

RECEIVED ENVIRONMENTAL REVIEW

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LANDMARKS PRESERVATION COMMISSION

Phase 1A Archaeological Documentary Study

Our Lady of Lourdes Apartments

Block 3468, Lots 1 and 50
1 De Sales Place
Brooklyn, Kings County, New York

OPRHP Project Review Number 12PR05153

Prepared for:

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Prepared by:

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September 2014

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Management Summary

OPRHP Project Review Number: 12PR05153

Involved Agencies: New York State Homes and Community Renewal

New York City Department of Housing Preservation

and Development

Phase of Survey: Phase 1A Archaeological Documentary Study

Location Information

Location: 1 De Sales Place, Brooklyn, New York

Tax Block 3468, Lots 1 and 50

Minor Civil Division: 04701

County: Kings

USGS 7.5 Minute Quadrangle Map: Brooklyn

Survey Area

Length: 91.4 to 103.6 meters (300 to 340 feet)

Width: 61 meters (200 feet)

Total Area Surveyed: 1.5 acres (64,000 square feet)

Report Author: Elizabeth D. Meade, M.A., R.P.A.

Date of Report: September 2014

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A. PROJECT OVERVIEW AND BACKGROUND

Georgica Green Ventures, LLC, is proposing to construct an affordable housing project at the Our Lady of Lourdes site at 1 De Sales place in the Bushwick section of Brooklyn, Kings County, New York (see **Figure 1**). The proposed project would involve the construction of an apartment complex on the grounds of the existing Our Lady of Lourdes Church. The existing Church grounds includes Lots 1 and 50 on Block 3468, which is bounded by Broadway, De Sales Place, Bushwick Avenue, and Aberdeen Street (see **Figure 2**).

The proposed project would include the renovation of the existing Our Lady of Lourdes Rectory building, located on De Sales Place near its intersection with Broadway, and conversion of the building into residential use, as well as the construction of two new residential buildings in the yard spaces on either side of the Rectory building (see **Figure 3**). The proposed project would result in approximately 103,531 gross square feet (gsf) of residential space, or approximately 76 affordable housing units. All new development will occur only within Lot 50, making up the southern half of the project site studied in this Phase 1A Archaeological Documentary Study. In the event that project plans are changed or that additional disturbance will become necessary in the future, this documentary study also analyzes the archaeological sensitivity of Lot 1, representing the northern half of the former Church of Our Lady of Lourdes property.

In order to construct the proposed project, state funding would be provided by New York State Homes and Community Renewal (NYSHCR) with additional local funding provided through the New York City Department of Housing Preservation and Development (HPD) and the Resolution A Capital Program. Federal funding will also be sought, including through the Low Income Housing Tax Credit Program through NYSHCR. As such, the proposed project is subject to environmental review in accordance with the National Environmental Protection Act (NEPA) and the State Environmental Quality Review Act (SEQRA). City of New York funding will require review under City Environmental Quality Review (CEQR), with HPD serving as the lead agency for the CEQR review.

Pursuant to the above named regulations, the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) was asked to provide a preliminary assessment of the project site's archaeological sensitivity. In a comment letter dated January 7, 2013, OPRHP recommended that a Phase 1 archaeological survey of the site be prepared to document disturbance to the project site and to identify any intact archaeological resources that may be present on the project site. This Phase 1A Archaeological Documentary Study has been prepared to clarify these initial comments and, as described in the following section, to determine if the site has the potential to contain intact archaeological resources. As described in this document, no areas of archaeological sensitivity have been identified and therefore Phase 1B archaeological testing has not been recommended and a full Phase 1 archaeological investigation is therefore not warranted. This document will also be submitted to the New York City Landmarks Preservation Commission (LPC) for review and comment.

B. RESEARCH GOALS AND METHODOLOGY

The following Phase 1A Archaeological Documentary Study of the Our Lady of Lourdes Apartments project site has been designed to satisfy the requirements of OPRHP and LPC and it follows the guidelines of the New York Archaeological Council (NYAC). The study documents the development history of the proposed project site as well as its potential to yield archaeological resources, including both precontact and historic cultural resources. In addition, this report documents the current conditions of the project site and previous cultural resource investigations that have taken place in the vicinity.

This Phase 1A Archaeological Documentary Study has four major goals: (1) to determine the likelihood that the project site was occupied during the precontact (i.e., Native American) and/or historic periods; (2) to determine the effect of subsequent development and landscape alteration on any potential archaeological resources that may have been located at the project site; (3) to make a determination of the project site's potential archaeological sensitivity; and (4) to make recommendations for further archaeological analysis, if necessary. The steps taken to fulfill these goals are explained in greater detail below.

In order to determine the likelihood of the project site's occupation during the precontact and historic periods, documentary research was completed to establish a chronology of the project site's development, landscape alteration, and to identify any individuals who may have owned the land or worked and/or resided there, and to determine if buildings were present on the project site in the past. Data was gathered from various published and unpublished primary and secondary resources, such as historic maps, topographical analyses (both modern and historic), historic photographs, newspaper articles, local histories, and previously conducted archaeological surveys. These published and unpublished resources were consulted at various repositories, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions). File searches were conducted at LPC, OPRHP, and the New York State Museum (NYSM). Online textual archives, such as Google Books and the Internet Archive Open Access Texts, were also accessed.

The second goal of this Phase 1A study is to determine the likelihood that archaeological resources could have survived intact on the project site after development and landscape alteration (i.e., erosion, grading, filling, etc.). Potential disturbance associated with the construction and demolition of buildings and utility installation was also considered. Historic maps documenting structures on the project location were analyzed and historic and current topographical maps were compared to determine the extent to which the project site has been disturbed. After identifying the likelihood that archaeological resources were deposited on the project site and the likelihood that they could remain intact given subsequent development and landscape alteration, a sensitivity determination was made for the project site for both precontact and historic period resources. As described by NYAC in their Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State, published in 1994 and subsequently adopted by OPRHP:

An estimate of the archaeological sensitivity of a given area provides the archaeologist with a tool with which to design appropriate field procedures for the investigation of that area. These sensitivity projections are generally based upon the following factors: statements of locational preferences or tendencies for particular settlement systems, characteristics of the local environment which provide essential or desirable resources (e.g. proximity to perennial water sources, well-drained soils, floral and faunal resources, raw materials, and/or trade and transportation routes), the density of known archaeological and historical resources within the general area,

and the extent of known disturbances which can potentially affect the integrity of sites and the recovery of material from them (NYAC 1994: 2).

