A Historical Analysis of Original Mosaic Tile Designs Within the New York City Subway System

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Abstract

Like most boys growing up, I have always been enamored with trains. As I grew older, I realized it was less about the trains themselves at it was the environment that surrounded the trains. Growing up outside of New York City, my love for trains grew out of the majestic mosaic tiled stations where I would stand and wait for trains. The designs I had admired as a youth had always reminded me of a classic New York era seen only in movies.

As an adult, I still find beauty in the design of the New York City subway. Now I realize it is now more about artistry that can be observed rather than the trains. As a practicing artist, I found much can be learned by analyzing the styles used by the creators of the subway as well as the artists that have installed their works there.

This paper will take a deep look at the origins of these designs by looking at original drawings that were completed over a century ago. By studying these drawing techniques, the reader will re-discover the talent and artistic skill these designers possessed, something than has been lost in the modern era of computer aided design. In the end I would hope to prove that the subway should be used as an art education tool much like any of the decades old art deco architecture or even some of the museum collections this city has to offer. The New York City Subway is a phenomena on many different levels, the arts and designs that can be found within are a testament to that.

Introduction

There are things in this country that will always attract the attention and imagination of young boys as they are growing up, regardless of how impure we feel they may have become in a 21st century technological climate. Planes, trains and automobiles, as clichéd as pop culture makes it sound, in its purest or most complex forms will still trigger a sense of discovery within children that allows them to explore the joy and charm in our methods of transportation that we find tedious and monotonous as adults. Trains in particular, even to this day, have always instilled this sense of discovery and joy in me.

As a child, my family relied on the railroads as a primary means of transportation for many family vacations. In the late 1980's and early 1990's this was often times a much more economical means of travel, which suited me fine as I often loved the scenic byways we often would travel. To me, flying seemed to cheat a person out views of American "backyards" outside of my own, a point of view not appreciated at 35,000 feet.

Once I entered high school I was able to take advantage of growing up in close proximity to New York City and would drive into the city for days trips with my brother and other friends to explore. There are few cities that offer such an expansive public transit system as the New York City subway and to this day despite its constant presence in the news for mismanagement I still admire its vastness and relative efficiency. It was within the subway that my perception of the railroad changed and I realized that in many ways I was more interested in subterranean scenery than those scenic images of America that I had experienced on family vacations.

Every time the train emerged from a dark tunnel, it would enter a brightly lit chamber lined with colorful majestic tile-work, either in the form of signage or works of art, that might give a "straphanger" the feeling they were viewing stained glass in a church window. The NYC subway had a sense of history and sophistication that I had not seen in any other transit system in the coun-

try and like few others in the world. As beautiful as these works of art were, there was also charm found in the more mechanical or industrial structures that can be found around every corner within the subway, many of which have occupied these tunnels for decades. The subway is a world unto itself and it possesses its own seemingly endless collection of art.

It is this personal relationship I have with this part of the city that has inspired me to choose this as the topic for my primary source/historiographic essay. This presents me with an opportunity to conduct research for answers to my own questions in conjunction with fulfilling the scope of this project as well as documenting some of my own ideas on how this very accessible system could be integrated into the art education curriculum in NYC area schools. My objective with this combined project is to conduct a visual and narrative historical account, while analyzing primary sources, of past and present design practices within the New York City subway system since its opening in 1904. Finally, I would like to use this paper to suggest how the NYC subway can better be used as an entity in the arena of art education.

Historical Account of the NYC Subway Prominent American architect Joseph Giovannini stated, "There are two mental maps of New York City, one above ground, and the other below, the first showing the city as separation, and the second, as connection". (GARN, 2004, pg. viii) A superficial observation, yet telling in many ways. Above ground maps illustrate waterways dividing the five boroughs of New York City. In 1904, subterranean maps emerged illustrating a vast network of tunnels, which would now connect the five boroughs. This action would alleviate the massive overcrowding in lower Manhattan allowing families to move to the outer boroughs, which ironically would lead to greater commercial growth in Lower Manhattan (MICHAELS, K., MATH, S., WALETZKY, J., & WALLACH, E, 1994).

Before Manhattan was connected to the outer boroughs, Lower Manhattan's commercial growth was somewhat limited. Commercial office and industrial buildings in the area were only able to accommodate a workforce that lived in close proximity as there was no way for employees to travel relative long distances to work. With the opening of inter-borough rapid transit these companies could bring in large amounts of works from the outer boroughs relatively quickly, they were no longer limited to employees living in within a short distance. Therefore these companies began to build upward to accommodate the influx of new workers, hence we see the advent of the sky-scraper (MICHAELS, K., MATH, S., WALETZKY, J., & WALLACH, E, 1994).

The New York City subway as it is known today, is operated by the Metropolitan Transportation Authority, a public benefit corporation. Through iconic branding concepts introduced by Italian designer Mossimo Vignelli in the late 1960's, which was built upon the now the standard design font "Helvetica", the subway is now seen as a massive system of track, stations and rolling stock that operate under the same banner. This has only been the case since 1940. In the 36 years before the subway functioned as a single entity under the MTA, it operated as three privately owned corporations know as the BMT (Brooklyn-Manhattan Transit), IND (The Independent Subway System) and IRT (Inter-Borough Rapid Transit) lines. Each individual company operated under its own management and branding style that would give its trains and stations unique characteristics that would set them apart from other stations in the system (GARN, 2004).

Beneath the now standard branding of white copy on a black background, lives intricate layers of design history that have more often than not been preserved and then built upon with time.

The system as a whole represents a permanent exhibition of 20th century movements in architecture and design. Giovannini talks of "cumulative differences across systems, time, designers, and styles, from the initial City Beautiful movement through Arts and Crafts, Machine Age design, Art Deco,

Moderne, and the Bauhaus" (GARN, 2004). Few other places in the world chronicled advancements in American design and industry, which propelled American society into the 20th century.

As both a visual and narrative history on this subject matter, this paper will analyze primary sources that are more than 100 years old, drawings and sketches that were completed in the infancy of the New York City subway. These drawings were the blueprints for many of the iconic tile designs that are found in this subway today, which hardly changed if at all. With evidence gathered from analyzing primary sources, this paper will offer a role the New York City subway can play in the area of Art Education and will suggest a way it can be better integrated into today's curriculum in conjunction with the latest tech and social media trends.

Historiographic Analysis on Subway Tile Art The New York City subway possesses a spirit of something ancient. It is not the oldest subway in the world. That can be found in Budapest, Hungary. In fact, it is not even the oldest in the United States; Boston's subway opened a few years prior (SHUBERT, 2010). It is the ornate style of ceramic and glass tile that suggests this feeling to the rider. It is a style that reminds people of a time of great public service advancements on the heels of the American Industrial Revolution.

The subway was born out of a time where public works were of the utmost importance, all of which possessed a Victorian flare. In the 1890's we saw such monumental projects as the Brooklyn Bridge and Central Park come to fruition with perhaps the greatest on the horizon in the subway (GARN, 2004). It was important to the visionaries of this project that the subway be a reliable form of transportation but also as aesthetically pleasing to the rider as possible. The city hired a young man by the name of Williams Barclay Parsons as their chief engineer. Parsons, a Columbia College alumnus as well as trustee of the school, was responsible for hiring the firms whose talent would lend to the creation of this style of tile art, and certainly influenced the selection of the 116th Street IRT station as one the flagship stations in the system. Parsons even selected the what is now

referred to as "Columbia-Blue" tiles that line the stations walls. (SHUBERT, 2010). The first section of the subway was to run from City Hall north to Grand Central Station then would run west to Times Square then run further north up Broadway to 145th Street, passing Teachers College on its way (CHRISTOPHER, *The New York Times*, pg. 11).

The first design firm that Parsons was responsible for hiring was Heins & LaFarge, a reputable firm whose work in New York City was well respected such as the Astor buildings at the Bronx Zoo and the Cathedral of St. John the Divine in the Morningside Heights neighborhood of Manhattan. Heins and LaFarge were lifelong friends, Massachusetts Institute of Technology classmates, business partners and brothers-in-law (CHRISTOPHER, *The New York Times*, pg. 11). Their style consisted of classical influences and made "color the centerpiece of the firms work" along with integrating with Greek and Roman architecture principals (SHUBERT, 2010). The firm was charged with creating an "overlay" for the visually unappealing infrastructure that was required for operation. This overlay drew great influence from the Beaux-Arts architecture style. This is a neoclassical style that emerged from Paris, France in the mid 18th century (GARN, 2004). This style was very popular amongst American architects and engineers in the early 20th Century, perhaps one of the most celebrated structures of this era being Grand Central Terminal.

While it would seem to be a mundane task to simply cover up the cumbersome steel, concrete, hydraulics and electrical units, Heins & LaFarge seemed to embrace the challenge, not only by finding an elegant approach by using colorful ceramic-tile combined with ornamental decoration but also ensuring that "each station differed in ornament and color scheme from its neighbors en route" (GARN, 2004). For stations unlike 116th St - Columbia University or Brooklyn Bridge that did not have "obvious symbolic connections", the designers came up with one of a kind mosaic designs (CHRISTOPHER, *The New York Times*, pg. 11)(Appendix, Figures 6.0-6.4). This would provide the rider with a unique experience at each station. The works of Heins & LaFarge would be

almost entirely exclusive to the IRT as Heins passed away unexpectedly in 1907 (CHRISTOPHER, *The New York Times*, pg. 11), the duo would become responsible for the design of less than 15% of the stations in the present day system (SHUBERT, 2010). However, it was their use of vibrant, sometimes gradated colors that had such an impact on the aesthetics of the design that riders continue to enjoy today. Despite the presence of symbols or ornaments within the tiles that may have been specific to certain locations, each station had a basic set of characteristics that were common to them all such as "straw-colored iron-spot brick" adjacent to white glassy mosaic tile topped with cast-iron beamed ceilings (CHRISTOPHER, *The New York Times*, pg. 11).

