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6159Q (PART 1 of 2)
Bergoffen
2006
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DOWNTOWN JAMAICA REDEVELOPMENT PLAN

CEQR No. 05DCP081Q

ARCHAEOLOGICAL ASSESSMENT REPORT – PHASE IA

PART I



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January 15, 2006

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1.A. DESCRIPTION OF THE PROJECT AREA AND PLANNED DEVELOPMENT

The New York City Department of City planning has proposed a redevelopment plan for downtown Jamaica, Queens that covers parts of Queens Community Districts 8 and 12, including neighborhoods in Jamaica, South Jamaica, Hollis, and St. Albans. The area comprises approximately 356 blocks in an area generally bounded by the Van Wyck Expressway service road on the west, 87th Road and Highland Avenue on the north, 189th, 190th, 191st Streets and Farmers boulevard on the east, and Waltham Street, 105th, 108th, 109th, Sayres and 100th Avenues to the south (Fig.1). In total, the downtown Jamaica redevelopment area includes 189 projected development sites and 422 potential development sites. The Revised Draft Scope prepared by AKRF provides the following summary of the proposed actions in the rezoning area. They include:

...zoning map amendments, a zoning text amendment to establish the Special Downtown Jamaica District (SDJD), an amendment to the City Map involving the elimination of a portion of a street and acquisition or disposition of real property related thereto, and designation of an Urban Renewal Area. (Oct. 3, 2005, 1).

The "project sites" -- those assessed in the present report -- are on blocks for which the DCP is proposing, in whole or in part, zoning map amendments. The proposed rezoning south of the LIRR Right-of-Way and north of Liberty Avenue between 148th and 158th Streets -- one of the principal areas of concern in this study -- is projected to increase greatly the density for industrial use, while, in general, the proposed rezonings on the other blocks containing the project sites are expected to increase either residential or commercial density, or both.

Of the 611 projected and potential development sites, the Landmarks Preservation Commission (LPC) has flagged twenty for potential archaeological sensitivity based upon a preliminary review of archaeological sensitivity models and historic maps (Figs. 1, 2.A. and 2.B.). These sites are located on eleven blocks and comprise a total of twenty-six lots. Sixteen of the project sites are located in the SDJD: in sub-areas Liberty Center (LC) or Jamaica Center (JC). Of these, twelve are located south of the LIRR, which runs east-west immediately south of Archer Avenue and north of 99th Avenue, dividing the rezoning area

it into a retail, business and residential area to the north and a largely industrial area to the south. There are a number of auto parts, auto repair, and large auto-wrecking and salvage yards south of the Right-of-Way; plants connected with the food industries (milk processing), and building (concrete), as well as warehouses and transfer stations. Immediately east of the cluster of project sites south of the tracks is the new campus for York College. North of the LIRR on Archer Avenue are parking lots and parking garages like those on the south side of block 10151, which includes project sites 468 and 469. But project site 463, also on this block, is part of Jamaica Avenue's busy shopping district of small stores, restaurants and department stores. Within a block to the north of this retail hub the streets are principally occupied by residential buildings and houses of worship. Project sites 118, 160 and 161 are located in this section. Project site 246, far to the east, on Jamaica Avenue, is in a thinly built-up area of small, two-story houses, gas stations, and auto service businesses.

The immediate area of the project sites contains eleven designated landmarks (Dolkart and Postal 2004, 293-295). Principal among these are the Rufus King manor -- originally the Episcopalian parsonage -- and the Grace Episcopal Church and its cemetery (Prudhon 1974, 19; Cotz 1984; HPI 1996, 13). Rufus King had a long and distinguished political career, beginning during the Revolutionary War period. He was a delegate to the Continental Congress (1784-1787) and one of the signatories of the Constitution in 1789. His political appointments include two "firsts": he was one of the first pair of senators from New York and later, the first minister to Great Britain (1796-1803). In 1825, he became Ambassador to Great Britain but returned shortly after to the United States due to illness. He died in 1827 and was buried in Grace Church's cemetery. King bought the mansion on later Jamaica Avenue in 1805 from the estate of Christopher Smith. The original, west sections of the building date to the mid-18th century. King made additions in 1806 and 1810. His son, John Alsop King (Governor of New York, 1857-59), made further modifications in the 1830s (Ibid.; Dolkart and Postal 2004, 293). The building and its surrounding park were designated as "King Mansion" in 1966, while the interior was landmarked in 1976.

Founded in 1702, Grace Church was "the official church of the British colonial government" (Edwards and Kelcey 1996, 15; Dolkart and Postal 2004, 294). The building and cemetery were designated in 1967. The present brownstone church in Gothic-revival style dates to 1861-62 and is the third on this site. Project site 118 is next to the churchyard, on the same block (9754).

Other landmarks in the immediate area of the project sites are the First Reformed Church of Jamaica, founded in the same year as Grace Episcopal Church and also the third building on the site. The present structure, dated 1858-59, was designed by Sidney J. Young, a member of the congregation (Dolkart and Postal 2004, 293). The church is located opposite the above-described two landmarks on the south side of Jamaica Avenue east of 152nd Street and a block or two north of the cluster of project sites south of Archer Avenue and Beaver Road. East of this group of project sites is the oldest cemetery in Queens, the landmarked Prospect Cemetery, dating from 1668. A number of members of old and prominent Queens families and many Revolutionary War veterans are buried here (Edwards and Kelcey 1996, 15; Dolkart and Postal 2004, 295).

B. EXECUTIVE SUMMARY

The LPC has recommended that an archaeological documentary study be performed for twenty project sites in the downtown Jamaica redevelopment area (see above). Accordingly, this report provides a detailed review of the primary and secondary documentary sources that were consulted in order to determine whether archaeological remains might indeed have survived on the flagged sites or whether there was evidence of successive construction episodes in the past that would have negatively impacted any potential remains. In general, if a phase IA archaeological assessment determines that a project site may contain archaeological remains whose integrity has not been compromised by subsurface disturbances associated with later building activities, and which have the potential to yield significant historical information, then a recommendation is made for field testing in order to verify the presence or absence of such remains and their state of preservation.

In order to assess the project sites' potential for prehistoric sensitivity, we consulted the map of inventoried prehistoric archaeological sites compiled by Boesch (1997) based on the records of the Office of Parks, Recreation and Historic Preservation, topographic maps, and primary and secondary literature regarding Native American occupation in Queens. The main group of sites possessing potential archaeological sensitivity for prehistoric remains is located in and around a pond and a stream that existed until the early 20th century. These sites were not occupied until the 1910s and the development was minimal, consisting primarily of sheds, containers or small, one-story, one-room offices. Thus, there were few or no negative impacts resulting from subsequent building episodes in this area and this, combined with the likely depth of fill deposited in and around the pond at the time of filling, means that the 19th century ground surface and earlier deposits over which it lies remain undisturbed below the present ground surface and the fill immediately beneath it. A number of sites in this area were therefore determined to be potentially sensitive for prehistoric remains.

Conclusions regarding the project sites' potential archaeological sensitivity for historic remains were based on a very extensive series of historic maps and on data from the Topographic Bureau of the Borough of Queens. The records of the Queens Sewer department were also checked. Primary sources such as newspaper articles, photographs, and village and town records, and secondary sources such as local histories and specialized studies were consulted at the Map Division of the New York Public Library, the New York Historical Society Library, the Long Island Collection of the New York Public Library, the Landmarks Preservation Commission, and in various articles and resources on the web.

The results of this study are summarized in the table on the next page. This report recommends for those sites considered archaeologically sensitive for prehistoric or historic remains or both, that archaeological field testing be conducted to determine the presence or absence of archaeological remains and their integrity prior to any action being undertaken that could damage or compromise the potential remains.

Sites Flagged for Potential Archaeological Sensitivity Summary of Results					
Potential Development Sites	Projected Development Sites	Block	Lot	Sensitive	Not Sensitive
118-JC3		9754	25	X	
160-D	161-JC3	9764	77	X	
			97	X	
	246-E	9908	10	X	
401-LC		10095	32	X	
410-LC		10107	73	X	
			77		X
411-LC			82	X	
			84	X	
			86	X	
			130	X	
413-LC			138		X
	414-LC		142		X
	417-LC	10108	305	X	
	418-LC		312		X
			319		X
	419-LC		316		X
416-LC			348	X	
420-LC		10109	31	X	
			44	X	
422-Y		10113	71		X
423-Y		10115	53	X	
463-JC1		10151	7	X	
468-JC1			75		X
469-JC1			116		X
475-JC2		10156	17	X	

2. ENVIRONMENTAL SETTING, PREHISTORIC AND CONTACT PERIODS

Queens is divided into two main geomorphic areas by a line of hills composed of the boulders and glacial till that mark the southern edge of the Wisconsin ice sheet. They are known as the Harbour Hill Moraine. Reaching its maximum extent during the Pleistocene era approximately 20,000 years ago, the terminal moraine of the glacier runs roughly along the line of the Interboro and Grand Central Parkways. During its second and last advance, the glacier reached approximately from south of Little Neck Bay southwestward through Ridgewood to Prospect Park in Brooklyn (Boesch 1997, 4-5). The rise of the appropriately named Hillside Avenue, a few blocks north of the project sites, was formed in that geologic period. On the south side of the Hillside Avenue watershed, the ground slopes down fairly rapidly. Until the early 20th century, a number of streams and small watercourses flowed down the hillside feeding or draining the fresh water marshes and ponds that once dotted the countryside. This characteristic topography of inland Queens began to emerge approximately 12,500 years ago with the draining of glacial Lake Flushing and the subsidence of the many melt water streams and rivers that had been released by the retreating ice sheets. The melting of pockets of ice under the ground also created depressions called kettles, which later filled with water to create ponds. The most important topographical feature of the project site area is Beaver Pond and the stream that drained it to the south. The pond occupied a large part of blocks 10107 and 10108, which make up the triangular area between 150th Street, Guinzburg Road / Liberty Avenue and 157th Street. (See further below and in Section 3).