As stipulated by the NYAC standards, sensitivity assessments should be categorized as low, moderate, or high to reflect "the likelihood that cultural resources are present within the project area" (NYAC 1994: 10). For the purposes of this study, those terms are defined as follows:

- Low: Areas of low sensitivity are those where the original topography would suggest that Native American sites would not be present (i.e., locations at great distances from fresh and salt water resources), locations where no historic activity occurred before the installation of municipal water and sewer networks, or those locations determined to be sufficiently disturbed so that archaeological resources are not likely to remain intact.
- Moderate: Areas with topographical features that would suggest Native American
 occupation, documented historic period activity, and with some disturbance, but
 not sufficient disturbance to eliminate the possibility that archaeological resources
 are intact on the project site.
- High: Areas with topographical features that would suggest Native American occupation, documented historic period activity, and minimal or no documented disturbance.

According to NYAC standards, Phase 1B testing is generally warranted for areas determined to have moderate sensitivity or higher. Archaeological testing is designed to determine the presence or absence of archaeological resources that could be impacted by a proposed project. Should they exist on the project site, such archaeological resources could provide new insight into the precontact occupation of the Bushwick neighborhood of Brooklyn, the transition from Native American to European settlement, or the historic period occupation of the project site.

A. CURRENT CONDITIONS

The project site is currently developed with three structures associated with the former Church of Our Lady of Lourdes (see **Figures 2** and **3** and **Photographs 1** through **8**). The church burned down in 1975 and has since been demolished. The property contains three standing structures associated with the former church: a 2-story (with basement) convent located at the eastern end of Lot 1; the 3-story Lourdes Academy High School at the western end of Lot 1 near the northeast corner of Broadway and Aberdeen Street; and a 3-story rectory within Lot 50. Both the school and the rectory are vacant and unoccupied, while the convent remains in active use. Sanborn maps indicate that both the convent and the rectory were constructed with basements. The school is not identified as having a basement, however, its first floor appears to be at a lower elevation than the surrounding area suggesting that it has a partial or raised basement.

A large asphalt-paved parking area and playground separates the school and the rectory (see **Photograph 1**). Storm water drains and utility vaults are visible within the parking lot. A paved patio/garden is situated to the rear of the rectory, separated from the parking lot by a chain link fence (see **Photograph 2**). The remaining areas within the site include overgrown yards (see **Photographs 3**, 4, and 5). A garden is present to the northeast of the convent, outside of the project site, and the rear and side yards of the convent feature landscaped gardens. Chain link and/or iron fences line the perimeter of the project site. Finally, an elevated track carries the J and Z subway lines past the project site along Broadway.

The elevation of the western half of the project site (in the vicinity of the rectory and school) is several feet higher than the sidewalk in the locations of those walls (see **Photograph 6**). A stone retaining wall lines the project site along De Sales Place west of the existing rectory, along Broadway, and along Aberdeen Street in front of the existing school (see **Photograph 7**). In some locations, the elevation is graded to the depth of the sidewalk to create walkways leading to building entrances. To the east of the rectory and the school, where the church once stood, the topography is generally flat along De Sales Place and slopes gently downward towards Aberdeen Street. The ground surface beneath the location of the former church is uneven and it appears that some grading may have occurred during the demolition of the church ruins. The front yard separating the convent from Aberdeen Street is sloping and stairs lead from the elevation of the sidewalk to the north to the front of the convent, the elevation of which is several feet higher (see **Photograph 8**).

B. GEOLOGY AND TOPOGRAPHY

The borough of Brooklyn is found within a geographic bedrock region known as the Atlantic Coastal Plain Province. This has been described as "that portion of the former submerged continental shelf which has been raised above the sea without apparent deformation" (Reeds 1925: 3). Soils on Long Island, on which King's County is located, are composed of glacial till or undifferentiated sediments such as sand and clay. The Atlantic Coastal Plain is typified by "flat, low-lying" ground "that slopes very gently toward the sea" (Isachsen, et al. 2000: 149).

The glacial till was deposited by the massive glaciers that retreated from the area towards the end of the Pleistocene (1.6 million years before present ["BP"] to approximately 10,000 years BP). There

were four major glaciations that affected New York City, culminating approximately in a northeast-southwest direction (Homberger 1994). The deposition of glacial till in the wake of the retreating glaciers resulted in the creation of sand hills, known as kames, across New York City, some of which rose to heights of one hundred feet. Historic maps show that the project site was originally located in the vicinity of a series land formations known as the "Bushwick Hills." These hills extended to the northeast of the project site, in the vicinity of what is now the Cemetery of the Evergreens. The project site was historically situated on a sloping hill increasing in elevation to the northeast that led to a gap in the Bushwick Hills known as the "Jamaica Pass." The hills to the south of the project site have largely been leveled, while the hills to the north and east survive in the belt of adjacent cemeteries to the east.

An 1891 USGS map (see **Figure 4**) and 1891 Bien and Vermule atlas depict the historic topography of the project site and show that the elevation of the project site rose to the northeast from approximately 90 feet above "mean high water" near the southern portion of the site to approximately 100 feet above mean sea level to the northeast of the project site. Modern USGS maps (see **Figure 1**) suggest that the elevation of the project site has remained largely consistent since the late-19th century. Several late-19th and 20th century maps provide information regarding elevation changes at street intersections in the vicinity of the project site (see **Table 1**). The maps show that while these intersections have remained relatively unchanged, with only minor grading and filling occurring since the late 19th century. As described previously, portions of the project site are at a higher elevation than the surrounding streets, suggesting that those portions of the project site may have experienced less grading and may stand closer to their historic elevations.