Once the IRT was completed and the LaFarge contract was fulfilled, Parsons decided to hire a full time designer/architect to work on new projects as the city subway extended deeper into Brooklyn, The Bronx and Queens. Squire J. Vickers chosen as Parson designer and would remain the full time designer through the expansion period, know then as the "Dual Contracts" and he would remain at his post for 36 years (GARN, 2004). Vickers was a talented drawer and painter and the tile work that now exists in many of his stations were easily influenced but his own artistic style (Appendix, Figures 7.0-8.0). Vickers was a student of the English Arts and Crafts movement and while he respected the mechanical and industrial needs of the system he chose to call upon his influences and embodied them in the form of ceramic tile. Vickers himself stated, "It is not enough that our stations should be sanitary, commodious and convenient-they must at the same time present a cheerful and attractive appearance to the public (GARN, 2004, pgs. 12-13)." The former may no longer be accurate but in regard to his later points, it can be observed that the effort was sincerely made to create this atmosphere.

Even thought the transition from the tile design efforts of Heins and LaFarge to that of Vickers might be very subtle to the everyday rider, their design differences are quite extensive. The fact that riders are able to navigate the system with relative ease is a "testament to the power of graphic

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design", an area of the arts that wasn't even acknowledged at this time (GARN, 2004). However, it is those subtle details that are currently considered major graphic design fundamentals that separated the branding styles of these two designers.

Vickers carried forward the pattern of displaying the station names in glass tile. However he chose to use serif fonts, which in many ways provided a more pronounced feel of elegance, suggesting a hand-written look. This can be seen at the Pennsylvania IRT station in midtown Manhattan. Always tuned in to other emerging trends in design and type, Vickers was fond of the Modernist look that the London Underground used for its station signage and decided to change his own style and revert to a san-serif typeface (GARN, 2004). As mentioned previously, the signage that emerged out of the subway rivalry between the BMT, IND and IRT was covered up with a "bandage" of unified type in the late 1960's by Mossimo Vignelli, which is modernist as well as simplistic.

It should be noted that the scope of Vickers design methods were not meant to be exclusive to a subterranean environment. There are still certain locales within the system that offer the same aesthetic climate above ground. The system used to have a greater presence of above ground stations houses and power supply facilities. Two prominent examples would be the renovated stations at 72nd and 96th street on the IRT line, (Appendix, Figure 4.0) as well as the viaduct that runs along Queens Boulevard which required "20,000 square feet of ornamental tile" (GARN, 2004, pg. 9). The station entrance at Columbia University and 116th street was also at one time an above ground station house in the median on Broadway which is now called the "Broadway Malls", a NYC green space.

Primary Source Analysis Thanks to public access by appointment to the New York City Transit Museum Archives, this paper will analyze a primary source that "marks a transition" between the sculptural styles Heins & LaFarge and the mosaic ceramic pattern styles of Vickers

(GARN, 2004). Included in the Appendix of this project is a photo of an official stamped drawing that was completed in 1907 by a designer with Heins and LaFarge (Appendix, Figure 1.1). The drawing depicts the Manhattan tower of the Brooklyn Bridge and in the background a view of New York Harbor with smaller images of the Statue of Liberty, a barge ship, the borough of Staten Island as well as what could be Governor's Island Appendix, Figure 1.3). This drawing was chosen because it exemplifies a process of art and design that has been lost or overlooked due to technological advances, most specifically CAD (Computer Aided Design).

Whether this type of drawing should be classified as art or an architectural drawing, a designer would still need to possess strong drawing skills. Since the original sketch has been damaged, information is missing about the designer who is responsible for this sketch which makes it difficult to trace the education and training the designer received. Another challenge with this particular drawing is that the faience, glazed terra-cotta, plaque that was created from this sketch no longer exists at the Chambers Street BMT Station which is part of the current Brooklyn Bridge-City Hall/Chambers Street Station (GARN, 2004). Much of the elegant detail and design that was introduced by Heins and LaFarge is now gone due to renovations projects dating back to 1910 and ultimately since this station merged with City Hall station in 1945. In 1962 an extended island platform was built which required the original side platforms, where this plaque once stood, were sealed off (SHUBERT, 2010).

Comparing this drawing to other originals that were examined in the archive, such as the hand-drawn Franklin-Leonard mosaic initial letter, similarities can be noted (Appendix, Figure 2.1). As an example, both drawings each contain two stamps, one in red in the bottom-center and one in black in the lower right-hand corner. The one in red seems to be identical on both documents, the tile reading "PUBLIC SERVICE COMMISSION" and having been stamped with the date "JAN 16 1911". While it is not conclusive, the drawings were done by the same individual, in all likelihood

they probably were as the "Drawn By" field has been filled in with the name "GARDNER" yet all that is legible on the Brooklyn Bridge plaque drawing are the letters "GAR" but in a very similar handwriting style.

Assuming these drawings were done by the same individual, what else can be known about the designer "GARDNER"? It could probably be assumed that aside from possessing solid drawing skills he/she also had experience with architectural or engineering renderings. This can be concluded by both sketches having notations pertaining to scale in each of these drawings. The Franklin-Leonard is the most legible, reading "F.S.D." which this paper is assuming means "Full Scale Depiction". If the investigator had a knowledge of the history of Art Education he/she might be inclined to draw parallels between these drawings techniques and those found among some of William Dyce's teachings in *Introduction to the Drawing-Book of the School of Design*, 1842-1843 (Government School of Design, 1842).

Another potentially significant detail within the black stamp is the "CHECKED BY" field, which in the Franklin-Leonard Mosaic is initialed by "R.H.P." This could be helpful in forming a picture of the firm's organization. What this could mean is that is known these drawing were completed by "Gardner" and then approved by "R.H.P.". The next challenge would be to try and find who "R.H.P."'s superior would be, hoping in the end it would lead to either George Heins or Christopher LaFarge themselves. These clues were brought to the attention of the NYCTA Archivist, Carey Stumm, but she did not have any records as to who these artists may have been and more importantly how they were trained. Training aside, this paper aims to prove by citing these primary sources that the design of the subways has always called upon artistic talents.

For those that may be interested in investigating further, a rider can still see for him/herself the original City Hall station that was closed to public riders in the 1940's, arguably the most beautiful station that came out of the Beaux-Arts influenced era of the subway's infancy. This station can still be seen if riders stay on the downtown #6 line at its terminus, even though the trains intercom

will instruct all passengers to exit. This train will continue past its terminus at Brooklyn Bridge-City Hall and loops around, passing through the old City Hall station to begin its route north to Pelham Bay Park (GRYNBAUM, M, *The New York Times*, Pg. 5). However, a similar replica of the ornate arched ceilings can be found at street level at this same station. Once the rider exits and emerges from the underground, they simply need to look directly up and they will notice a massive vaulted brick ceiling that was created as a tribute to the now closed City Hall station.

Relationship with Art Education Thanks to the efforts of Parsons, LaFarge and Vickers the subway stations were designed with careful consideration and attention to ornate detail that would give the every day a rider a visually pleasing experience. In an effort to compliment, not compete with, the MTA Arts for Transit formed in the 1980's and since then has commissioned a variety of art installations throughout the city subway system (NEW YORK STATE, 2009). While over time these works have evolved to encompass a variety of mixed artistic medias, there are still a large amount that have been created in the same mosaic tile style as the original design themes. It seems only fitting that such a large and distinct collection of one of a kind design and artistic works be better integrated into the Art and Art Education programs in New York City area schools. This section will propose an interactive tour of the subway system that would not only expose school children to the artists, styles and materials of commissioned works but also inform them of the many cultural attractions that are accessible by using public transit and supporting public works.

This addition to the current Art and Art Education curriculum would target middle/junior high school students in grades 5-8. In this proposed program the students, chaperoned by their instructors, would be given a series of ten clues. Each clue would provide hints to the subject of the commissioned mosaic along with a reference to its location in the city. One such example could read: "I am the king of the Jungle yet I call the basement of Madison Square Garden my den. I currently am guarding the southernmost wall and the sum of the three subway lines that service my home is 6." This clue should suggest to the student that this mosaic is located near Madison Square

Garden and the sum of the subway lines that service this station: 1, 2 and 3 IRT trains is 6. As a result of these clues the students should conclude that this mosaic is located at Pennsylvania Station below Madison Square Garden. On the southernmost wall on the express platform (2 and 3 trains) they would find Elizabeth Grajales' *When the animals speak...*, a 1998 ceramic mosaic (NEW YORK STATE, 2009). This is just a very basic example from which a more detailed version can be found in the Appendix of this paper (Appendix, Figure 3.0).