After the last ice age, during the Paleo-Indian period ca. 10,000-8,000 years ago, small bands of nomadic people hunted mammoth, mastodon, caribou and musk ox in forests of spruce and fir. The characteristic weapon in their chipped stone tool kit was the fluted javelin or spear point known as "Clovis". Only one of these points has been found in Queens, in the Bayswater section. But at Baisley Pond, approximately two miles south of the main cluster of project sites at Beaver Pond, five molar teeth of a mastodon and fragments of its tusk were discovered in 1858 during dredging of the pond (Prudhon 1974, 28; Fagin 2005). This is the only place on Long Island where mastodon remains have been

found, although many teeth and tusks have been recovered in the waters off the island's shores in fishing nets (Ibid.) The mastodon became extinct about 10,000 years ago.

According to the map of inventoried prehistoric archaeological sites compiled by Boesch (1997), there are no recorded finds of the succeeding Archaic period (ca. 8,000 B.C. – 1,000 A.D.) within a one-mile radius of the project sites. Boesch's study was based on the records of the Office of Parks, Recreation and Historic Preservation, which in turn are based on site file records. During the Archaic period, the mastodons and other large herbivores that roamed long island during the preceding phase became extinct. An environment of swamps and mudflats emerged that attracted migratory wildfowl and beaver. The mixed forests of hickory, oak, beech, elm and chestnut that augmented the earlier coniferous forests provided a habitat for white-tailed deer, wild turkey and moose. The Archaic Indians settled in small groups on islands, at the head of coastal estuaries, by the seashores, and by inland streams. These sites offered plentiful supplies of fish and shellfish. Site types of this period include fishing and hunting camps along the streams, rock shelters, processing stations for shellfish, quarry and workshop sites, and burials (Boesch 1997, 11). Semi-permanent villages also appeared during this phase.

Five Woodland (ca. 1000 B.C.–1,600 A.D.) and Contact Period sites have been identified within a one-mile radius of the project site. During the Woodland period, pottery is introduced and the rise in shell gathering attested by the huge piles of discarded shells, called "middens", point to increasing sedenterization. Plant domestication may also have begun during the Middle Woodland Period (ca. 1-800 A.D.) Agriculture superseded hunting and gathering in Late Woodland Times (ca. 900-1,600 A.D.) Large, permanent or semi-permanent, palisaded settlements supported by agriculture developed from ca. 1,000 A.D. But the Woodland Indians still traveled seasonally to their hunting or fishing camps. Smoking pipes and bows and arrows, which replaced the earlier spears and throwing sticks, are characteristic Woodland Period features.

The Woodland Period sites are numbered 78, 74, 73A and 76 on the USGS quadrangle of Jamaica, Queens. The fifth site, number 8, is said to have been located on Beaver Pond but

is shown on the map in the Richmond Hill district some three miles to the west. Boesch (1997, 290) noted that the site may have been occupied during the Contact Period. The name of this village, Jameco, and of the later European settlement, is derived from the Algonkian word for Beaver (Bolton 1934, 149; Historical Records 1938, 78; Tooker 1962, 75; Prudhon 1974, 3). According to Thompson (1843, 582), the Gemeco Indians (elsewhere referred to as the Jameco or Yemacah) were a small group subject to the Canarsie. Grumet (1981, 16) disputed this: there was no such group, and "Jameco" was only a place name. The Indian site is said to have been located at the southwestern edge of the Village of Jamaica near Beaver Pond, or south of Beaver Pond, or at the intersection of Rockaway Road and South Street (Tooker 1962, 75; Historical Records 1938, 78). According to Prudhon (1974, 1-2), "a small vestigial community" survived into the early 19th century "near the intersection of Rockaway Road and South Street". Beauchamp (1980, 137) notes that an Indian village still existed at the time of the first European Settlement "on a creek a mile south of the present village of Jamaica". An alternate location for this Indian village has also been proposed near Baisley Pond (Boesch 1997, #48). A travel book written in 1871 recorded that there was still a group of Indians living near Jamaica village at that time (Prudhon 1974, 35). In sum, by all accounts there was an Indian presence south of the village that survived well into historic times, but neither its exact location and nature, nor the number of inhabitants, were recorded.

Site number 78 consists of Indian material culture remains from Rufus King Park whose find spot was not recorded (Boesch 1997, 38). Ed Platt noted in pencil that vocational archaeologists had collected other Native American artifacts at this location (Ibid., LPC copy). Site number 74 was located on Archer Street west of Parsons Boulevard, immediately northeast of the Beaver Pond group of project sites. Site 73A was located in Captain Tilly Park, on Highland Avenue between 165th and 167th Streets. It is described as having a "possible Middle Woodland component" (Boesch 1997, 37, quoting Seyfried). Boesch included under number 76, a number of additional unrecorded sites in Jamaica where "arrowheads and other artifacts" had been found (Boesch 1997, 31).

A site's potential for prehistoric remains is assessed based on its proximity to sources of fresh water, fish (including shellfish), or game, such as are found in the estuaries or banks of rivers, or by the side of ponds or marshes (wetlands). In such localities, food or tool processing stations might be situated. Cotz (1987, 3) noted that Beaver Pond would have been a good place for hunting wild duck because it was on the "Long Island flyway", the route of migratory birds. It was therefore a locality that offered "lucrative seasonal exploitation", as is evidenced by scattered finds of lithics. Permanent settlements, however, would be situated on dry, elevated land. Potential prehistoric presence in the formerly boggy areas in and around Beaver Pond would be expected to fit the former category of site rather than the latter. Prehistoric deposits, usually found at shallow depths of approximately three to four feet, could well be preserved in this area under the layer of fill deposited in the early twentieth century to fill the pond (Historical Perspectives 1998).

3. HISTORIC PERIODS

The history of Jamaica begins in 1643 with the first conveyance of Indian land in Hempstead to a group of settlers who were mostly English Presbyterians from Stamford, Connecticut (Thompson 1962, 30; Gritman MS). This group made a second purchase of land that included the area of later Jamaica village in 1655. Among the signatories was Daniel Denton, whose detailed description of the topography, flora, fauna, and native inhabitants of New York (1670) is often cited in historical studies (Munsell 1882, 193). He served for many years as Town Clerk of Jamaica. In 1656 and 1660, Governor Stuyvesant granted patents to the settlers in recognition of their tenure, the second designating the village of "Rusdorp" (Prudhon 1974, 2). Other early names for Jamaica village were Conarsarret or Canorasset; Crawford, Jamaco, Gemaco, and other spellings of this last name, from the Algonquian, which became Jamaica, the name adopted from the time of the English conquest to the present (Historical Collections 1938, 78; Prudhon 1974, 3).

The early history of Jamaica turns in large part on the history of its churches and in particular the story of the clash between the Presbyterians and the Episcopalians. Jamaica's first settlers were non-conformists who dissented from the established Church of England and they settled in Jamaica in part in order to be able to practice their religion as they saw fit. But within two decades after the English take-over in 1683 they came into conflict with the official church. The Society for the Propagation of the Gospel, founded in 1701 especially to address the spiritual needs of the American colonists, began their work in the new world in Jamaica, sending their first missionary clergy there to establish in the village the Colonial Church of England (Onderdonk 1880, 97). Thus, Grace Church was founded in 1702. Coincidentally in that year, Lord Cornbury took refuge in Jamaica from the yellow fever epidemic raging in the city and that summer, the legislature of the province of New York sat in the village. Cornbury decided to take the opportunity of his presence in Jamaica to strengthen the position of the official church while simultaneously quashing the non-conformists. Although the Reverend John Hubbard, leader of the Presbyterian Church, had offered him accommodations, Cornbury was determined to make the Church of England dominant in the colony and encouraged the Reverend John Barton, leader of the

Episcopalian community in Jamaica, to take over the Presbyterian meeting house from Hubbard. Barton did so by crowding out Hubbard's sermon and forcing him to retreat to a nearby orchard (Munsell 1882, 229; Prudhon 1974, 7). In 1704, Lord Cornbury forced Hubbard to hand over the church and parsonage to the Church of England minister. But the C. of E. occupation of the Presbyterian Church was short-lived, because a descendant of the rector married a Presbyterian and gave the parsonage back to its original owners. In this way, in 1728, the Presbyterians were able legally to recover their old stone church, erected in 1699 in "the middle of Jamaica Avenue at Union Hall Street" (Prudhon 1974, 6). Between 1728 and 1734, when Grace Church was built on its present site, the congregation worshipped in the county courthouse (Munsell 1882, 238). The rector of the first church, Thomas Colgan, lived for a time in the later Rufus King house (Prudhon 1974, 7).