Table 1: Street Elevation Changes

	Intersection Elevation (in feet):							
Year/Source	De Sales Place & Broadway	De Sales Place & Bushwick Avenue	Aberdeen Street & Broadway	Aberdeen Street & Bushwick Avenue				
1886 Robinson Map	93.9	109.2	90.2	102.2				
1888 Sanborn Map	94	109	90	103				
1898 Ullitz Map	93.38	107.20	89.50	100.80				
1907 Sanborn Map	93	107	89	100.5				
1929 Belcher-Hyde Map	92.75	107.16	89.17	100.54				
1951 and 2012 Sanborn Maps	92.7	107.1	89.1	100.5				

NOTES: Some of the historic map sources included in the table above do not indicate the datum from which the elevation was measured while others present elevations above high tide or "ground surface." Therefore, it is assumed that all elevation measurements are with respect to an approximation of sea level. In addition, De Sales Place was formerly known as Hull Street, and is depicted as such on the maps referenced above.

C. HYDROLOGY

The project site is situated more than two miles north of Jamaica Bay and is more than two miles south of Newtown Creek, the closest waterway to the north. Historic maps (including the 1837 Jenkins and 1844 Hassler Coastal surveys, and the 1849 Sidney, 1852 Riker, and the 1860 Walling maps) do not indicate the presence of any bodies of water in the immediate vicinity of the project site. Stiles' (1867) map depicting Brooklyn during the Revolutionary War depicts a pond to the west of the project site. This pond may also be shown on a coastal survey published in 1866.

D. SOILS

The New York City Soil Reconnaissance Survey published by the National Resource Conservation Service (2005) indicates that the project site is characterized by a soil complex known as the "Pavement & Buildings Till Substratum" soil complex. These soils are found in level to gently sloping areas with 0 to 5 percent slopes that are "highly urbanized areas with more than 80 percent of the surface covered by impervious pavement and buildings, over glacial till" (New York City Soil Survey Staff 2005: 11).

E. PALEOENVIRONMENT

Due to the extended glacial period that left the Northeast blanketed in thick ice sheets for thousands of years, the area was not inhabited by humans until approximately 11,000 years ago. As temperatures increased, a variety of flora and fauna spread throughout the region. At this time, large open forests of spruce, fir, pine, and other tree species expanded across the Northeast, interspersed with open meadows and marshland. A wide variety of animal life could also be found, including large mammals such as mammoth, mastodon, caribou, musk ox, moose, as well as smaller mammals such as fox, beaver, hare, and many kinds of marine animals.

Climate changes continued to reshape the environment of the Northeast as time progressed. As the climate grew increasingly warmer, jack pine, fir, spruce, and birch trees were replaced with hardwood forests of red and white pine, oak, and beech (Ritchie 1980). Furthermore, a decrease in glacial runoff resulted in the creation of small bodies of water such as lakes as well as, later on, low-lying marshes and swampy areas. By the time of the Early Archaic period, beginning approximately 10,000 BP, there was "considerable environmental diversity, with a mosaic of wetlands, oak stands, and a variety of other plant resources...[making it]...an attractive and hospitable quarter for both human and animal populations" (Cantwell and Wall 2001: 53). Warmer temperatures forced the herds of large mammals to travel north before eventually dying out. The new surroundings attracted other animals such as rabbit, turkey, waterfowl, bear, turtles, and white-tailed deer. The expanded water courses became home to a variety of marine life, including many varieties of fish, clams, oysters, scallops, seals, and porpoises, among others (ibid).

A. THE NATIVE AMERICAN OCCUPATION OF BROOKLYN

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three periods: Paleo-Indian (11,000 to 10,000 BP), Archaic (10,000 to 2,700 BP), and Woodland (2,700 to 500 BP). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

As mentioned in **Chapter 2: Environmental and Physical Settings**, human populations did not inhabit the Northeast until glaciers retreated some 11,000 years ago. These new occupants included Native American populations referred to by archaeologists as Paleo-Indians, the forbearers of the Delaware—also called the Lenape Indians—who would inhabit the land in later years. Archaeological evidence suggests that the Paleo-Indians were likely highly mobile hunters and gatherers who utilized a distinct style of lithic technology, typified by fluted points. They appear to have lived in small groups of fewer than 50 individuals (Dincauze 2000) and did not maintain permanent campsites. In addition, most of the Paleo-Indian sites that have been investigated were located near water sources. Because of the close proximity of Paleo-Indian sites to the coastline, few have been preserved in the New York City area.

The Archaic period has been subdivided into three chronological segments, based on trends identified in the archaeological record, which reflect not only the ecological transformations that occurred during this period, but the cultural changes as well. These have been termed the Early Archaic (10,000–8,000 BP), the Middle Archaic (8,000–6,000 BP) and the Late Archaic (6,000–2,700 BP) (Cantwell and Wall 2001). The Late Archaic is sometimes further divided to include the Terminal Archaic (3,000-2,700 BP). The abundance of food resources that arose during this period allowed the Archaic Native Americans to occupy individual sites on a permanent or semi-permanent basis, unlike their nomadic Paleo-Indian predecessors. Fishing technology was developed during the Middle Archaic in response to an increasing dependence on the area's marine resources. Tools continued to be crafted in part from foreign lithic materials, indicating that there was consistent trade among Native American groups from various regions in North America throughout the Archaic period. Few Early and Middle Archaic archaeological sites have been identified in New York City, although numerous Late Archaic sites have been identified in the area.