A program such as this can bring more to New York City art students than an appreciation of the accessible arts. The subways are full of visual treasures that provide a glimpse back in time to an era of traditional craft arts along with samples of ground breaking mixed-media sculpture that displays the potential and out-of-the box thinking of many current artists. An example of the former would be the Borough Hall IRT station in Downtown Brooklyn. This station contains a variety of ceramic ornamental details and symbols that were commonly used by Heins and LaFarge. This station, one of several that have been "listed" by the National Register of Historic Places, contains a popular 19th century symbol called the cornucopia. This symbol, which is also known as the "horn of plenty" was often times synonymous with wealth and prosperity, a sentiment that was expressed throughout the subway system during the early 1900's as New York experienced a tremendous period of growth (GARN, 2004). The iconic "BH" plaques found throughout the station, similar to the back-to-back "BB" plaques at the Brooklyn Bridge IRT station (GARN, 2004)., were designed by the Boston firm, *Grueby Faience*, the same company that manufactured the plaques at Brooklyn Bridge-City Hall Station (SHUBERT, 2010). The designs found in this station should give students a "look back" in time to an era of unprecedented growth and prosperity in New York. This station opened in 1908, ten years after the consolidation of Brooklyn into Greater New York, in many ways celebrating the birth of the New York City that exists today.

This program is meant to be interactive with popular social media platforms. Ideally the MTA or the NYCBOE could offer its own platform in which to interact with students. To take it a

step further, a mobile application could be developed that would provide students with hints or questions based on their current location. Then by accessing the device's GPS, they could obtain directions to the mystery art installation via subway.

Of course with the above solution, a class of students would be at the mercy of MTA or NYC school budgets which allow little "wiggle" room in the current economic climate. An alternative would be to utilize some free social media platforms such as FacebookTM. Within this service a responsible authority figure such as a teachers could set up a limited access "Group". Within this group access could be granted to students via a community email account. This email account along with FacebookTM, would need to be synchronized with a school operated mobile device. Equipped with this tool, students could take their list of clues along with their mobile, work as team to decide where the specified art can be found. Once it is found, the students can take a photo with the mobile device and upload their image to their FacebookTM group. This provides the student with a way of managing their photo assets where they may go back in and add pertinent information such as artist, year or medium. The instructor could also open the FacebookTM group open to discussion where students could log-on and talk about their findings.

When analyzing the latter which emphasizes a more modern take including mixed-media sculpture, a good station to visit would be the 14th Street-8th Avenue IND station. Entering this station one should immediately notice its recent renovations. It is is decorated with a variety of bronze sculptures, many of which appear to occupy uncomfortable or clumsy spaces lacking a feeling of belonging that many of the mosaic installations in the system offer. Sculptor Tom Otterness' 2001 installation *Life Underground* depicts scattered bronze sculptures attached to steal beams, railings, benches, floor tiles and columns throughout the station (NEW YORK STATE, 2009). Otterness travels in a different direction than most artists in this arena who have chosen to work with mosaic tiles much like the systems forefathers, Heins and LaFarge. Otterness pays homage to the life of the commuter, how the subway is a culture unto itself, carrying riders from all walks of life. A rider on

the A-C-E express platform may find themselves sitting next to a turtle-like creature dressed in formal attire on a bench, or may pass a bronze ear extending out of a steal girder, or even step over a sewer alligator (Appendix, Figure 5.0). All of these pieces suggest a sense of fantasy and imagination that can be a pleasant surprise to a rider who can grow numb to the monotony of the everyday commute.

A more ambitious and perhaps fearless researcher could investigate one of the three other "ghost stations" in Manhattan, in addition to the closed City Hall Station. One such station can be observed on a student's daily commute to Columbia University from downtown on the #1 line. Upon leaving the often busy 96th street station heading south toward the 86th street station, if the rider puts his/her eyes up to the glass of the subway doors looking west, they might be able to notice the terra-cotta tiles masked by dust and spray paint of a now defunct 91st station which closed in 1959. The 91st street station existed during a time of 5-car long subway trains, once these were extended to 10 cars, the platforms also had to be expanded and 91st was unfortunately caught between the 86th and 96th street platform extensions (ANDRE, A, *The New York Times*, Pg. 37). Eastside riders can find a similar experience at Worth and 18th street along with several different places along what will be the Second Avenue Line which is scheduled to open in 2017 (GRYN-BAUM, M, *The New York Times*, Pg. 5). In the late 1990's the Transit Museum was offering tours of this defunct station that is now buried beneath excess building materials, trash and remnants of squatters. However the tile work this paper celebrates is still intact (ANDRE, A, *The New York Times*, Pg. 37).

It is imperative to acknowledge the significance of the design and typography within the subway. Art-specific education aside, the effect these images can have on a child's young and impressionable mind is quite amazing. In the introduction to *GARN*, 100 Years of Architecture & Design in the New York City Subway, the architect Joseph Giovannini talks of such an experience with

his own daughter:

"On a personal note: I would like to pay witness to the edifying role that subway design plays in the everyday life of the city.

The graphic designers of the subway system have built into the system an exercise in progressive education. The visual punch of all those letters and numbers of the 1, 2, 3, 4, 5, 6 and 7 lines, and the A, B, E, F, R, M, N, Q and W routes, each bulleted in a colorful circle, attracted the attention of my toddling Manhattan-born daughter, and taught her numbers and letters long before she ever would have learned them in the above-ground world (GARN, 2004, pg. ix)."

Would his daughter have learned numbers and letters just as easily if they hadn't been set against the background of vibrant-colored shapes? There certainly is a possibility but it is also fair to say that a child would respond more to the colors, shapes, letters and numbers that Vignelli designed as well as the mosaic illustration and station abbreviations that were laid out by Heins and LaFarge. This section is not suggesting this was the intention of the designers of the subway system but perhaps a priceless unforeseen benefit. What irony there is here: For all the culture and iconography that can be found above ground in New York, it is traveling to and from these locations underground where society is subconsciously being educated. Riders pacing up and down platforms admiring the tile work, commuters walking past beautiful mosaic tile installations while transferring from one train to another, children sitting down in a subway car, reading the numbers and symbols on the train route map aloud. New Yorkers have been given yet another way to cultivate culture within themselves by making it available in areas where other cities have not...

...UNDERGROUND.

References

- ANDRE, A. (1999, January 8). MY MANHATTAN; Next Stop: Subway's Past. New York Times, p. 37. Retrieved from Academic Search Premier database.
- CHRISTOPHER, G. (2004, October 10). STREETSCAPES/New York's Subway; That Engineering Marvel Also Had Architects. New York Times, p. 11. Retrieved from Academic Search Premier database.
- GARN, A., & New York Transit Museum. (2004). GARN: 100 years of architecture & design in the New York City subway. New York: Stewart, Tabori & Chang.
- GOVERNMENT SCHOOL OF DESIGN. (1842). The drawing book of the Government School of Design: Published under the immediate superintendence of the council. London: Chapman & Hall, Strand.
- GRYNBAUM, M. (2010, November). The Ghosts of New York Subway Stations Past. *New York Times*, p. 5. Retrieved from Academic Search Premier database.
- MICHAELS, K., MATH, S., WALETZKY, J., & WALLACH, E. (1994). River of steel: The building of the New York City subway. New York, N.Y: Distributed by: Stuart Math Films, Inc.
- NEW YORK (STATE). (2006). NEW YORK STATE: A guide to art in the MTA network.

 New York: Metropolitan Transit Authority.
- SHUBERT, G.. (2010, January 4). [Podcast] New York Transit Museum and Learning-Times. SHUBERT: The New York Transit Museum Podcast Series. Retrieved 2010, November 6th, from

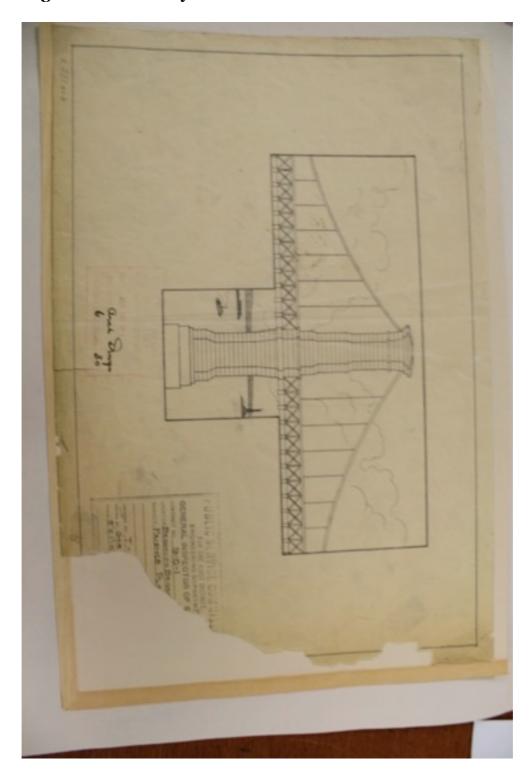
http://itunes.apple.com/us/podcast/SHUBERT-the-new-york-transit/id349075461

A very special thank you to Carey Stumm, Archivist at the New York City Transit Authority

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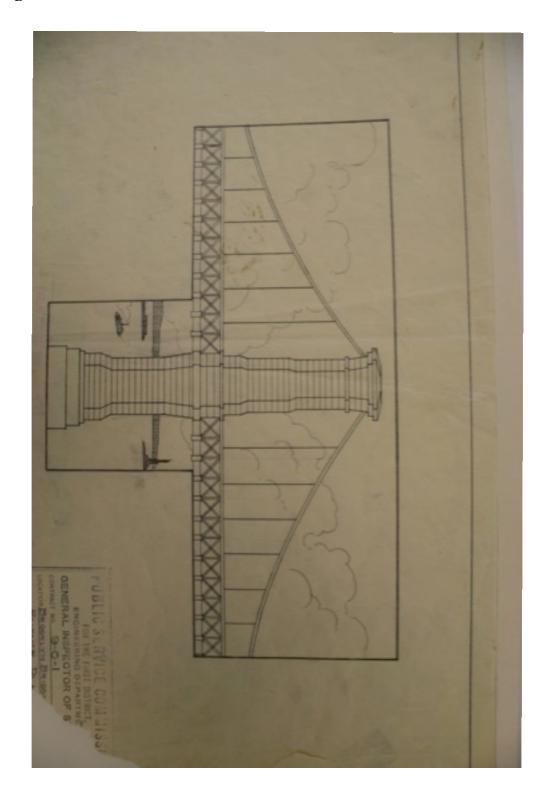
Appendix