The first church building and its cemetery apparently occupied only about half an acre on block 9754 (Onderdonk 1880, 52, n., but he states that he was unable to discover who was the seller, or what was the cost). In 1761, money was raised from the congregation to repair the church and enclose the churchyard "more decently", i.e. presumably to build a fence around it (Onderdonk 1880, 61). The old building survived for many decades only to be replaced by a larger structure that was consecrated in 1822 (that building burnt in 1861 and was replaced by the present church in 1861-62 -- consecrated in 1863). The second building was designed by Rufus King and the two wardens, Timothy Nostrand and L.E.A. Eigenbrodt, "for lack of a professional architect" (Onderdonk 1880, 108). Its frame was assembled by the carpenters on land belonging to King situated on the east side of the churchyard, possibly on or near project site 118. In extending the building into the area of the graveyard, some tomb stones had to be removed and "set up under the church" (Onderdonk 1880, 108). According to Onderdonk, many individuals had been buried without grave markers (Ladd 1914, 347). This is pertinent for our study because it leaves open the possibility that similarly unmarked burials may have been made in the area of project site 118.

In the 18th century, the clergy and the wealthier members of the congregation were buried in the chancel or under their pews, respectively, while most individuals and the poor were

interred in the churchyard (Onderdonk 1880, 56). In the 19th century, people who were not members of the congregation might also be buried in the church yard, but their interment was not to cost more than \$10 and the sexton needed to get permission from the rector or warden before digging their graves (according to a notice of 1828, Onderdonk 1880, 114). The cost of Grace Church's funerals in the late 18th to early 19th centuries, both those made in the church and those in the yard are known, thanks to the accounts of the sexton Aaron Van Nostrand, who had to supply a record of such expenses to the church wardens. Nostrand made 776 entries of interments that took place in the churchyard between 1773 and 1820 (Onderdonk 1880, 71). A typical list of the costs of burial included "inviting, and grog for the carriers, 10S; use of the pall, 4S; digging grave, 8S; funeral bell, 5S" (Onderdonk 1880, 72). The "grog", i.e. the consumption of alcohol, was common practice. Munsell (1882, 234) notes that rum and wine were regularly offered at funerals. The men gathered outside and passed around a bottle; the women remained indoors and drank wine. Reverend Henry R. Weed, leader of the Episcopalian church in the early 19th century, was against this practice and tried to discourage it. Possibly his efforts had some effect because drinking at funerals went out of fashion around that time. The last occasion on which mourners partook of alcohol at an interment was at the funeral of Rufus King (Ibid.; although Prudhon 1974, 20, writes that "he was buried without pomp in the churchyard"). Onderdonk (1880, 112) described the affair:

...according to the custom of those days there were segars and pipes on a table in the spacious hall, and waiters bearing before them salvers loaded with decanters and wine-glasses were constantly passing around in-doors and out, for it was a warm afternoon. The body lay in the hall.

Rufus King and his son John A. King were major benefactors of the church. Onderdonk (1880, 120, 122) records three of John's donations of land to the church. The first was made August 14, 1841, from "Mr. King's lot" for the cemetery and for the construction of sheds. A second, dated June 22, 1856, was for the construction of a Sunday school, 22 by 40 feet in size. The tract is described as measuring fifty feet front and rear and 72 feet deep, adjoining the horse sheds. These two donations correspond to the area of project site 118. A third donation made July 9, 1862 added one acre to the rear of the cemetery (Onderdonk 1880, 126).

The period of the Revolutionary War had little impact on any of the project sites reviewed here, and its history in Jamaica is quickly told. There were many Tory sympathizers in the village and the Jamaicans were not notably active in opposing the British occupation (1776-1783; Prudhon 1974, 14). Jamaica's most illustrious son was Captain Jacob Wright who, together with Captain Van Nuyse of Kings County, gathered two companies to serve under Col. Lasher's first New York battalion. The companies guarded Flatbush pass on alternate days (Ross 1903, 526). The British occupation caused a great deal of damage to the village. To build the huts of their encampment at the foot of Hillside Avenue and provide fuel, the British cut down the woods, tore up the fences, and even dismantled the old county hall for building materials (Prudhon 1974, 14-15). Although there was a burst of rebuilding following the British withdrawal in 1783, in 1804 Jamaica was still a small village of about one hundred houses. It grew by 40% in the next three decades, in the meantime becoming incorporated, in 1814. But in 1836 there were still only one hundred and forty dwellings and most of these were located on Jamaica Avenue, then known as Fulton Street (renamed in 1918; Timothy Dwight, cited in Edwards and Kelcey 1996, 13, and in Prudhon 1974, 17, 23).

Fulton Street was the village's main artery and source of income. The British had widened and improved this road, which was also the island's main east-west thoroughfare, and in the course of the 19th century, Jamaica became a "key point" on the stage wagon route to New York (Prudhon 1974, 16). Along the road, a number of public houses, hotels, inns and taverns sprang up in the 18th and 19th centuries to serve the wayfarers -- as well as New Yorkers fleeing the summer epidemics -- and travel-related or entertainment-related businesses became the village's main industry (Prudhon 1974, 17). Large houses along the road, surrounded by grass lots, were frequently occupied by retired New York businessmen (Ibid.). In 1809, the Brooklyn, Jamaica & Flatbush Turnpike Company took over and refurbished the section of the road between the Manhattan ferry and 168th Street in Jamaica and it became a private toll road. It remained private until 1897 (Prudhon 1974, 43). West of 168th Street it was known as the Jamaica Plank Road (or Jamaica Turnpike); east of 168th Street, it was called the Hempstead and Jamaica Plank Road, or Hempstead Turnpike. The 168th Street terminus of the Jamaica turnpike, later of the horse car service,

introduced in 1866, and later still of the BRT, was near project site 475, which explains why there were buildings on Canal Street near Jamaica Avenue from the late 18th century on. The East Jamaica toll gate was located on project site 246.

The growth of the village during the 19th century is directly attributed to the development of its rail transport systems. Service to New York began with the Brooklyn and Jamaica Railroad company's construction of a line from the East River along Atlantic Avenue to Jamaica. The company leased its road to the Long Island Railroad in 1836, which extended the service to Hicksville. Jamaica was served by the South Side Rail Road (SSRR) branch, whose depot is shown on the 1873 Beers map directly north of project site 401. The SSRR was leased by the LIRR in 1876-79 when the Brooklyn & Montauk R.R. was created to take over the SSRR lines. In 1918, the BRT's elevated line was extended along Jamaica Avenue, terminating at 168th Street.

All the LIRR stations had toilets by January 1881, according to the company's 1886 Annual Report (cited in Historical Perspectives 1998, VII-2). This clearly indicates that sewer service was available by that date. Historical Perspectives (1998 VII-2) notes as well the existence of a building permit of 1900 for the installation of toilets in the cellar of a building on Fulton Street and concludes that "municipal water and sewer lines were in general use ca. 1901". The Sanborn maps of 1901 also indicate that water pipes had been laid in the streets by that date. The earliest records of sewers at the Department of Environmental Protection of the Borough of Queens are, however, much later, the first in the project area being the Canal Street sewer laid in 1914. Other pipes in Jamaica Avenue, Parsons Boulevard, and 160th Street are dated on the system plans to 1925. The reason for the lack of data for earlier periods is that the city began only in 1912 to acquire the private water companies that had previously served Queens residents for some years (Manufacturing 1913, 68). In 1913, the Chamber of Commerce of the Borough of Queens reported that the construction of sewers was "now... under way", but also that in 1898, there had already existed thirteen "separate and distinct sewer systems for local needs" (Manufacturing 1913, 110).

Southeast Brooklyn and Queens were served by the Jamaica Water Supply Company until 1996 when the company was finally taken over by the city (DEP 2005; EPA 2005). It was the last of the private water suppliers in New York. The groundwater system of 65 wells formerly operated by the company covered an area of approximately twenty-nine square miles and provided drinking water for some 650,000 customers in Cambria Heights, Hollis, Holliswood, Jamaica, Jamaica Estates, Kew Gardens, Laurelton, Queens Village, Richmond Hill, Rosedale, St. Albans, South Jamaica, South Ozone Park and Springfield Gardens (Ibid.). It is unfortunate that there is no detailed information available about the company's early operations or the exact dates when the individual project sites were first connected to water and sewer services. Water and sewer service were in place at the latest by ca. 1900, but it is possible that some households or areas did not immediately access sewer services, perhaps continuing to use their privies until the city began constructing sewers ca. 1912/13.