The Woodland period represents a cultural revolution of sorts for the Northeast. During this time, Native Americans began to alter their way of life, focusing on a settled, agricultural lifestyle rather than one of nomadic hunting and gathering. Social rituals become visible in the archaeological record at this time. Composite tools, bows and arrows, domesticated dogs, and elaborately decorated pottery were introduced to Native American culture at this time and burial sites grew increasingly complex. Woodland-era sites across North America indicate that there was an overall shift toward full-time agriculture and permanently settled villages. Archaic sites in New York City, however, suggest that the Native Americans there continued to hunt and forage on a part-time basis. This was most likely due to the incredibly diverse environmental niches that could be found across the region throughout the Woodland period (Cantwell and Wall 2001, Grumet 1995).

The Woodland period ended with the arrival of the first Europeans in the early 1500s. At that time, a division of the Delaware Indians known as the Canarsee—a local branch of the Matouack tribe—

inhabited western Long Island, including what has since become the borough of Brooklyn. The Native Americans lived in villages consisting of multiple longhouses and practiced some farming, but subsisted mostly on food resources obtained by hunting, gathering, and fishing (Grumet 1995). With the introduction of European culture into the indigenous society, the way of life once maintained by the Native Americans was thoroughly and rapidly altered. European guns, glass beads, and alcohol soon became incorporated into the Native American economy. The Canarsee Indians suffered a great deal from the side-effects of European colonization: disease, alcoholism, and warfare (Grumet 1981). As the 17th century progressed, fierce wars broke out between the Dutch and the Indians. There are several Contact period archaeological sites that have been identified in New York City, including the Ryder's Point site in southern Brooklyn, several miles to the southeast of the project site. It was a major Canarsee village that was occupied continuously for thousands of years.

B. PREVIOUSLY DOCUMENTED NATIVE AMERICAN ARCHAEOLOGICAL SITES

A review of the files at the OPRHP, LPC, the New York State Museum (NYSM), and cultural resource surveys of projects in the immediate vicinity indicated that there are no precontact archaeological sites within a 1-mile radius of the project area. In addition, the project site is not situated within a generalized area of archaeological sensitivity as mapped by OPRHP's online Geographic Information System. While numerous Native American sites have been identified along the waterfront in northwestern Brooklyn and to the southeast of the project site near the shores of Jamaica Bay, none have been reported in inland areas similar to the project site. Previous archaeological investigations of the Bushwick area (i.e., AKRF 2011; Pickman 1992; Winter and Rubinson 1989; and Bergoffen 1997) have not identified any precontact archaeological sites in the inland portion of central Brooklyn.

Bolton's 1922, 1934, and 1975 works documenting the Native American occupation of New York City do not identify any precontact sites in the vicinity of the project site. However, Bolton's 1922 map of Native American trails indicates that a precontact road crossed through the immediate vicinity of the project site. The road was a major east-west thoroughfare that connected Native American villages in Brooklyn Heights with those to the east, including a large village at Jamaica. Bolton describes the trail as follows:

The Rockaway trail...ran from the Brooklyn path along the base of the hilly ground known as the Green hills that form the central backbone of the island from Fort Hamilton to North Hempstead. This path followed the line of the old Bedford and Jamaica highway, which the present Atlantic avenue and Jamaica avenue succeeded. The path was expanded into a King's highway in 1704, and for many years bore that name. It became known later as the Jamaica and Brooklyn plank road and sometimes as the Old Ferry road. (Bolton 1922: 178)

As described in greater detail in the next section, historic colonial roads, likely constructed along this trail, formerly ran through the project site. Grumet's (1981) reinterpretation of Bolton's data indicates that the trail ran in the vicinity of the historic colonial roads. Therefore, while no precontact sites have been documented within the project site or the surrounding area, a Native American trail likely crossed through the project site.

Available at: http://pwa.parks.ny.gov/nr/

A. BROOKLYN'S HISTORICAL CONTEXT

New York was "discovered" by Giovanni de Verrazano in 1524 and explored by Henry Hudson in 1609, thus marking the beginning of European occupation in the area. Hudson described the Brooklyn Heights neighborhood as having "magnificent forests gorgeous with autumnal hues" (Stiles 1867: 9). By 1621, the area had become part of a Dutch colony and the States-General in the Netherlands chartered the Dutch West India Company ("WIC") to consolidate Dutch activities in the New World. It was at this time that the WIC began to purchase large tracts of land from the Native Americans. The WIC began to purchase land in northwest Brooklyn in the late 1630s, including lands purchased from the Native Americans in the first half of the 17th century (Bolton 1975). It has been speculated that the sale of Brooklyn land "saved New Netherland from being abandoned by the West India Company" (Armbruster 1918: 3). After the WIC purchased the land from the Indians, they in turn granted it to European settlers.

The western end of Long Island was settled in the first half of the seventeenth century by predominantly Dutch and Walloon (French Protestants from Belgium who fled to escape persecution) families. In 1638, land was granted to any individual who promised to establish a farm in the area (Armbruster 1918). Six independent towns were established in the second and third quarters of the century including Brooklyn, in which the project site is located, which was first settled in the 1640s, though not formally organized until 1746. While at first the WIC granted patroonships—a patroon was the "feudal chief" of a small colony of fifty or more individuals (Stiles 1867: 20)—they found that farms were more successful if the land was granted directly to individual farmers. Therefore, the land was given the name Brooklyn, which is derived from the Dutch *Bruijkleen*, meaning "a free loan, given to a tenant or user for a certain consideration" (Armbruster 1914: 20). The name went through several changes throughout the Dutch and English colonial periods; from Bruijkleen to Breukelen to Brookland and, finally, to Brooklyn. English settlements were established throughout Brooklyn during the mid-1600s. In 1664, the English took control of the colony and it was renamed "New York."

Like all of New York, the village of Brooklyn was occupied by the British during the Revolutionary War in the late eighteenth century. The region suffered a great deal of destruction and disturbance both during battle and at the hands of British soldiers. After the Revolutionary War ended, Brooklyn was given a chance to thrive as an important component of the greater New York economy. While at first it provided agricultural goods for the city proper, it soon became the city's industrial base. The opening of the Brooklyn Navy Yard, to the northwest of the project area within Wallabout Bay, brought in a large number of jobs. In addition, the installation of ferries and other public transportation allowed for residents to commute to their jobs in Manhattan while living in "rural" Brooklyn.