Figure 1.0 - Primary Source



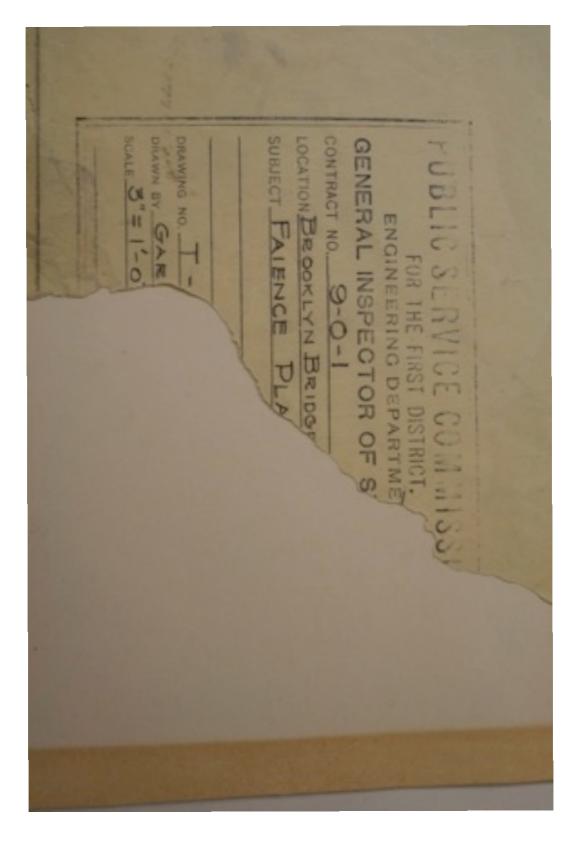
Hand drawn blueprint of faience plaque. Drawing was completed in 1907, designed by Heins & LaFarge. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY

Figure 1.1 - Detail



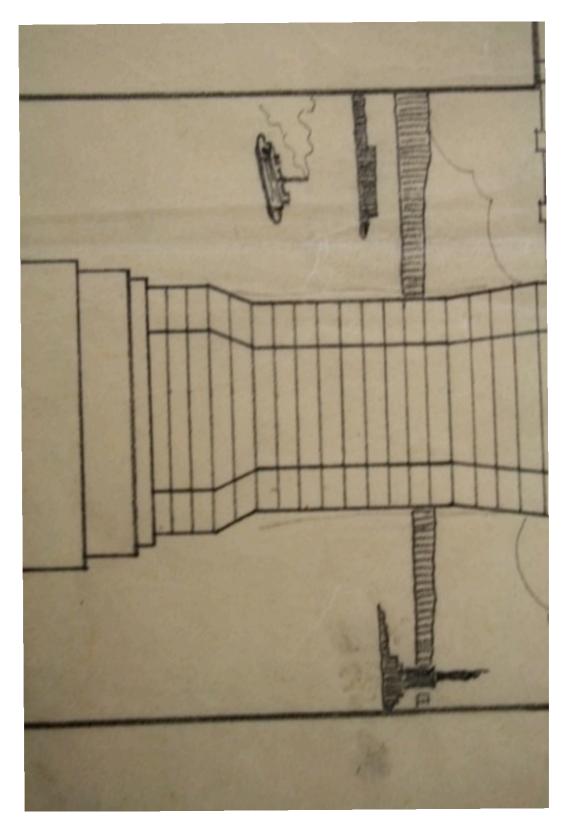
Hand drawn blueprint of faience plaque. Drawing was completed in 1907, designed by Heins & LaFarge. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY

Figure 1.2 - Stamp Detail



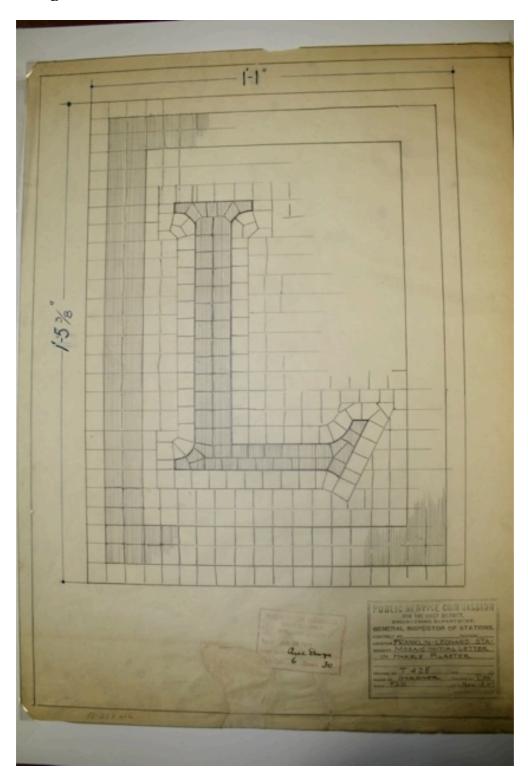
Focus on Public Service Commission Stamp. Completed in 1907. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY





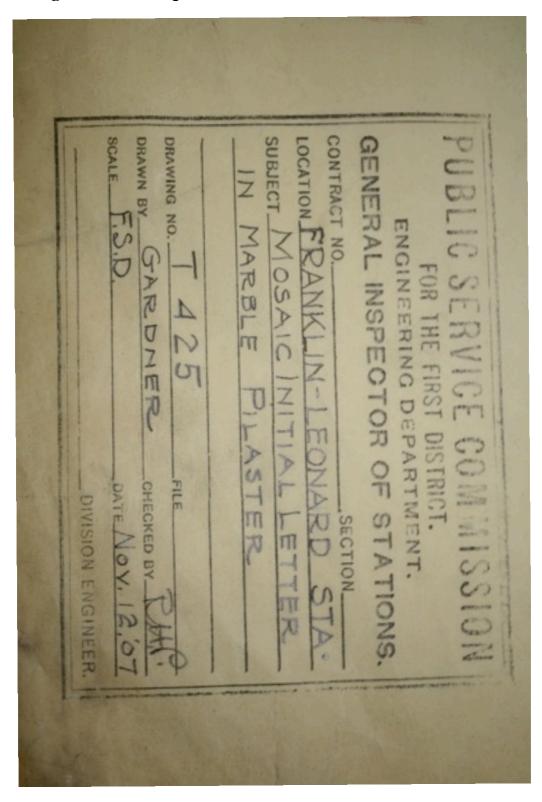
Focus on background detail. Statue of Liberty, Steamship, Staten Island. Completed in 1907. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY

Figure 2.0



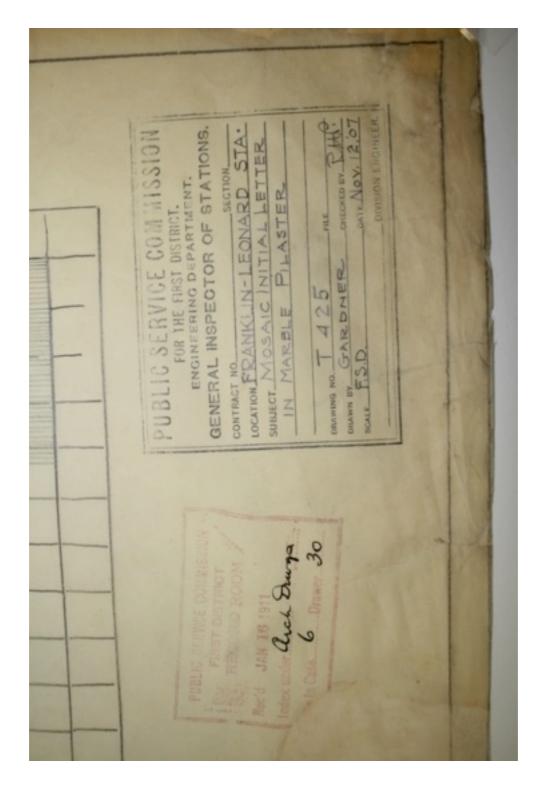
Hand drawn blueprint of mosaic initial letter from Franklin-Leonard Station. Drawing was completed in 1907, designed by Heins & LaFarge. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY

Figure 2.1 - Stamp Detail

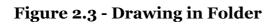


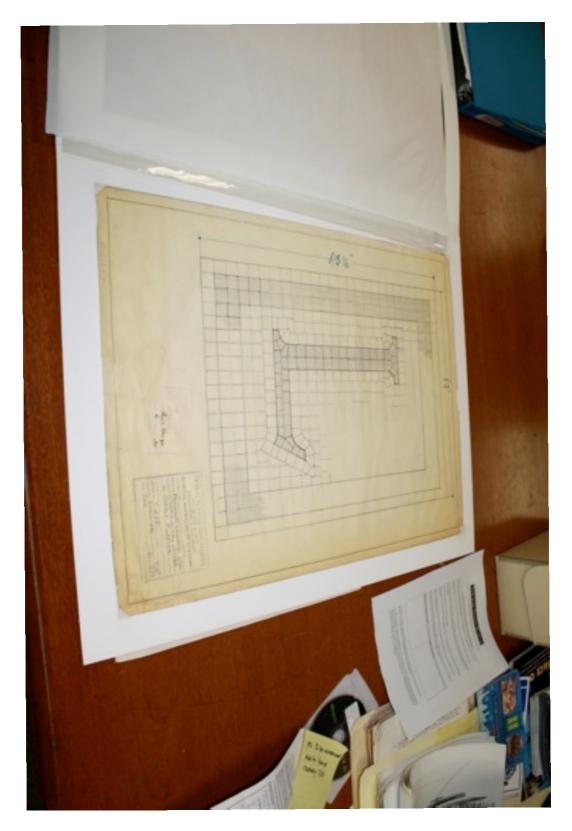
Public Service Commission stamp. Drawing was completed in as documented in this photo. 1907, designed by Heins & LaFarge. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY





Public Service Commission stamp in red, same as Figure 1.0. Drawing was completed in as documented in this photo. 1907, designed by Heins & LaFarge. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY





Drawing in its protective casing. Photographed by Matthew Vincent at NYCTA Archives, Brooklyn, NY

Figure 3.0 Sample Curriculum Scavenger Hunts Questions

1.) Hint: I am the king of the Jungle yet I call the basement of Madison Square Garden my den. I

currently am guarding the southernmost wall and the sum of the three subway lines that service my

home is 6.