In the third quarter of the 19th century, according to Munsell (1882, 202), market gardening, rather than running large farms, had become the "principal business in the rural districts of the town". But by the time he wrote his history, Jamaica's countrified existence was in decline. During the 1880s and 90s, the larger estates north of Jamaica Avenue were being divided up and sold (Long Island Real Estate 1886; Prudhon 1974, 34-35). Improvements in transportation made Jamaica more accessible to people of all classes, and from the late 1870s on, the population became economically and ethnically more diverse. The growing presence of European immigrants is signaled by the appearance of the first of several German newspapers in 1882. Smaller lots were now also available, although the development of housing was slow and there were no decent rentals available south of the railroad tracks where working class and immigrant families were expected to move in. Indeed, an 1884 newspaper article stated that these "mechanics" – as laborers and tradesmen were called – were "not welcome" unless they settled in that part of town (cited in Prudhon 1974, 34).

At the end of the century the town held an Improvement Celebration (1898) to mark its progress. New streets were built, the old ones widened and paved, and by that time, water

and sewer service had become generally available (Prudhon 1974, 39, 43). The opening of the Queensborough Bridge in 1909 and the LIRR tunnel one year later completed the process of the borough's suburbanization. By 1920, the population quadrupled (Prudhon 1974, 36). Just two or three blocks south of the main street, however, the picture was not so rosy. This crowded area "of poverty and filth" was described in a 1909 article in the *Brooklyn Times* as a crime-ridden collection of "tumble-down shanties with families of Italians, Slavs, negros (*sic*)..." (cited in Prudhon 1974, 43). As in the case of Manhattan's Five Points, however, the bad reputation of the area may have been greatly exaggerated. It could have arisen in part because of the outbreaks of typhoid in the neighborhood that were thought to be caused by the unhealthy atmosphere of the Beaver Pond marshes. Since twelve of the sites reviewed in this report are located in the area of the former pond, its history is treated separately and in detail in the following section.

4. BEAVER POND

Beaver Pond is first mentioned in 1661 as “Bever Pond” in an allotment of meadows to Goodman Everitt. He was to receive “five acres next the Bever Pond” (Gritman MS, 17). In 1670, Nicholas the Cooper was granted half an acre of land by the Beaver Pond, “to build a house on to supply the town with such cooper’s work as they shall stand in need of” (Munsell 1882, 201). The cordwainer Peter Smith purchased land at the “lower end of Bever Pond” in 1747 (Town Records 1749-1855, 40). Thus, cooperage, cordwaining and milling were the town’s earliest recorded industries, and their earliest practitioners lived around Beaver Pond. The mills were erected on the three streams that rose from sources south of present-day Hillside Avenue and the flowed south from the village to empty into Jamaica Bay. The principal stream was the one that drained the pond, running south along later Water Street, past project site 422. There were three mills on this stream at one-mile intervals, approximately, from the village (Munsell 1882, 201; Prudhon 1974, 13). The natural springs that fed these streams were sufficient to supply many Queens residents. In 1850, the Nassau Water Works Co. bought the water rights of the mills located on the village’s principal stream. They diverted water from the third mill into a brick conduit that carried 40,000,000 gallons of water daily (Munsell 1882, 202).

As noted, the town had granted lands around the Beaver Pond to certain individuals, and there are also records of sales, as between Hendrick Eldert and Peter Smith (above). William Denton had a house at Beaver Pond, as did other individuals in the 19th century as well. But in 1765 the town voted that there “shall be no more land take up around the Beverpond but by as a Commonage for the use of the inhabitants of the Town” and in a further motion, in 1797, it was decided that anyone caught removing soil from the common lands would be “fined 40S for each offense” (Town Records 1749-1855, 214). This ruling did not however serve the village’s best interests, because removing soil from the pond was a good way to reduce its boggy-ness. Therefore, in 1806, the Trustees of the Common Lands enjoined the village’s inhabitants to “...be free liberty to remove dirt out of Bever pond and other ponds on the Common Lands” (Aug. 9, 1806; Town Records 1749-1855, 305)

In and around this wetland area, the villagers entertained and busied themselves hunting wild fowl, fishing, and in the winter, ice skating and cutting ice for their ice houses (Prudhon 1974, 13). For about fifty years, from the middle of the 18th century there was also a one-mile horse racing course around the perimeter of Beaver Pond (Thompson 1843, 134; Historical Collections 1938, 103). Prudhon (1974, 13) cites a 1769 advertisement for a horse race: "twice around the course at Beaver Pond to each heat". Ross (1903, 524) called this popular sport the "first industry of Queens". The southeast side of the pond, in the area of project site 423, was called "The Green", and was used as a mustering and training ground for the militia (Edwards and Kelcey 1996, 12). Two executions took place here on November 12, 1784. William Guthrie and Joseph Alexander, after being tried and imprisoned in the old stone church, were hanged "for stealing a silver tankard and other items from Thomas Thorne, of Cow Neck" (Munsell 1882, 221, 233; Centennial 1876).

A glance at the topographic data provided on the Final Section maps, together with the mentions of Beaver Pond in the 19th century Village and Town Records of Jamaica, make it clear that drainage was a perpetual problem, and that the area was generally boggy. Already in 1829 it was voted that the Town "have leave to drain the beaver pond" (Town Records 1749-1855, 271). According to Prudhon (1974, 24), the pond was indeed "drained in 1835 and new lots opened". In 1834, the Village trustees had agreed to pay Rebecca Beckley \$50 to widen and keep clean the ditch that ran through her land for the purpose of draining Beaver Pond. An article in *The Long Island Star* of August 24, 1837, proudly reported:

This pond...has within the two years past been entirely drained, and presents a considerable area of building lots. These will probably be gradually built upon adding breadth to the present extension of the village, and obviating an objection which has been made to the pond by some persons as a means of engendering agues.

The 1842 Johnson map shows the area of the pond as the newly made land of a "Public Square". But despite these notices, the area evidently remained a muddy bog. In 1845, the town asked that "all persons taking "soil or muck off the bed of the Beaver Pond to take it clean as the go[...] (From the south end)", and again a year later (May 6, 1846), the trustees of the common lands were "requested to allow all the muck to be taken out of the

Beaver Pond" (Town Records 1749-1855, 300, 305). In 1848, the Trustees of the Common Lands were requested "...to cause all the muck to be cleaned out of the Beaver Pond & sold to help pay the expense of cleaning out the same, on or before one year from the date that the pond may be again filled with water as formerly" (Town Records 1749-1855, 307). The issue of the pond's refilling will be discussed further below, but as for the mud, it was still there in 1849 when the Town Trustees were now requested "to confer power upon the Trustees of the Village of Jamaica, to clear out the beaver Pond and put it in a condition safe for the health of the Village, but without any expense to the Town." The question of who would pay for the work was no doubt one reason why it took so long to get the job done.

The matter of selling the last of the public lands owned by the village, the "Common Lands known as Beaver Pond", was raised at a meeting of April 2, 1850 (Town Records 1749-1855, 315), and other issues such as fencing and dividing the land into sections were discussed in the next few years (Town Records 1749-1855, 331, 334). The auction of the "common lands of the town of Jamaica known as Beaver Pond" was held July 26, 1854, and the sale of that "Big swamp etc." i.e. Beaver Pond, yielded \$1608 (Town Records 1856-1881, 4). But the pond was still not drained. At a meeting of May 28, 1855, the Village discussed the motion of Mr. Smith in "reference to the draining of Beaver Pond", and on September 25, 1855, considered Mr. Shipman's cost estimate of \$50 for doing the work. The following spring, the Village was planning "...opening, widening and deepening the outlet of the Pond", and installing planking (Village Records 1855-1875, 47). This time, the owners of the land on the pond would pay for the work, but the draining would "remove the bug-bear "Beaver Pond Aque" and leave our Village rid of the "Mill Stone" around her neck" (Village Record 1855-1875, 47).

The matter was not soon resolved. In a "Petition of Beaver Pond Residents to the Honorable the President & Trustees of the Village of Jamaica" made June 1, 1876, said residents complained that the

...place known as "Beaver Pond"... is at present in a very unhealthy condition, the same being nearly full of stagnant and dirty water, which overflows into the

cellars of the houses adjoining said pond and is the cause of creating much sickness. (Jamaica Residents 1835-1897).

They ask therefore that the pond be drained and *cleaned*. i.e. dredged (author's italics) with the idea that it would be refilled again. The signatories of the petition included several with German names: Augustus Voight, Gottfried Sauer, Gottfried Veigele, Henry Pitsch, C. Henkle, Frederick Scheiderer, signaling the transformation of the ethnic make-up of Jamaica with the arrival of immigrants especially Germans, who settled south of the railroad tracks.