New York's prosperity caused Brooklyn and Manhattan to become increasingly co-dependent, both economically and culturally. In order to unify the entire area and to facilitate its rapid growth, Brooklyn (as well as the other three outer boroughs) was incorporated into the City of New York in 1898 (Burrows and Wallace 1999).

B. THE DEVELOPMENT OF THE PROJECT SITE

The project site was originally situated on the slope of one of a series of long heavily wooded hills known as the "Bushwick Hills" or the "Hills of Guan." These hills can be seen on several 19th century maps (see **Figures 5** and **6**). This "ridge varied in height from one hundred to one hundred and fifty feet above the sea" and was entirely "covered with a dense growth of woods and thickets...impassible to artillery" (Johnston 1878: 142-143). The project site was located near a gap in the hills that was historically known as the "Jamaica Pass." Modern Broadway, formerly Division Avenue, served as the boundary between what was considered the city of Brooklyn in the mid-19th century and the town of Bushwick, in which the project site was located. Bushwick was annexed to the City of Brooklyn in 1854 (Armbruster 1912).

THE PROJECT SITE DURING THE REVOLUTION

Because of their great height and the thick woodlands that covered them, the heights of Brooklyn could be traversed in only a few locations. The closest of these to the project site was Jamaica Pass, adjacent to the project site near what is now the southeast corner of what is now the Cemetery of the Evergreens (established 1849). The Pass is depicted on H.R. Stiles' map depicting Brooklyn during the Revolutionary War (see **Figure 6**). As seen on the map, two roads were present in the vicinity of the project site. The first was the Road to Jamaica, located in the vicinity of modern Fulton Street and Jamaica Avenue. The second road extended north through the project site before turning northeast and continuing through a still-extant road through the Cemetery of the Evergreens and along the line of what is now Central Avenue.

As seen on Stiles' map, Jamaica Pass was a key access point for British troops during the Battle of Brooklyn and played a crucial role in the British victory that day. The Americans had stationed just five men to guard the pass, who were easily captured by the approaching British army (Schecter 2002). British General William Howe then forced William Howard, the proprietor of a tavern on the eastern side of the pass, to guide them along a bridle path east of the Pass, within what is now the Cemetery of the Evergreens (Stiles 1867). This allowed the British to investigate and secure the pass without actually entering it (Schecter 2002). The troops then marched silently and slowly through the Pass in the dead of night, pausing only for a brief rest and breakfast after reaching the fields on the opposite side on the morning of August 27th, 1776. The British then continued west down the Road to Jamaica and would go on to capture the City of New York after the conclusion of the battle (ibid). Stiles referred to the Americans' leaving the Pass largely unguarded as a "criminal oversight of the commanding general" (1867: 293). The extent to which the project site was developed at the time of the war is unknown.

RESIDENTIAL DEVELOPMENT IN THE 19TH CENTURY

Some of the earliest maps to depict the project site in detail were produced by the United States Coastal Survey under the direction of superintendent F.R. Hassler in 1837, 1844 (see Figure 5), and 1845. The maps each depict two historic roads that were partially located within the project site. The first, identified on later maps as Bushwick Road, angled through the northern half of the project site between Broadway and the cemetery, along the approximate line of Sackman Street, which is still extant to the south of the project site. The second road was a historic branch of the Old Jamaica Turnpike or Road to Jamaica. To the northeast of the intersection of these two roads, partially within the project site, was a small homestead. The area to the north was undeveloped farmland and the wooded hills occupied the areas to the east and south. The 1844 and 1845 maps also reflect the construction of the railroad tracks along Atlantic Avenue. Those tracks were originally constructed in

1832 as part of the Brooklyn and Jamaica Railroad, the first rail line to be chartered on Long Island (Hinsdale 1898).

Sidney's 1849 map of the area twelve miles around New York City depicts additional roads in the vicinity of the project site. The map depicts the same roads as the previous coastal survey and indicates that the aforementioned homestead was occupied by J. Pilling, although it shows the home further to the west and not immediately at the intersection of the two historic roads. Connor's 1852 map of Kings County is more consistent with previous maps, and indicates that the home and 40-acre estate of W. Henry Furman was located at the intersection of Bushwick and Old Jamaica Roads. A remnant of the latter road is shown as a dashed line north of Broadway, which by that time had been mapped, if not constructed. The map shows the Pilling house far to the northwest of the project site.

A map published by H.F. Walling in 1860 does not depict the Bushwick Hills—nor are they shown on any subsequent maps—but it does suggest that the modern street grid had been proposed. Several subsequent coastal surveys, including one published in 1866 by A.D. Bache, indicate that the streets may not have all been constructed at that time and that the 1860 map may depict the proposed street conditions. Neither map clearly depicts the locations of structures within the project site. Dripps' 1869 map of Brooklyn, however, does depict numerous structures within the project site (see **Figure** 7). Both the modern and historic streets are depicted on that map, as well, with modern Aberdeen Street referred to on the map as William Street and modern De Sales place as Hull Street. The remnants of Bushwick Road and the Old Jamaica Turnpike are also present within the northeast corner of the block. Three structures are depicted to the north of the intersection of the historic roads, within what is now Lot 1.

The map also identifies the owner of the property as William H. Furman. Furman and other members of his family owned much of the land in the immediate area. The map also indicates that James Pilling owned the land to the west of the Furman property, which began at what is now Furman Avenue. The occupant of the home during this time is unknown, but it does not appear that any member of the Furman family resided there. By the publication of the 1874 Fulton farm line atlas, the former William Street had been renamed Aberdeen Street.

