west. Source: Image by author.
32. Main horse and cattle receiving platform. Source: Image by author.
33. View from lower level of platform. Source: Image by author.
34. Tunnel Entrance west side of Parc Georges Brassens. Source: Image by author.
35. View on platform looking west. Source: Image by author.
36. View looking east of underpass of rue Brancion. Source: Image by author.
37. View of Antique Book Market Place. Source: Image by author.
38. View of rails going east from rue Brancion overpass. Source: Image by author.
39. View of southern slope in Parc Georges Brassens. Source: Image by author.
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41. Façade of Gare Charonne. Source: Image by author.
42. Rear façade of Gare Charonne. Source: Image by author.
43. View under Gare Charonne. Source: Image by author.
44. View of tunnel entrance behind Gare Charonne. Source: Image by author.
45. View of Southern end of platform and Service Building. Source: Image by author.
46. Façade of Service Building. Source: Image by author.
47. View of PC Trestle from Parc de la Villette. Source: Image by author.
48. Built Environment vs. Open Space – 1,000 meters. Source: Graphic by author.
49. Built Environment vs. Open Space – 500 meters. Source: Graphic by author.
50. La Petite Ceinture Map, circa 1860. Source: Carrière, Bruno. 1992. *La Saga de la Petite Ceinture, La Vie du Rail Publisher*. Map Insert.

51. Canal de l'Ourcq, Existing Typologies. Source: Graphic by author.
52. Existing Conditions looking South from track and street level.  
Source: Image by author.
53. Existing Conditions looking North from track level. Source: Image by author.
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55. View of Northeast ROW plot. Source: Image by author.
56. Bicycle Shop Entrance under the Viaduct. Source: Image by author.
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58. Vegetation Growing up Through Tracks. Source: Image by author.
59. Images of the Trestle that Cross the Canal. Source: Image by author.
60. Small lizard common along the ballast stones along the tracks, by author.
61. Wildflowers growing along trench section of the PC. Source: Image by author.

## Appendix B. Table Credits

### Chapter 2 – La Petite Ceinture and the City of Paris.

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### Chapter 3 – Paris Parks and Open Spaces.

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