The problems besetting Beaver Pond and its residents are mentioned in several articles in the *Brooklyn Daily Eagle* in the late 19th century. The maintenance of the creek, which drained the pond, was one concern (Creek, Dec. 31, 1879). It was clogged by quantities of foreign matter, including dead animals, and the result was that the water backed up in the cellars of those who lived around the pond (Cellars, May 1, 1888). A more serious concern was the risk of typhoid – the above-mentioned “ague”. Isaac B. Remsen’s contribution to this problem is noted in an article dated August 23, 1889:

Fever and ague prevails to a distressing extent at Jamaica. (...) Dr. Meyner says the cause of the epidemic is Beaver Pond. the pond is being dug out and deepened to gather ice from. The mud and vegetable matter emit the foulest of ordors (*sic*). Isaac B. Remsen owns the pond and is having the excavating done. He agreed to lime the earth, but Dr. Naval, for some unaccountable reason, relieved him of the obligation... The people of the town are very indignant. They have not been able to make any impression on the Health Officer, and Mr. Remsen proceeds with the work regardless of the consequences to the public health. (Epidemic 1889)

The 1891 Wolverton map traces the lines of Catherine Street and the unopened Water Street through the pond and even outlines lots in the pond’s southwestern corner. The pond is now labeled “I.B. Remsen’s Ice Pond”, and J.C. Remsen’s Ice House is shown on the east side of the pond, partly overlapping project site 416. Remsen evidently finished the work. An undated note in the Historical Collections (1938, 33) states that “Isaac B. Remsen dug Remsen’s lake covering about six acres adjoining Jamaica village”. “Remsen’s Pond”, as it was known in 1907, was purchased by the Consolidated Ice Company (Historical Collections 1938, 103).

An 1898 map of "Remsen Lake" and surrounding area in the collection of the Queens Topographic Bureau (Fig. 34) records Remsen's work on the pond. The outline of the pond was evidently regularized and the water now contained within graduated banks that must have been intended to prevent the pond's overflowing and creating a swamp all around it.

When was the pond finally filled in? According to a note in the Historical Collections, compiled in 1838, the pond was filled in "ten years ago" but whether this means ten years before the records were compiled (i.e. ca. 1928) is unverifiable, as there is no date next to the note. Seyfried (1991, 28, no. 42) published a photograph of Beaver Pond taken March 1906 that clearly shows that the pond still had plenty of water in it at that date. He cited an article in the *Brooklyn Daily Eagle*, April 3, 1906 that mentioned the impending filling, and claimed that the photograph was the "only and last view" of the pond because in June of that year (1906) "the pond was filled in and streets cut through". There is actually a second, early 20th century photograph taken by Charles Conklin that is illustrated on the cover of this report. Was the newspaper article, once again, wishful thinking? The 1911 Sanborn map shows several buildings on the southeast corner of block 10108 (partly overlapping project site 417), that belonged to the "Knickerbocker Ice Co.", and while this map no longer shows the pond, the 1912 Hyde map does. The mention of the pond's filling in a 1906 article (?) in the *Brooklyn Eagle*, cited by Seyfried, was not found; therefore the purported date of the filling has not been verified by this writer.

5. LOT HISTORIES: EVALUATION OF ARCHAEOLOGICAL SENSITIVITY

SITE 118 - BLOCK 9754, lot 25 (Figs. 4, 5, 6 and 7)

The LPC flagged this site as sensitive for remains of a historic cemetery. The question is whether any remains, either *in situ* or associated with the adjacent graveyard of Grace Church, may exist on lot 25. These could include burials or objects once associated with them, such as fragmentary tombstones.

Today the cemetery borders lot 25 on the west and south but is separated from it both by a chain fence that encloses the lot on these two sides as well as by a very noticeable difference in the level. The lot is on the top and side of a hillock some three feet above the surrounding cemetery, whose surface slopes down steeply towards the west a further seven feet to 155th Street.

The first church, erected in 1734, faced Parsons Boulevard (then Flushing Road), according to the 1782 *Pass* map, which shows the rectangular building running parallel to Fulton Avenue and the steeple on the Flushing Road side (Fig. 3). The map also depicts the outline of a small churchyard bordered by a row of trees. The church and its yard may have impinged upon the area of present-day lot 34, but it is not possible to determine the distance the original church was set back from present-day Parsons Boulevard. Judging by the outline of the roughly square plot on the opposite (east) side of the street, which was probably the basis for the later lot line of the town hall (Conklin 1886), the north side of the yard immediately surrounding the first church probably corresponded roughly to the north lot line of present-day lot 34. The wider plot in which the church was situated, however, would have included part of project site lot 25. We can not rule out the possibility that graves – perhaps unmarked (Ladd 1914, 347)-- were once dug in the area of lot 25 in the 18th century, or that fragments of tombstones from nearby burials might not be found on the undisturbed, rear portion of the lot (see below).

The 1842 Johnson map depicts the second church, measuring 76.5 feet in length before it was enlarged in 1846 to 90 feet (the same length as the present, third church). The building now faced Fulton Avenue but was set back from the road. The rectangular area surrounding the church, indicated by a dotted and dashed outline, may represent the limits of the (fenced?) churchyard. The north-south measurement of this area is equal to the length of the adjoining property of G. Phraner and Wm. H. Barroll, which surely corresponds to present-day lots 34 and 29. The third church, also set back from Jamaica Avenue, ends on the line of the north side of lot 29, as indicated on the 1868 Conklin map, now showing the lot lines of Phraner's property and the project site lot 25 immediately to the north. Although the cemetery occupies the remainder of the block, the area of present lots 34, 29 and 25 are clearly set aside from the cemetery and remain so on all subsequent maps (i.e. Fig. 8).

A complete list of the succeeding buildings on lot 25, as reconstructed from historic maps, is given in the Catalogue. There were no buildings on lot 25 in 1842 (Johnson). The Sunday school building on the project site was erected in 1856 on land donated by John Alsop (son of Rufus King), as was the horse shed (*Historical Collections* 1938, 162). According to Miss Charlotte Creed, the school, located "in the churchyard" was built in 1851 and used until 1913, when the Memorial House was built (Ibid.) The 1868 Conklin map shows two long, rectangular structures, probably the same "Sheds" (later "Horse shed") and "Vestry" as on the 1873 Beers map (Figs. 8 and 9). The vestry subsequently served as an Episcopal Church and as a Sunday school as late as 1911 (Sanborn and Fig. 9), but by 1925 had been turned into a commercial space used for "Hand Printing" (Fig. 10). Additions were made that filled the rectangular area between the transepts and the nave walls (Fig. 11). At the rear of the buildings, an area roughly 22 feet deep (east / west) by 62 feet long (north / south) on the southwest side of the lot was never built upon and may be archaeologically sensitive for 18th or early 19th century remains associated with the landmarked cemetery adjoining it.

BLOCK 9764, lot 77 – SITE 160 (Figs. 12, 13, 15 and 16)

In 1842 the project site was part of Dr. Nathan Shelton's tract of land and had no buildings on it. By 1868 (Conklin), the property belonged to F.W. Shelton and had been divided up into lots but not yet developed. The 1873 Beers shows the three rectangular plots that make up present-day lots 77 and 75 with houses at the front of the southernmost and central lots (Fig. 17). The first belonged to J. Fox; the second, noted as a residence, to A. Dunham. The same buildings are shown on the 1891 Wolverton map, except that Fox's property now belongs to W. Hardenbrook. On both maps, the third rectangular area on the north was part of a larger lot that extended to the western side of the block and belonged to J.A. Burdett in 1873, to "Burdett" without initials in 1891. On the 1901 Sanborn map, there are two sheds along the north lot line of the southernmost dwelling, now numbered 95 Flushing Avenue. The lots are now numbered 98, 97 and 96. The third rectangular area on the north (old lot 96), of which today only the rear portion west of lot 75 is included in lot 77, had a two-story barn on it (the building on the adjacent lot to the north was a shed, Fig. 19).

The dwellings shown on the 1911 Sanborn and 1912 Hyde maps may well be the same buildings (Fig. 18). The addresses, from south to north were 95 and 99 Herriman Avenue and the rear of 101 Herriman Avenue. A second home was built next to the dwelling on lot 98 between 1911 and 1942, but this was the only significant addition in the 20th century. The buildings were demolished between ca. 1951 (Sanborn) and 1955 (Hyde). The backyards were never impacted by subsequent construction and are therefore sensitive for historic archaeological remains consisting of 19th century cisterns and privies.

BLOCK 9764, lot 97 – SITE 161 (Figs. 14, 15 and 16)

The Shelton family also owned this property between ca. 1842 and 1868 (Johnson and Conklin, respectively), but by 1873 (Fig. 17) it was purchased by A. Dunham and a large building erected on the Shelton Avenue side (also shown on the 1876 Dripps map, where the owner's name was not recorded). The block was not included in the Sanborn atlases made in the 1880s and 90s, but was included in the 1901 Sanborn atlas, where the building

appears as two (?) semi-detached dwellings (Fig. 19). A third building of approximately the same length and width as one of the two older structures appears on the 1925 Sanborn map on the west lot line (fig. 20). By 1951, the buildings were torn down and the lot remained vacant until the present time. The rear portion was never built upon and is therefore sensitive for historic archaeological remains consisting of 19th century cisterns and privies.