CONSTRUCTION OF THE CHURCH

In September 1871, the Fathers of Mercy, a French order of Roman Catholic priests, purchased the western portion of Block 3468 for use as a summer retreat (Ross 1902). At the time, there were not enough Catholic worshippers in the area to warrant the construction of a church, however, by 1872, the Fathers of Mercy were holding mass in the "parlor of the parochial residence" on the site (ibid: 270). Three years later, a small church known as the Church of Saint Francis de Sales was constructed at the corner of the project site near the intersection of De Sales Place and Broadway (ibid).

The 1880 Bromley atlas of Brooklyn is the first to depict the redevelopment of the project site for religious use. That map indicates that the western half of the block was a single property and was developed with the Church of Saint Francis de Sales, a brick and wood frame structure at the southeast corner of the block, where the modern rectory stands today. A second wood frame building was present in the northeast corner of the block in the location now occupied by the school. The Hopkins 1880 atlas of Brooklyn identifies the northern structure as a school. The remainder of the block had been divided into lots, but remained undeveloped.

The 1886 Robinson atlas depicts additional development within the project site: both the school and the church had been expanded and two wood frame outbuildings, one of which was a barn or stable, were constructed at the rear of the property. The 1888 Sanborn map depicts the site in a similar way. That map identifies the northern extension of the church as a 4-story dwelling, indicating that it may

have served as the rectory. That map also depicts a 1.5-story small chapel that was constructed to the rear of the church which appears to be one of the small wood frame structures seen on the 1886 Robinson atlas. The 1888 Sanborn maps also reflects the construction of a row of homes along Aberdeen Street, two of which are included within the project site in the location now occupied by the convent. The two dwellings—then known as 32 and 34 Aberdeen Street—are identified as 2-story wood frame structures with brick basements. The easternmost structure (34 Aberdeen Street) featured a 1-story outbuilding in its rear yard that is identified on the map as a "gold beater." The map indicates that water lines were present in the surrounding streets by that time.

The original church and school building remained standing while construction began on a much larger church in 1896 (Armbruster 1942). The church was formally opened in 1898 despite construction not having been completed (*Brooklyn Daily Eagle* 1898) and was dedicated in 1906 (Armbruster 1942). The larger church, renamed "Our Lady of Lourdes," was located in the eastern portion of the original property, in what is now the open yard and parking lot that separates the existing convent from the other structures on the project site. The larger church was 200 feet long and between 66 and 124 feet wide, with seating for 11,000 worshippers (Ross 1902). The 1898 Ullitz atlas depicts the newly constructed church and also reflects the renaming of Hull Street to De Sales Place. To the east of the church, outside the project site, the formerly vacant lots had been developed with wood frame dwellings.

The 1907 Sanborn map indicates that little change had occurred within the project site (see **Figure 8**). The properties at 32 and 34 Aberdeen Street each contained a small 1-story outbuilding in their rear yards. The property was developed with the larger church (by that time renamed Our Lady of Lourdes); the older church, by that time used by the Fathers of Mercy as a rectory and hall/stage; and the original school. The 1908 Bromley atlas of Brooklyn depicts the same site conditions. The original church was demolished and replaced with the existing rectory in 1911, as depicted on the 1916 Ullitz atlas of Brooklyn (*Brooklyn Daily Eagle* 1911). The 1916 map incorrectly identifies the modern rectory as a school and continues to depict the original wood-frame school and wood-frame rectory (previously shown as brick) to the west.

The 1929 Belcher-Hyde atlas of Brooklyn is the first to depict the construction of the existing school—built in 1920—in the location of the original school, which was significantly smaller. The existing convent was constructed in 1934 on the site of the two lots at 32 and 34 Aberdeen Street and is first depicted on the 1951 Sanborn map. The church of Our Lady of Lourdes was destroyed by a fire in November 1975, and its remaining contents were looted in the months that followed (*New York Times* 1975). The congregation merged with another in the surrounding area and the rectory continued to be used as office space (PS&S 2012). The rectory closed in the early 2000s and the buildings on the project site have been vacant for the last decade and the grounds on the project site have become overgrown.

C. POTENTIAL FOR HUMAN BURIALS ON THE PROJECT SITE

As a result of increasing and misguided fears about the impact of human interments on public health, burial legislation in New York City became increasingly strict in the early nineteenth century. Editorials in favor of outlawing human interments in the city limits of Brooklyn—Bushwick was annexed to Brooklyn in 1854— appeared in the *Brooklyn Daily Eagle* as early as June 1847 and bans within the city limits occurred in the following years (*Brooklyn Daily Eagle* 1849). These bans began several decades before the Church of Saint Francis de Sales was established on the project site.

As burials were being outlawed in the City of Brooklyn, large rural cemeteries began to be established throughout the less densely populated portions of Brooklyn and Queens which served the

populations of the entire New York City region. The most notable of these rural cemeteries was Green-Wood, a nondenominational cemetery founded in 1838 approximately 2.5 miles south of the project site. Other large cemeteries established at this time were the Cemetery of the Evergreens, a nondenominational cemetery near the Brooklyn-Queens Border one block to the north of the project site, and the Holy Cross Cemetery, a large Roman Catholic Cemetery in Flatbush, both founded in 1849.

There is no indication that the original Church of Saint Francis de Sales or the Church of Our Lady of Lourdes maintained a cemetery or burial vaults on the property. Given the timing of the original church's construction in the 1870s, it is likely that the members of the congregation would have been interred at one of the large rural cemeteries in the immediate vicinity. In addition, given the church's humble beginnings and the construction of a significantly larger church on the property, it is not likely that human burials were present on the property. No documentary evidence regarding the removal or inadvertent discovery of human remains during the construction of the new church could be located. It therefore does not appear that the church property was ever used for human interment.

A. SENSITIVITY ASSESSMENT

As part of the background research for this Phase 1A Archaeological Documentary Study, various primary and secondary resources were analyzed, including historic maps and atlases, historic photographs, newspaper articles, and local histories. The information provided by these sources was analyzed to reach the following conclusions.