Answer: Elizabeth Grajales' When the animals speak..., 1998, ceramic mosaic

2.) Hint: Once Alice jumped down the rabbit hole this is where she landed. She redecorated a bit

but then headed eight blocks south to bring her story to Broadway.

Answer: Lilian Porter's Alice: The Way Out, 1994, glass mosaic tile

3.) Hint: Not only do we perform at the Met right upstairs, we also prefer to dance, tumble and sing

on the walls down below.

Answer: Nancy Spero's Artemis, Acrobats, Divas and Dancers, 2001, glass mosaic tile

4.) Hint: Usually you would ride one of these two space, but for now you will need to take it to go

across town. But before you get on, be sure to look up or you might miss this yellow cartoonish

train!

Answer: Roy Lichtenstein's *Times Square Mural*, 2002, Porcelain enamel on wall

This is a small sample of commissioned station art with a concentration around midtown Manhat-

tan. This of course be expanded in a variety of directions.

Figure 4.0 - Above Ground Station House

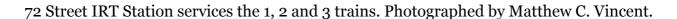


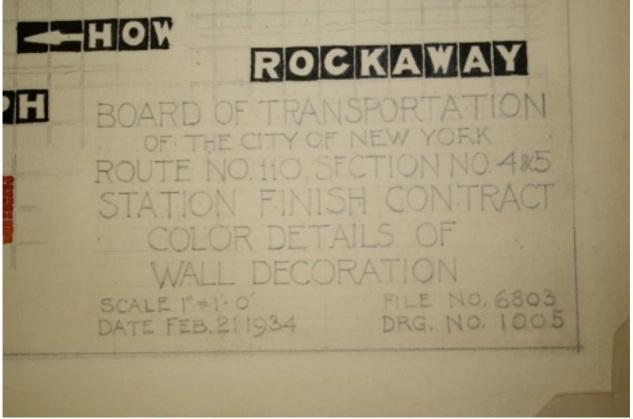
Figure 5.0 - Sample of Bronze Figurines at 14th St-8th Avenue Station

Life Underground by Tom Otterness, 2001, Bronze sculptures. Photographed by Matthew

C. Vincent

Figure 6.0 - Original Color Detail Drawings/Prints

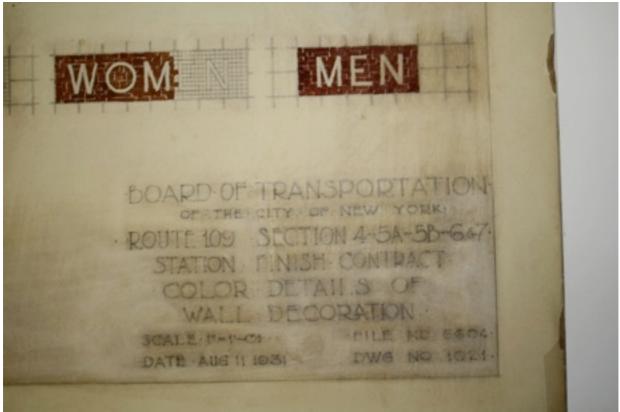




Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

Figure 6.1 - Original Color Detail Drawings/Prints

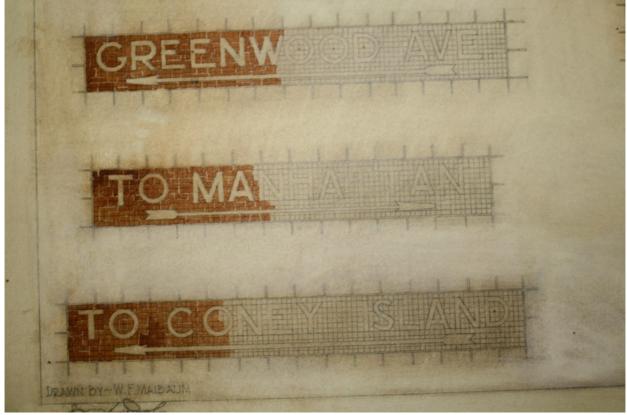




Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

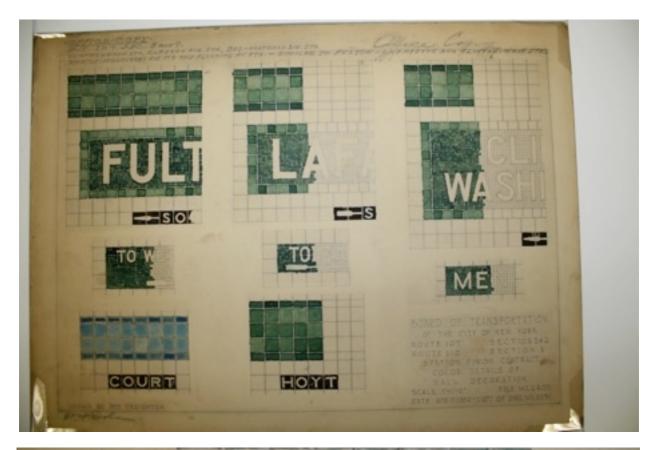
Figure 6.1 Continued





Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

Figure 6.3 - Original Color Detail Drawings/Prints

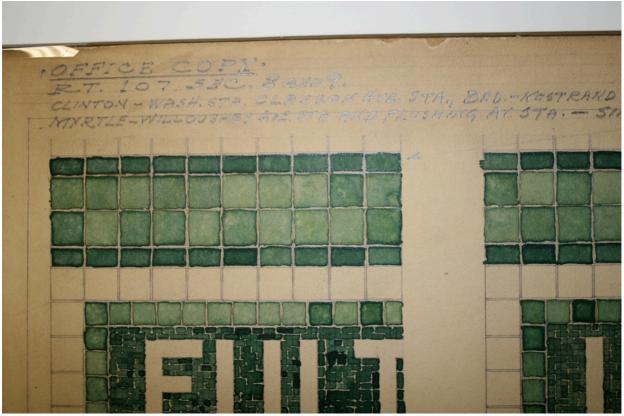




Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

Figure 6.3 Continued





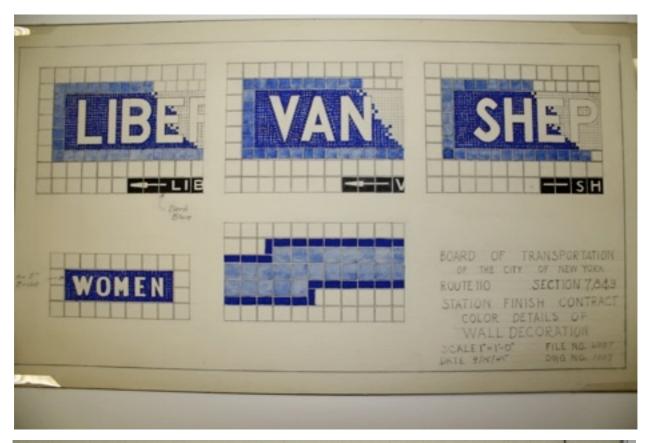
Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

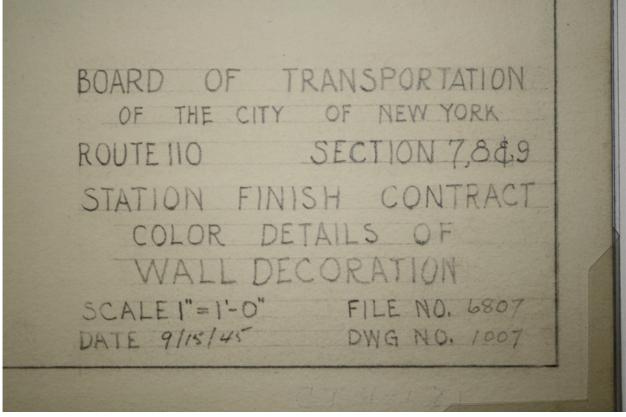
Figure 6.3 Continued



Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.

Figure 6.4 - Original Color Detail Drawings/Prints





Original Color Details Drawing. Photographed by Matthew C. Vincent at NYCTA Archives.



Figure 7.0 - Private Drawing by Squire J. Vickers

Drawings are untitled and year is not known. Images were donated to the NYCTA Archives by Vickers family. Photographed by Matthew C. Vincent at NYCTA Archives.