BLOCK 9908, lot 10 – SITE 246 (Figs. 21, 22, 23 and 24)

This is the only site reviewed here that was not in Jamaica Village (Figs. 1. and 2.B.). It was located just "over the border" in Hollis, also known as East Jamaica. This was still countryside in the late 19th century and the streets bordering the project site, Eden and Colton Avenues, were not yet created (Wolverton 1891). The area was not suburbanized until the 1890s, and even then, change came slowly (Kroessler 1991, 169). On the Town Map of Jamaica in the 1873 Beers Atlas, the project site is at the western edge of school district no. 2. This very small scale map depicts a row of houses on the north side of the Hempstead Turnpike but does not record the name of the property owner(s). The 1891 Wolverton map of the Town of Jamaica shows the toll house near the western edge of the land belonging to A. Stark. The East Jamaica toll gate was located between 186th and 187th Streets on the north side of Jamaica Avenue (removed in 1897, Seyfried [1953], 2; Historical Collections 1938, 32). More specifically, it stood "...just west of where Cree's Hardware store is now, 186-13 Jamaica Avenue..." (Winans 1934), which would place it on the project site (18609-18611 Jamaica Avenue). Jamaica Avenue was widened at least twice after 1901 from 70 to 100 feet, which it is at present. But the houses shown on the 1926 Sanborn map on Jamaica Avenue, when the street was 75 feet wide, are still standing today, and therefore the area of the project site – where the buildings shown on the 1901 map were located (Fig. 25) – was not impacted by these alterations. West of the toll house and adjoining it was Thomas T. Husson's house; east of it was his store (Historical Collections, vol. 13, 29, n.d.). After the toll house was abandoned in 1893 its last keeper, John Watts, moved to Jamaica (Ibid.). It is not clear exactly where the toll station stood in relation to the modern avenue, since it straddled a ten- to twelve-foot entrance to the

private toll road (Seyfried [1953], 2). The street evidently did narrow at this point (Sanborn 1901).

The 1901 and 1912 Hyde and Sanborn maps depict two two- and one- story frame houses on the street and several barns or sheds at the rear (Fig. 25). By 1901, as indicated by the Sanborn map, an eight-inch water pipe had been laid in the street in front of block 9908. By 1926 (Sanborn), the project site had acquired its present commercial character with the erection of a two-story paint shop at 18615 Jamaica Avenue near the eastern edge of the project site. In the ensuing decades, other paint shops were built on the front of the lot at various addresses (Sanborn 1951; Sanborn 1963; Fig. 26). Since a new row of homes is in the process of being erected on the project site, set back about ten feet from the front of the lot and extending to the north lot line of the adjacent lots to the west (approximately 75 feet), the earlier building history for this part of the project site is moot. The present structures cover the area formerly occupied by the 19th to early 20th century farm houses plus perhaps about twenty feet behind them, and the cistern or cisterns that might have been built on the rear of these earlier buildings are not likely to have survived. The rear of the lot, however, has remained largely undisturbed by subsequent construction episodes in the 20th century -- aside from the one-and-a-half story frame building in the northwestern quarter of the lot that was once a woodworking shop, later connected with L.I. Screens Weather Strip Work" (Sanborn 1926, 1951; Fig. 26). This leaves open the possibility of recovering a privy associated with a dwelling or the toll house that stood on or immediately adjacent to the project site in the 19th century. The site is therefore considered sensitive for historic archaeological remains consisting of 19th century privies.

BLOCK 10095, lot 32 – SITE 401 (Figs. 27, 28 and 29)

The 2005 Sanborn map (Fig. 29) assigns this triangular area at the tip of block 10095 its own block number, 10096, and shows it separated from block 10095 by 151st Street. In reality, the project site is the parking lot of the Access-a-Ride garage and there is no public thoroughfare across the site, which is fenced (Fig. 27). The street was closed ca. 1955 (Alterations map 1955). But 151st Street, formerly Division Street, is in the project site

area, making up its western 35 feet. The former street front on Division Street measured 114.67 feet (Fig. 33).

The first houses were built between 1842 (Johnson) and 1868 (Conklin). The Conklin map gives the name of the owner of the triangular plot at the southern end of the block, Colton, and shows a long building (or buildings) on the west side of this plot on 151st Street, with a rear extension (?) of the building nearest the southern tip of the block running back to Beaver Street. The same buildings appear on the 1873 Beers (Fig. 30) and 1876 Dripps maps. the owner was "Mrs. Colton". The Beaver Street side of the project site was vacant. On the 1886 Sanborn map the lot is occupied by a row of "Tenements" on 151 Street at numbers 122, 123, 124, 125 and 126, and there are two small buildings on Beaver Street, one at number 339 (Fig. 31). This map shows a reservoir immediately north of the project site in the street. Water pipes were laid in both Beaver and Division Streets by 1901 (Sanborn).

The area of potential archaeological sensitivity is the rear of the building shown on the earliest maps. Two two-story buildings are shown on the 1912 Hyde map on the Beaver Street side of the lot at its northern end (Fig. 32). The southern of the two (66 Beaver Street), seems to have survived until at least 1955 (Sanborn 1925 and Fig. 33). On the 151st Street side, there were three small, one-story buildings that extended approximately half-way down the west street front (Fig. 33). There was no building opposite these on the Beaver Street side of the lot, leaving the rear of the former buildings and their yards behind the original developments unaffected by later building. At the southern end of the lot there was no construction following the frame structure on 151st Street, leaving the tip of the triangle free of negative impacts from subsequent building episodes. All of the buildings on the project site were demolished between 1955 (Hyde) and 1973 (Sanborn) and the site has remained vacant to the present time. Although water was evidently supplied by 1886, there were earlier buildings on the site -- from at least 1868 -- that might have predated the installation of the reservoir in the street and used their own cisterns. This project site is therefore considered sensitive for historic archaeological remains consisting of 19th century privies and cisterns.

BEAVER POND SITES – BLOCKS 10107 and 10108

In the introduction (Section I.A., above), it was suggested that the filling of the pond would have covered the 19th century and earlier ground surfaces. Indication of a rise in level is provided by comparing the Final Section map of 1916 with the 1901 Sanborn map. Both give elevations on Liberty Avenue approximately in the center of block 10108. The former notes a level of 29.3 feet, the latter, 23 feet, indicating a rise of approximately 6.5 feet. The 1916 map shows the elevation of the contours as well as elevations in the streets, which should logically indicate the natural topography versus the artificially created one, respectively. The elevation at the intersection of Tuckerton and Liberty Streets is 28.0 feet. This area is within the 20 foot contour line representing the lowest level of the pond. Thus, the difference in level here is approximately 8 feet. As one moves west and east to the edges of the former pond, the difference in level disappears with the natural rise of the land, corresponding to the banks of the pond, to around 30 feet above m.s.l.

BLOCK 10107, lots 77 and 73 – SITE 410 (Figs. 36, 37, 39, and 40)

Lot 77 - 1523 Beaver Street.

The project site was depicted as vacant or not mapped on all the 19th century maps consulted and up to and including the 1901 Sanborn map (Fig. 43). The 1911 Sanborn map shows a brick building covering slightly more than half the lot and leaving a narrow passage on its south side. A water pipe was laid in Beaver Street by 1901, so these first residents would not have needed a cistern. Between 1925 (Sanborn) and 1951 (Sanborn), this building was extended and joined to the sheet metal works building on the adjoining lot 167, west of lot 77 in the center of the block (Fig. 44 and Sanborn 1963). Only the narrow alley on the southern side of the lot remained uncovered, and this strip was probably negatively impacted by the construction of the building. This lot is not considered sensitive for historic archaeological remains.

Lot 73 - 9533 150th Street

The site was not developed until after 1895 (Wolverton 1891; Hardenbrook 1895). The 1901 Sanborn map is the first to show a building on lot 73 (Fig. 43). It is a two-and-a-half-story frame structure set back from the street. By this date, as noted above, a water pipe had been laid in Beaver Street, so that residents would not have needed their own cisterns. The 1911 Sanborn map depicts a second, small, one-story dwelling at the rear of the yard, almost on the lot line, and a one-story shed is recorded in the northeast corner of the lot. The two-story store on the front of the lot now had a one-story wing in front of it running to the west lot line and the street. By 1925, a one-story extension, approximately half the width of the lot and a third of its length was added to the rear of the two-story wing, running along the south lot line (Sanborn 1925). The lot coverage reached its maximum extent by 1951 (Fig. 44). An area measuring approximately thirty feet long on the north half of the lot, and about fifteen feet on the south half remained vacant. The former could conceivably contain the remains of a privy associated with the store on the front of the lot. The southern part of the yard had been previously covered by the 1911 dwelling. Although water service was available by 1901, sewerage was another matter, and many buildings probably used privies into the early 20th century. The possibility of such a backyard feature associated with the early 20th century occupation at this address may not be entirely ruled out, and this lot is therefore considered sensitive for historic archaeological remains consisting of an early 20th century privy.

BLOCK 10107, lots 86, 84, 130, 82 - SITE 411 (Figs. 38, 41, 42)

Lots 86, 84 and 130 make up a roughly triangular area. Lot 86, the top of the triangle, narrows sharply to the east. Lot 84, a parallelogram, fronts on Beaver Street, while lot 130 lies directly behind it to the east. Lot 82 adjoins lot 84 and part of lot 130 on the south. The area of sites 410 and 411 appears on historic maps as a wider piece of dry land at the edge of the pond. It may be noted that the level rises comparatively steeply on this side of the water, which would have promoted drainage.