DISTURBANCE ASSESSMENT

The project site, a former wooded hilltop, has been developed and redeveloped several times since the 18th century. The construction of the existing buildings, which have full or partial basements, would likely have disturbed any archaeological resources within those portions of the project site. Similarly, the construction of the original church, rectory, and school that stood in the western portion of the site would also have resulted in some disturbance, but to a lesser extent as maps do not indicate that those structures had basements. Additional disturbance would have been generated by the demolition and removal of the ruins of the church after it was destroyed by a fire in 1975. Finally, evidence of subsurface infrastructure is visible, indicating that there has been disturbance within the parking lot separating the existing school and rectory.

PRECONTACT SENSITIVITY ASSESSMENT

The precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. In addition, precontact archaeological sites are generally found at shallow depths, usually within 4 to 5 feet of the original ground surface. The project site appears to have been located at a great distance from nearby sources of fresh water and marine resources. In addition, the site was historically on the slope leading to a large hill and was not level ground, as was typical of Native American habitation sites. Finally, no Native American archaeological sites have been documented within a 1-mile radius of the project site. Although a Native American trail ran in the immediate vicinity—if not through—the project site, the extensive development and landscape modification that occurred in the 19th and 20th centuries would most likely have disturbed the shallow depths below the original ground surface. Therefore, the project site is determined to have no sensitivity for precontact archaeological resources.

HISTORIC SENSITIVITY ASSESSMENT

Before the modern street grid was established in the 19th century, the project site was bisected by the old Bushwick Road, which 19th century atlases (see **Figure 7**) indicate ran through what is now Lot 1 within the project site. The Old Road to Jamaica ran through the southwestern portion of the project site, just north of Broadway. The British army marched along these roads on August 27, 1776, before marching east where they would win the Battle of Brooklyn later that day. By 1837, a homestead was present to the northwest of Bushwick Road's intersection with the Old Road to Jamaica. The buildings associated with that home stood through the mid- to late-19th century. The property was redeveloped with the church, rectory, and school of the Church of Saint Francis de Sales by the early 1870s. Those buildings were later replaced with larger structures, including the existing rectory and school and the Church of Our Lady of Lourdes, which burned down in 1975. The existing convent

was constructed in 1934 on the site of two former dwellings that had been constructed in the late-19th century, likely after water and sewer networks were available in the area.

The only residential occupation of the project site that predates the installation of water and sewer networks occurred within Lot 1 to the north of the intersection of the colonial roads that formerly ran through the site. Prior to the construction of the first Church of Saint Francis de Sales, no historic development or occupation appears to have occurred on Lot 50. The project site was disturbed as a result of the construction of the historic and existing schools as well as disturbance associated with grading, paving, and the installation of subsurface infrastructure in the paved play area to the rear of the school. This disturbance would also likely have destroyed any archaeological resources associated with the historic roads themselves. Any archaeological resources associated with the march of the British army through the area would likely have been surficial and would have been destroyed by subsequent development and landscape modification. In addition, deeper disturbance associated with the construction of the existing school (which has a partial basement) could have impacted archaeological resources at greater depths within the small portion of the former Furman estate that is situated within Lot 1. Therefore, the project site is determined to have low sensitivity for historic period archaeological resources.

B. RECOMMENDATIONS

The project site has been determined to have no sensitivity for precontact archaeological resources and low sensitivity for archaeological resources associated with the historic period. Therefore, no additional archaeological analysis (i.e. a Phase 1B survey) is recommended.

AKRF, Inc.