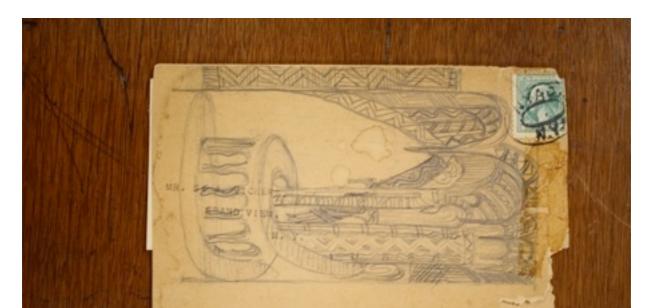


Figure 7.1 - Private Drawing by Squire J. Vickers

Drawings are untitled and year is not known. Images were donated to the NYCTA Archives by Vickers family. Photographed by Matthew C. Vincent at NYCTA Archives.





Figure 7.2 - Private Drawing by Squire J. Vickers

Drawings are untitled and year is not known. Images were donated to the NYCTA Archives by Vickers family. Photographed by Matthew C. Vincent at NYCTA Archives.



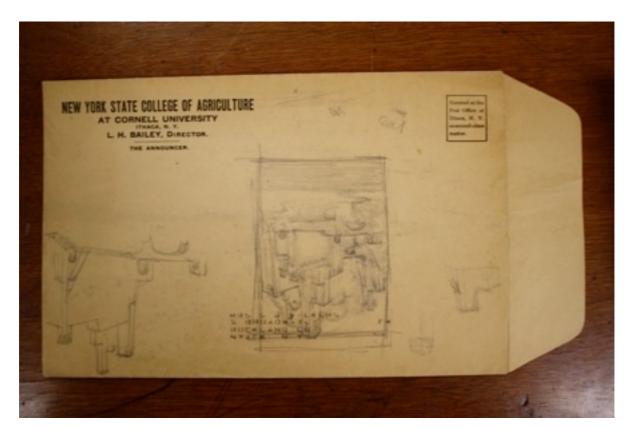


Figure 7.3 - Private Drawing by Squire J. Vickers

Drawings are untitled and year is not known. Images were donated to the NYCTA Archives by Vickers family. Photographed by Matthew C. Vincent at NYCTA Archives.



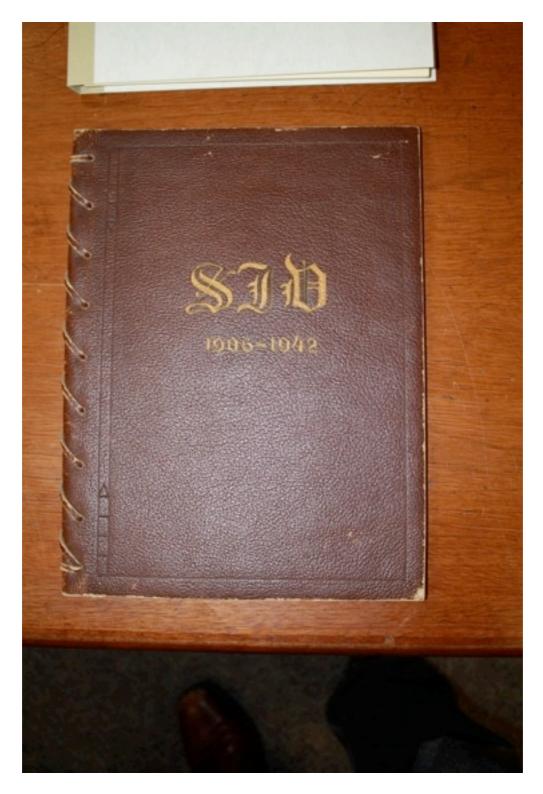


Figure 8.0 - Renderings by Squire J. Vickers

Renderings for proposed NYCTA Headquarters (Un-Built). Year Unknown. Images were donated to the NYCTA Archives by Vickers family. Photographed by Matthew C. Vincent at NYCTA Archives.

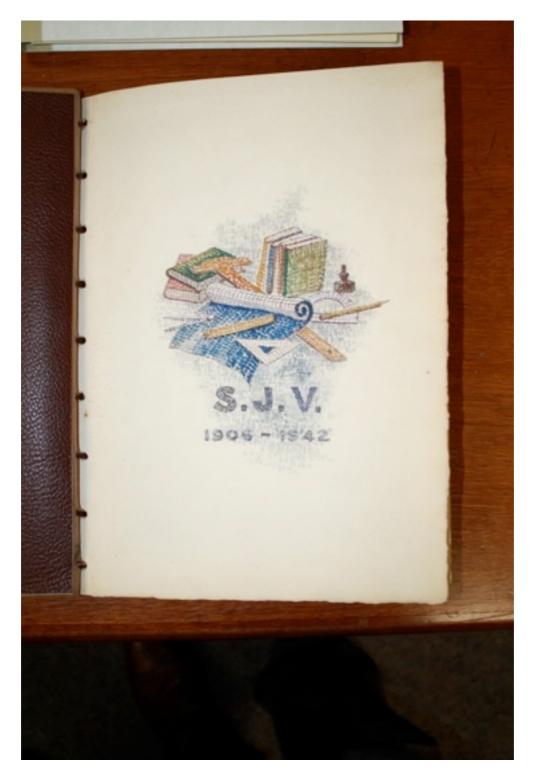






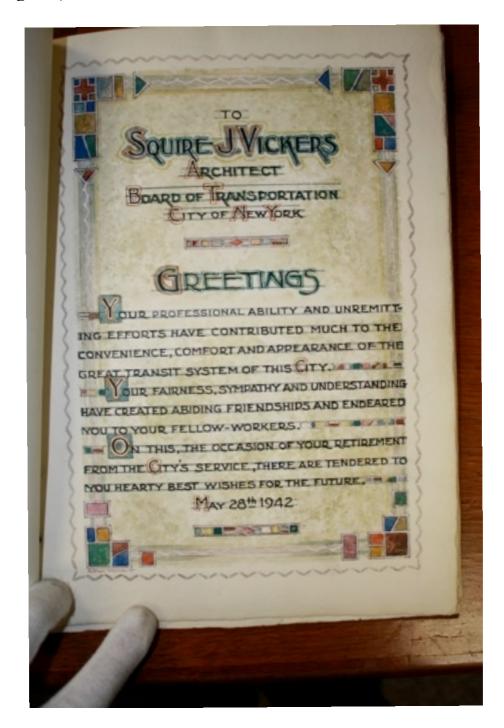
Hand-made leather-bound booklet celebrating the career of Squire J. Vickers and his contributions to the NYC Subway. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.





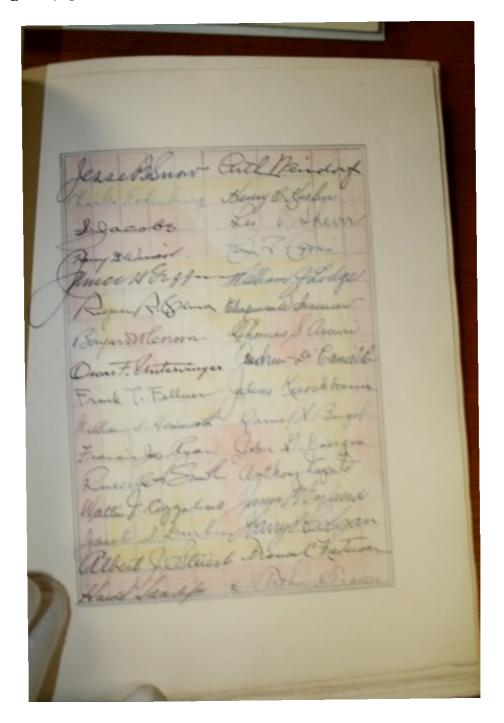
Page 1. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 9.2 Continued



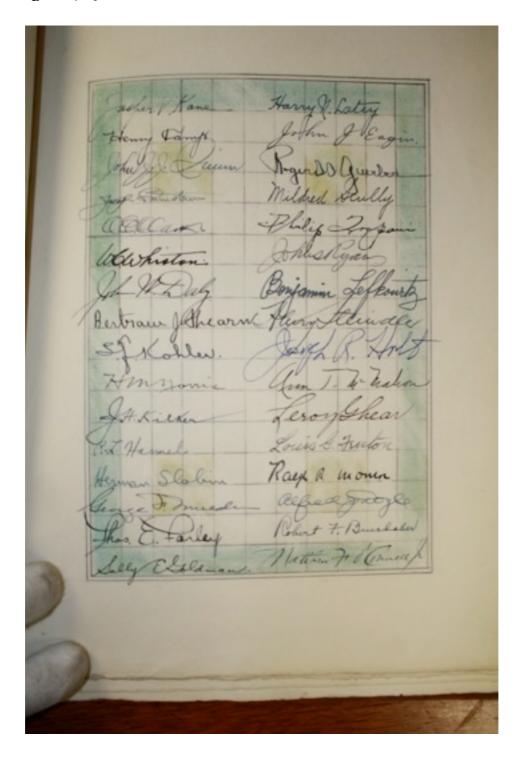
Page 2, dedication page. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 9.3 Continued