Lot 86

The lot was still vacant in 1842 (Johnson). Both the 1868 Conklin and 1876 Dripps map show a house belonging to P. Carroll on this triangular-shaped lot. A second dwelling appears on the 1891 Wolverton map immediately south of it, which is clearly the same building as the two-story brick store with one story rear annex still depicted on the 1901, 1911, 1925, and 1942 Sanborn maps (Fig. 43). It is distinguished by a very unusual feature: it was "cut" by the south lot line. The series of Sanborn maps also all show a smaller, one-and-a-half story dwelling next to the store on lot 9 to the north, and it is likely that this is Carroll's old house. The 1901 Sanborn depicts a shed behind the house, on the north lot line (Fig. 43). The Conklin map shows it more or less next to J. Holliday's dwelling with the next building to the north belonging to the late I. Simonson. This was a larger structure set further back from the street. These are surely the same series of buildings as shown on the 1901 and later Sanborn maps, on old lots 7, 8, and 9 (north to south). By 1955, the building was removed and there has been no further building on the lot save for the one-story frame shed shown on the 1925 and 1942 Sanborn maps near the rear "tip" of the lot, and a shed shown on the 1955 Hyde map across the middle of the lot, approximately. The former backyard must have contained a privy and it is also likely that the house had a cistern in the rear, neither of which would have been negatively impacted by subsequent construction. This lot is therefore considered sensitive for historic archaeological remains consisting of 19th century privies and cisterns. Given the proximity of Beaver Pond and the absence of appreciable impacts (aside from the privy) in the rear portion of this lot, it is also considered sensitive for prehistoric archaeological remains.

Lot 84

The lot is shown vacant on the 1868 Conklin and 1876 Dripps maps and was not mapped by Sanborn until 1901, by which time water pipes had been laid in the street. But a building does appear on this lot on the 1895 Wolverton map. The 1901 Sanborn depicts a two-story brick store with one-story rear wing and a two-story shed on the rear lot line (Fig. 43). A one-story shed was later built along the north lot line (Sanborn 1942) and by 1951

(Sanborn), a new, two-story storage building was erected that ran the width of the lot against its rear lot line. The buildings were removed between 1955 (Hyde) and 1973 (Sanborn) and the yard between the house and the shed was never built upon. As noted above, a reservoir and later, piped water, were available in the 1880s-1890s, so that the dwelling on this lot probably did not have a cistern. But it might have been equipped with a privy. This lot is therefore considered sensitive for historic remains consisting of a late 19th to early 20th century privy. The proximity of Beaver Pond and the likelihood that approximately a third of the lot has not been disturbed by construction means that it is also archaeologically sensitive for prehistoric archaeological remains.

Lot 130

On the 1891 Wolverton and 1901 Sanborn maps this lot is shown more than half submerged beneath I.B. Remsen's Ice Pond. Neither that part, nor the western half, which was not submerged, has ever been built upon, to the present time. This lot is therefore considered archaeologically sensitive for prehistoric archaeological remains.

Lot 82

There is no evidence of development prior to ca. 1901 (Sanborn), by which time water service was available. The Sanborn map of that date depicts a commercial building on the front of the lot, a two-story brick store (Fig. 43). By 1911 (Sanborn), a small, one-story wing was added to the rear of the building. This building survived until between 1955 (Hyde) and 1973 (Sanborn), when it was torn down. The yard was never built upon. As noted above, water service and sewerage are two different matters, and while drinking water was available in the project site area, the early 20th century occupants of the lot may still have had to avail themselves of a privy. The lot is therefore considered sensitive for historic archaeological remains. In view of the lot's proximity to the pond it is also considered sensitive for prehistoric archaeological remains.

BLOCK 10107, lot 138 – SITE 413

BLOCK 10106, lot 142 – SITE 414 (Figs. 45, 4647, and 48)

These two adjacent sites may be considered together as they have the same history. Both were once submerged under Beaver Pond, and since the pond was filled in, in 1906, have never been developed (Figs. 34 and 57). Lot 142 has had a few small, one-story structures on it at various times, mostly along its southern edge (Sanborn 1925 and Fig. 49), and there is a currently a row of similar buildings -- offices and containers -- on Liberty Street and at the southeast corner of the lot. Similar structures are presently standing at the edge of lot 413, fronting Tuckerton Street. These must be fairly new additions as neither the 2005 aerial view of the site nor any of the historic maps show any buildings on the lot. Both lots were under water in the 19th century, and while the water level in the pond has surely varied over time, both sites lie almost wholly within what was the deepest part of the pond or at least, the swampiest, according to the Final section map (Fig. 50). Although shell middens may be found half submerged, at the edge of bodies of water, sites 413 and 414 were in the middle of the pond. There is therefore a low probability of recovering prehistoric remains in the area of these project sites and they are not considered sensitive for such remains.

BLOCK 10108, lot 348 – SITE 416 (Figs. 51, 53, and 54)

This site was located on the southeast side of the pond. A long, narrow building is shown on the lot on the 1868 Conklin and 1876 Dripps maps (Fig. 55). At that time, the property belonged to Benj. Simmons. Later, J.C. Remsen's ice house, shown on the 1891 Wolverton map, partly overlapped the northeast end of the lot (Fig. 57). It is depicted as a large, roughly square, frame structure. This building no longer appears on the 1901 Sanborn map, which records a long, narrow, one-story shed on the lot only. This building is in the same position as the frame stable or shed shown on the 1911 Sanborn map as part of the "Knickerbocker Ice Co." (Fig. 58). On later maps, the lot is vacant. Berger's discussion of the apparatus and processes that were employed in the ice industry in the late 19th century concluded that the archaeological visibility of this type of 19th century

manufacture would not be distinctive since it did not require installations built into the ground but employed movable equipment that would have been taken out when the factory was closed down (Berger 1993, 16-21). The 1942 Sanborn map shows a one-story brick tractor shed on the western, narrower end of the lot. Although today the lot is merely paved but largely devoid of buildings, most of its area has been impacted at different times by construction, beginning with Benj. Simmons' building through the ice house and later the tractor shed. The land here rises very gradually so that even the difference in level after the pond's filling was still only a few feet (Fig. 62). But a small part of the western end of the site was not built upon in the 19th century. This would have been covered by a few feet of fill when the pond was filled and prior to the construction of the tractor shed in the early 20th century. Given the site's proximity to the lake and the historical accounts which record an Indian presence on the south side of the pond, it is perhaps better to err on the side of caution. This part of lot 416 is therefore considered sensitive for prehistoric archaeological remains.

BLOCK 10108, lot 305– SITE 417 (Figs. 51, 53 and 54)

Located south and west of site 416 and also formerly at the eastern edge of Beaver Pond, site 417 has not been subjected to any appreciable negative impacts resulting from development and therefore possesses potential for prehistoric archaeological remains. The lot may also be sensitive for historic archaeological remains. The 1868 Conklin and 1876 Dripps maps record a small building on the western side of the lot, set back from Liberty Avenue (Fig. 55, although the 1873 Beers map does not). This lot was also part of Benj. Simmons' property at that time. A larger frame building in approximately the same place appears on the 1891 Wolverton map, when the property belonged to J.C. Remsen (Fig. 57). The 1901 Sanborn map depicts a two-story building in a slightly different location, on Liberty Avenue. This dwelling is still represented on the 1911 Sanborn map and 1912 Hyde map, but was torn down by 1925 (Sanborn; Figs. 56 and 58). In 1911, it appears to have been connected to the Knickerbocker Ice Co., whose other industrial buildings stood on lots 416 (above) and 301 on the corner (not one of the project sites). At the rear of the dwelling was a one-story "Wagon Shed" (Fig. 58). The

rest of the lot was vacant. It is likely that a small part of this lot was removed when Catherine Street was enlarged and renamed Liberty Street, between 1911 (Sanborn) and 1916 (Final map). But no record of this street alteration was located at the Queens Topographic bureau. The location of Catherine Street in relation to Liberty Street is shown on the plan, Fig. 35, dated 1928. Note that the entire block and much of the adjacent property at that time still belonged to the Knickerbocker Ice Company. The company's wagon shed, shown on the 1925 Sanborn map, no longer appears on the 1942 map, which depicts only a one-story office building at the southwest corner of the lot on Liberty Street. On later maps, the lot is vacant, and aside from a small office building, garage, and container on Liberty Avenue, the rear of the lot has remained vacant. In view of the absence of building on most of the lot, and its proximity to Beaver Pond, this lot is considered sensitive for prehistoric archaeological remains. Moreover, backyard features connected with what was probably Remsen's dwelling, shown on the 1891 Wolverton map, and which was very likely the same two-and-a-half story building that survived until 1911, would not have been disturbed by subsequent construction. This lot is therefore also considered sensitive for historic archaeological remains consisting of a late 19th to early 20th century privy and cistern.