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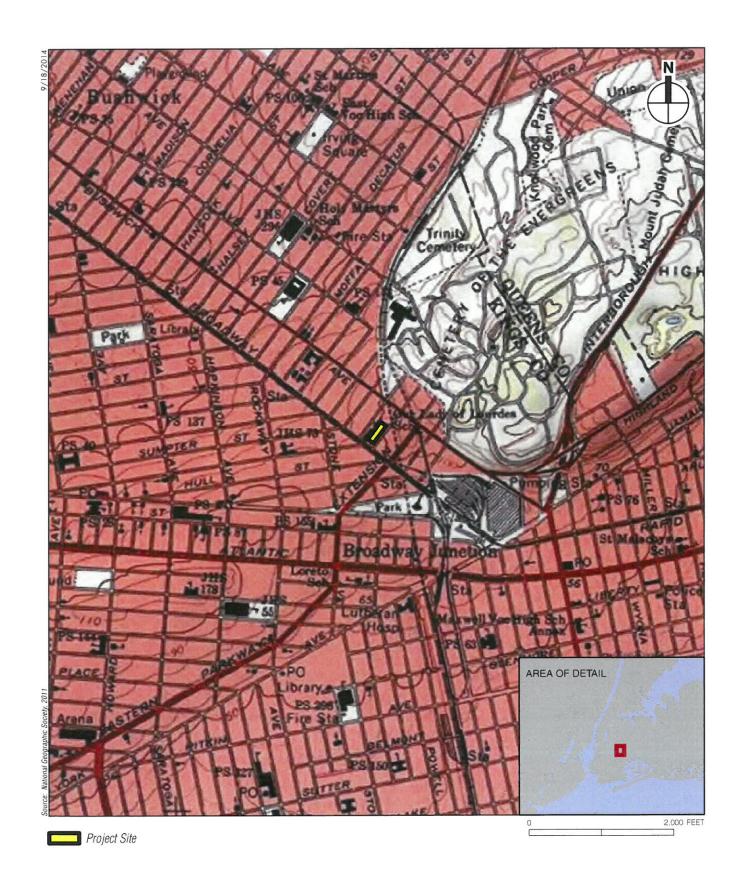
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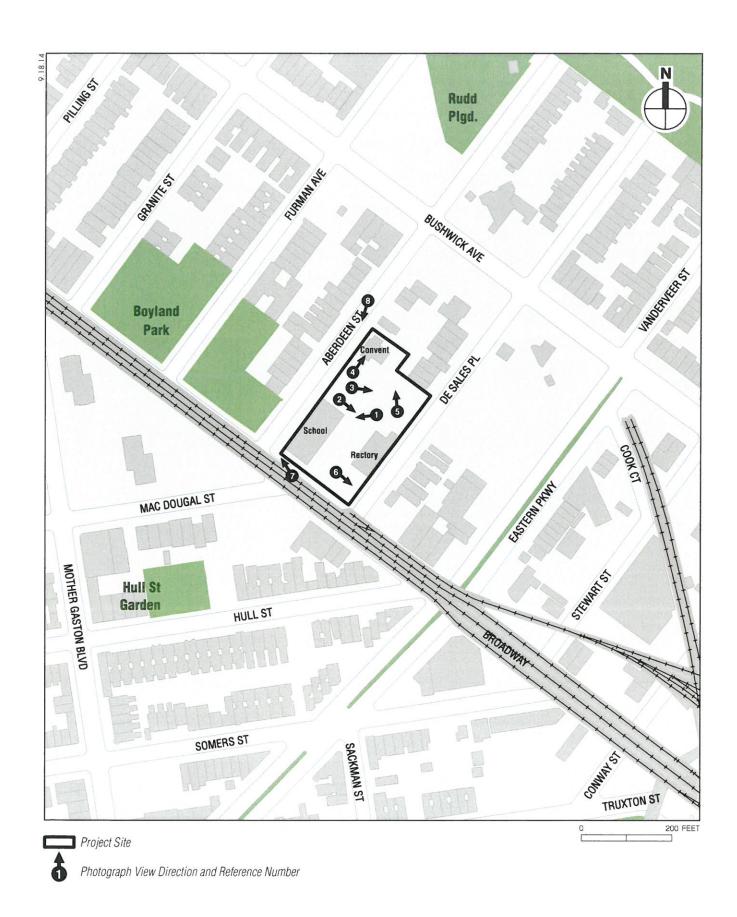
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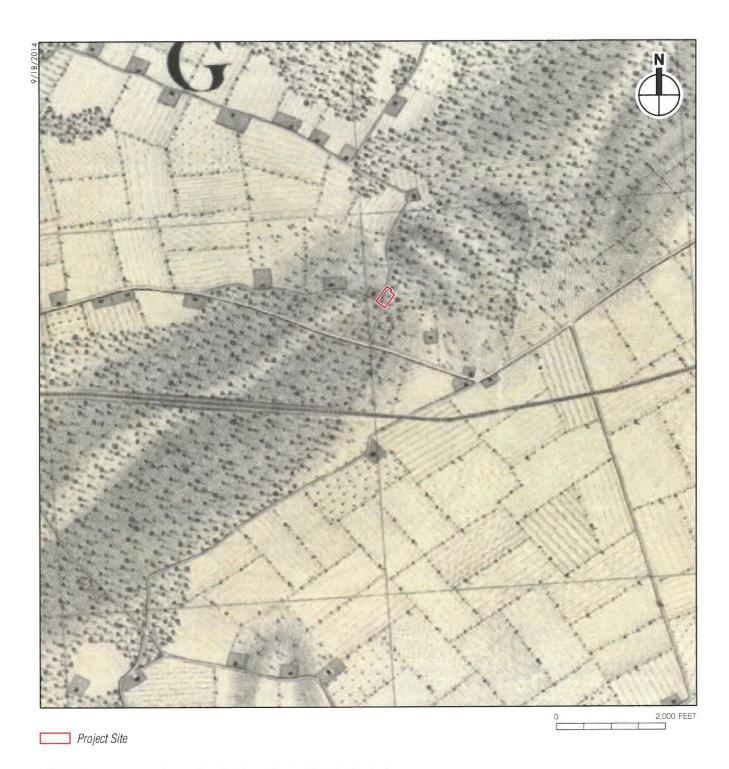


USGS 7.5 Minute Topographic Map Brooklyn Quad Figure 1

OUR LADY OF LOURDES



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NOTE: This map was georeferenced to align the modern and historic streetbeds. Due to inaccuriaces in the original map, the Project Site location has been approximated.

Project Site

1907 Sanborn Map Figure 8



Looking southwest across the paved play area to the rear of the school (in background). Storm water drains and utility vaults are visible in the pavement in the center of the photograph



The paved area to the northeast of the school (at right), looking southeast towards the existing rectory (in background). The overgrown garden to the rear of the rectory can be seen surrounded by a chain link fence at right and the overgrown footprint of the former church is to the left



View northeast at the densely overgrown area where the church stood until it was destroyed by a fire in 1975



The paved area between the existing school and the convent where the church formerly stood. Note the gentle slope to the northwest towards Aberdeen Street (at left)

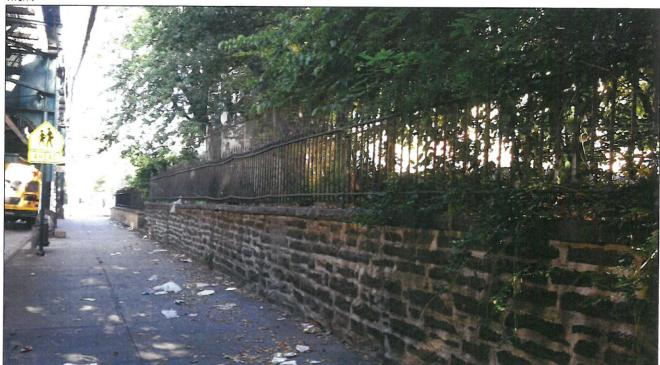


The dense overgrowth within the footprint of the former church, looking north towards Aberdeen Street and the existing convent (at right)



The overgrown area to the southwest of the existing rectory. The elevation of this portion of the site is several feet higher than the adjacent sidewalk of De Sales Place, which is accessed via the stairs in the center of the photograph

OUR LADY OF LOURDES Photographs



The stone retaining wall that lines the project site along Broadway. The elevation of the project site is several feet higher than the sidewalk below



The sloping lawn between the existing convent and the sidewalk along Aberdeen Street

OUR LADY OF LOURDES Photographs