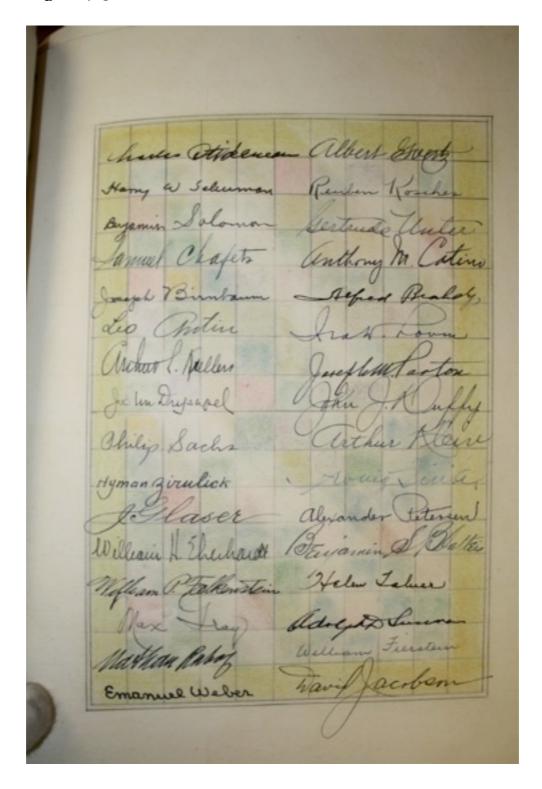
Page 3, co-worker signatures. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 9.4 Continued



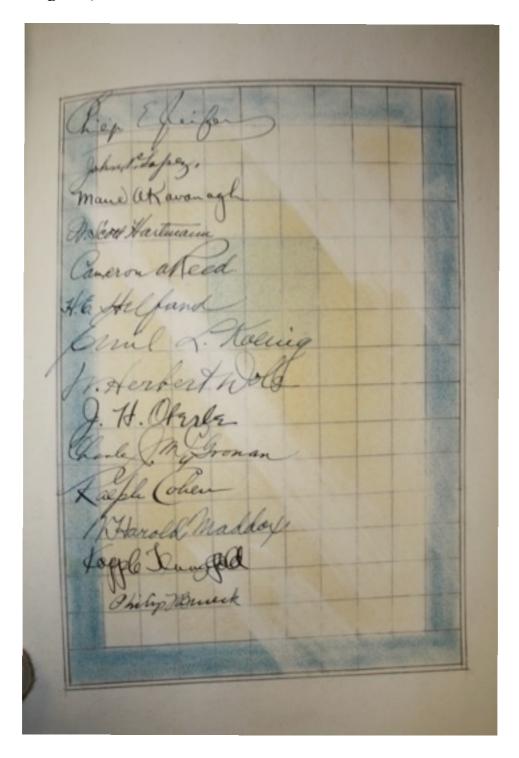
Page 4, co-worker signatures. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 9.5 Continued



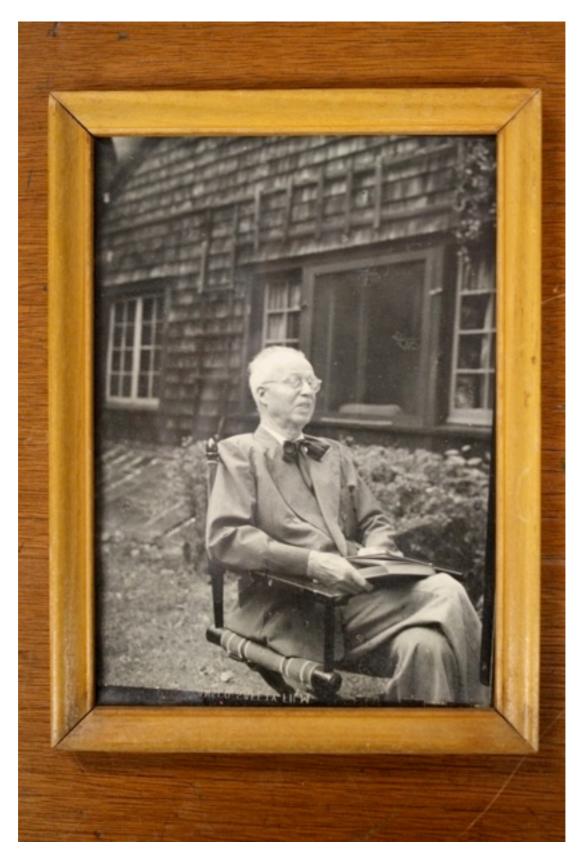
Page 5, co-worker signatures. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 9.6 Continued



Page 6, co-worker signatures. Presented by co-workers in 1942. Photographed by Matthew C. Vincent at the NYCTA Archive.





Date unknown. Photographed by Matthew C. Vincent at the NYCTA Archive.

Figure 11 - Columbia University-116th Street Station IRT Postcard featuring the Alma Mater

Figure 12 - SPECIAL SECTION - Original Construction Photo of the IRT on the Upper West Side, Manhattan, New York City. Photos were taken between



1900 and 1904. Photographed by Matthew C. Vincent at the NYCTA Archive. No known negatives exist of any of the original photos pictured here. A very special thank you to Carey Stumm, Archivist at the New York Transit Museum



118th Street and Broadway, January 6th, 1902.



125h Street and Broadway, December 8th, 1902.



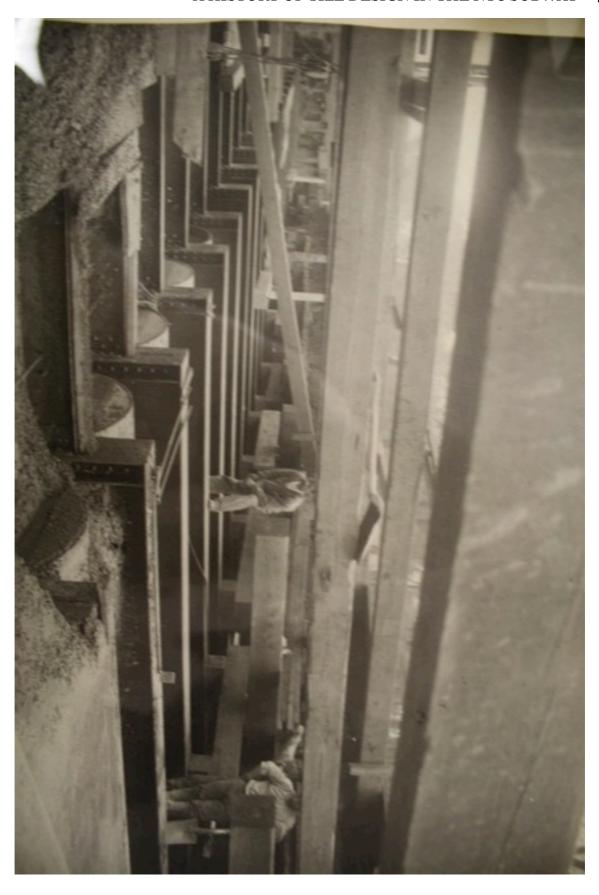
Unknown location and date.



Unknown location and date.



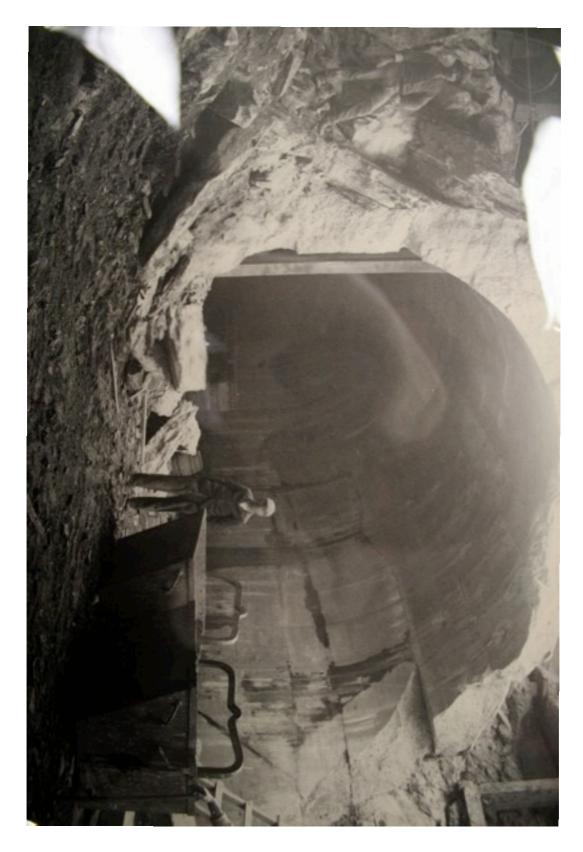
118th Street and Broadway, November 11th, 1902.



Unknown location and date.



Unknown location and date.



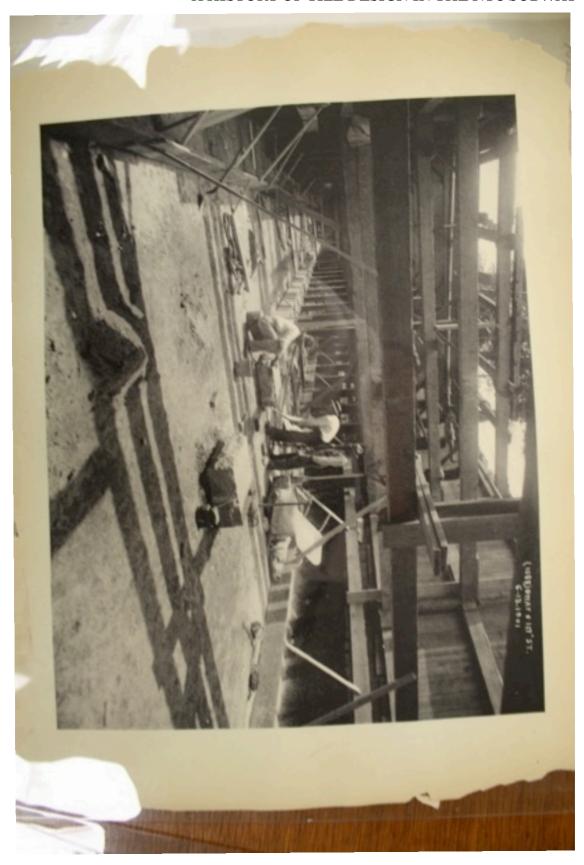
Broadway and 120th Street, October 18th 1901 Beneath Teachers College, Columbia University



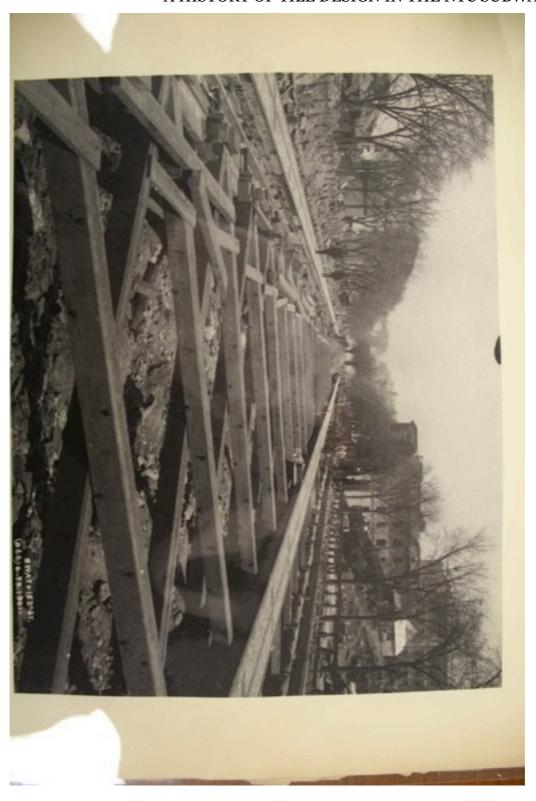
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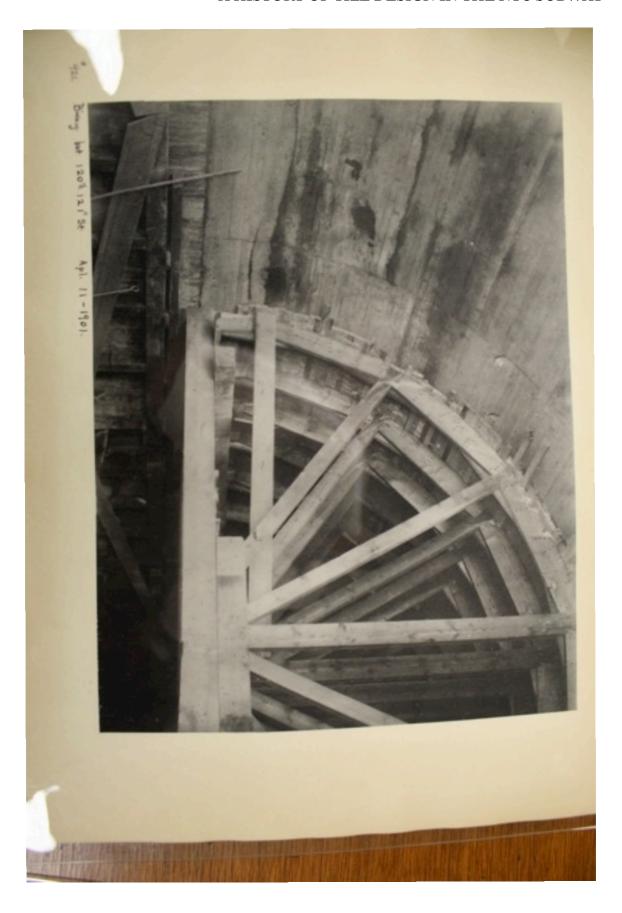
Unknown location and date.



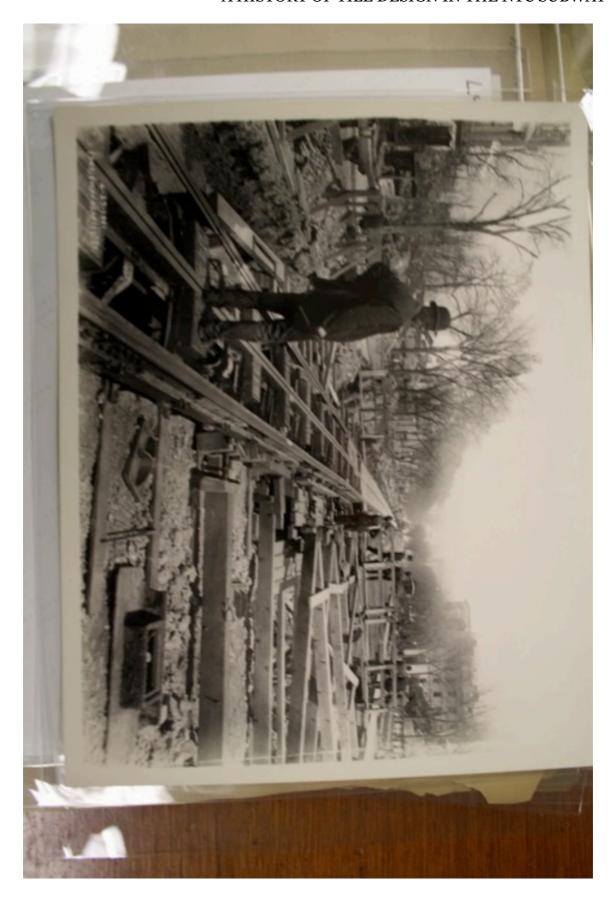
Broadway and 117th Street, June 13th 1901



Broadway and 122nd Street, April 29th 1901



Broadway between 120th and 121st Street, April, 11th 1902



Broadway and 122nd Street, April 29th 1901



Broadway and 120th Street (looking north), June 23rd 1900



Broadway and 120th Street (looking north), April 11th 1901



Broadway and 120th Street, June 23rd, 1900



Broadway and 118th Street, June 18th 1901



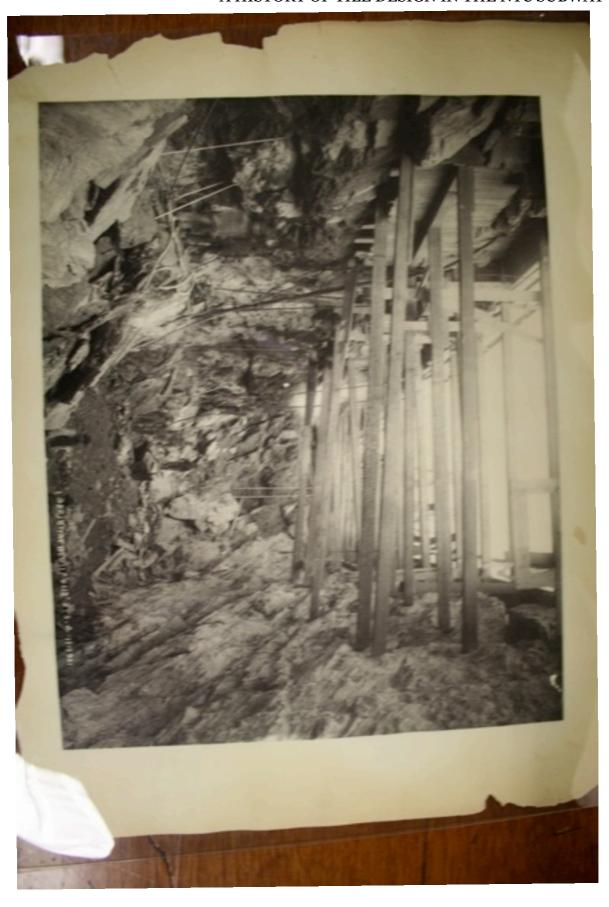
Broadway and 118th Street, January 14th 1902



122nd Street and Broadway.July 22nd 1901



Broadway and 117th Street, June 13th 1901



Broadway between 117th and 118th, April 11th 1901



Broadway between 119th and 120th Street, December 21st 1900



detail of previous image



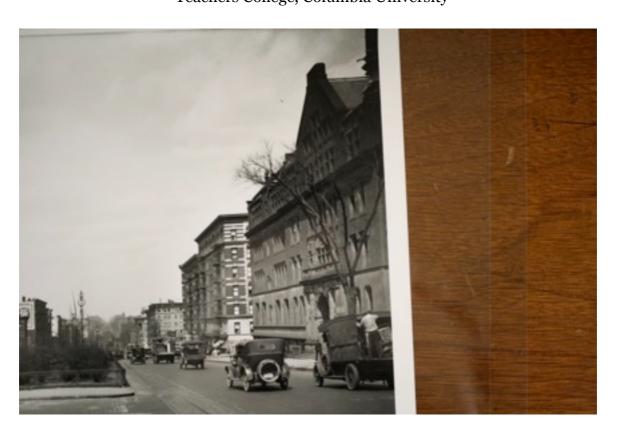
Broadway between 122nd and 126th Streets, May 22nd 1901



Broadway and 120th Street, Date Unknown

Horace Mann Hall on Right

Teachers College, Columbia University





Broadway and 114th Street, October 30th 1900



Postcard featuring the Alma Mater placard from Columbia University-116th St. Station

Postmark date May 24th, 1957