BLOCK 10108, lots 312, 319 – SITE 418

BLOCK 10108, lot 316 – SITE 419

These two sites may be considered together because they have the same history. On all the historic maps beginning with the *Pass* map of 1782, they are shown under Beaver Pond (Figs. 3, 34, 56, and 57). They lie inside the lowest contour recorded on the 1916 topographic map. To the east, the ground rises slowly so that even if at times in the Archaic period these lots were not submerged, they would probably have been very boggy. The first building on either site is the small, one-story structure shown on the 1942 Sanborn map on lot 312. Otherwise, these sites have remained vacant except for various containers and sheds. As in the case of project sites 413 and 414, in view of topographic considerations, neither of these sites is considered sensitive for potential prehistoric remains.

BLOCK 10109, LOTS 31, 44 – SITE 420 (Figs. 59, 60, and 61)

The 1782 *Pass* map indicates that the site was at that time possibly partly or wholly under Beaver Pond (Fig. 3). The 1842 Johnson map shows it as part of the "Public Square". The Final Section map (1916), however, records that the elevation of most of the project site is about ten feet higher than the area corresponding to the center of the former pond.

Lot 44

This small lot, located in the southwest corner of block 10109, was built upon already by 1868 (Fig. 63). The building shown on the Conklin map of that date, fronting on Liberty Avenue, is evidently the same as the one depicted on the 1873 Beers, 1876 Dripps and 1891 Wolverton maps on the property of Isaac B. Remsen. The dwelling still appears on the 1901 Sanborn map (Fig. 64). On the 1911 and 1925 Sanborn maps, this two-story dwelling with one-story wings at the front and in the rear is shown running along the east lot line (Fig. 65). There is a building on the east lot line on the 1942 Sanborn but it is only one story high. There was no other construction on the lot in the period from ca. 1868 to 1942. From 1955 until the present the lot has remained vacant. The original dwelling was surely equipped with a privy and cistern, and since the lot has not been disturbed by any subsequent construction episodes, it is considered sensitive for historic archaeological remains consisting of a 19th century privy and cistern. In view of topographic factors -- the proximity of Beaver Pond and the site's elevation -- lot 44 is also considered sensitive for prehistoric remains.

Lot 31

The 1868 Conklin and 1876 Dripps map record a long, narrow building and two smaller structures on the west side of the lot near the rear. On the 1891 Wolverton map these are replaced by a single, large frame building that was slightly set back from the street and located near the northwest corner of the lot. By 1891, a new "housing development" had been erected on Liberty Street consisting of a row of nine small, frame dwellings with

narrow rectangular yards marked out behind them (numbers 1-9, Fig. 64). The rear of lot 44 remained vacant. These houses were demolished between 1912 and 1925 (Fig. 56), by which time the lot had become city property and the site of a "City Incinerator" (Fig. 65). The incinerator stood at the corner of Liberty and 158th Streets while the rest of the block, except for a U-shaped concrete runway, was vacant. By 1942 (Sanborn), the incinerator had been removed and the lot was completely devoid of buildings. There has been no subsequent construction on this lot to the present time. In view of the site's proximity to Beaver Pond and its elevation and the fact that the rear of the lot was only impacted by sparse building in its northwest, this lot is considered sensitive for prehistoric remains. Water pipes were installed in the street by 1901 (Sanborn), and water was probably supplied earlier through reservoirs. But the residents at 1-9 Liberty Street might well have used privies. Since their yards have not been impacted by construction, this lot is therefore also considered sensitive for historic remains consisting of late 19th century privies.

BLOCK 10113, lot 71 – SITE 422 (Figs. 66, 67 and 70)

The site today is not accessible due to the closing of Tuckerton Street north of Liberty Avenue in 1980 (Alterations map 1980). Styler Street was eliminated in 1965 (Alterations map 1965). Temporary sewer easements 14.18 ft. wide were mapped on either side of the former roadway at that time (Ibid.).

The 1782 *Pass* map indicates that the site was at that time at the edge or under Beaver Pond, near the stream that drained the pond. On the 1842 Johnson map it is part of the "Public Square", an area of swampy land. The site's elevation is low, the same as that of the pond bottom, about 20 feet above msl. These conditions make it an unlikely location for settlement but leave open the possibility of its being visited for fishing, shell collecting or hunting.

There was no building on this site prior to 1912: the first dwellings were erected between that date and 1925 (Sanborn), when dwellings are represented on Styler Road. No water

pipes are shown in the street on the 1925 Sanborn map and the residents may still have had to resort to privies for some years. But the shape of the old lot, a rectangle running parallel to Styler Road, would have meant digging the privies in the area between the two dwellings, facing the road. Water pipes were installed in Styler Road by 1942 (Fig. 71). The area north of the dwellings was originally a separate lot and by 1925 was almost completely filled with the one- and two-story buildings of an "Auto Wreckers" (Sanborn). The same buildings are shown on the 1951 Sanborn map, but the 1955 Hyde map records only the two dwellings on Styler Road. By 1973 these had been torn down and the lot remained vacant to the present time. In view of the late date of the first buildings on the lot and the construction of both domestic and industrial structures on most of its area, this lot is not considered sensitive for either prehistoric or historic archaeological remains.

BLOCK 10115, lot 53 – SITE 423 (Figs. 68, 69, and 70)

The site today is not accessible due to the closing of 156th Street, 156th Place, and Guinzberg Road in 1980 (Alterations map 1980).

On the 1868 Conklin map, the owner of the land containing the project site lot is recorded as "I.B. Remsen"; on the 1873 Beers and 1876 Dripps maps, it is "E. McGinnis Est." These maps do not show Hackett Street, which first appears only on the 1891 Wolverton map. The 1901 Sanborn map shows the property divided up into lots. Originally, lot 53 was made up of three old lots and part of a fourth. There were two sets of old lot numbers and street addresses, all of which may be found in the Catalogue. Only one of the old lots, lot 20, had a two-story dwelling on it by 1901 (Sanborn), by which time a water pipe had been laid in South Street. A second lot, south of lot 20, (lot 21) was developed by 1911 with the construction of a one-story dwelling. By 1925, a third building was erected on the north side of the building on lot 20, also a two-story dwelling. The southernmost third of lot 53 was not developed until after 1925. A two-story dwelling is depicted on it on the 1942 Sanborn map. Half or more of the rear portions of these old lots were not built upon, with the exception of a couple of sheds: one in the northeast rear corner of old

lot 21 and one in the center of old lot 20 (possibly two different sheds at various times, one on the north lot line, the other on the south, but both approximately in the center of the lot). The buildings were demolished between 1955 and 1973 and the lot has remained vacant to the present day.

In sum, no more than approximately half the depth of these 157.5 foot long lots was ever built upon, leaving a large area free of disturbance from construction. The site was originally on the southeast side of Beaver Pond, lying at between approximately 25 and 30 feet above msl. Historic records suggest that there was an Indian presence on the south side of the pond. In view of these topographic considerations, historical data, and the absence of negative impacts from successive building episodes, this site is considered sensitive for prehistoric remains. The earliest of the three dwellings on the project site, on old lot 20 may also have been initially equipped with a privy. This portion of the lot is therefore also considered sensitive for historic remains.

BLOCK 10151, lot 7 – SITE 463 (Figs. 72, 73, 78 and 79)

Located in the heart of old Jamaica village, the front of this lot, facing Jamaica Avenue, was formerly the location of the "Female Seminary" (Fig. 80). This institution was created by the Trustees of Union Hall Academy, which was the first school in Jamaica not run by one of the churches. It was founded in 1792 (Prudhon 1974, 18). The building was erected in 1843 -- on the 1842 Johnson map, the lot is shown still entirely vacant (Historical Collections 1938, 30; Prudhon 1974, 30). The seminary was a boarding school intended to accommodate thirty to forty young ladies, who would there receive instruction in "all the branches of a polite and well finished education" (Munsell 1882, 229). Except for a shed near the southeast corner of the lot, there were no substantial changes either to the building or to the rear of the lot throughout the remainder of the 19th century, although the building ceased to function as a woman's school ca. 1900. On the 1901 Sanborn map it is labeled "Colonial Hall". On the 1912 Hyde map it is marked both "Colonial Hall" and the "Wheelmen's Club House". But on the 1912 Sanborn it is a "Public Library" (Fig. 81. The library opened at this location between 1902 and 1908,

Manufacturing 1913, 95). Between 1897 and 1901 (Sanborn), the building was considerably enlarged at the rear and on its east side. In 1923, the Stuart Building, a large store, was erected on the site (Fig. 82). A cement shed belonging to the industry on lot 468 encroached on its southwest corner, the area overlapping lot 468 and presently once again part of lot 463 (Fig. 82). In the 20th century, the 19th century yard has served as a parking lot and has never been built upon.

Since the Female Seminary was also a residence, privies and cisterns would have been required and used for decades before water or sewer service became available. The cisterns, if located on the rear of the building (as is usually the case), would not have survived the various rebuildings and additions to the original structure or the erection of the Stuart building. The privies, however, probably located further in the rear, might well be intact, as the yard has not been disturbed by subsequent construction episodes. This lot is therefore considered sensitive for historical remains consisting of 19th century privies.

BLOCK 10151, lot 75 – SITE 468 (Figs. 74, 75, 78 and 79)

The lot was still vacant in 1842 (Johnson) and was part of a large tract of land belonging to Cornelius Duryea, whose home stood on 165th Street side of the property. By 1868 (Conklin), the west side of lot 75 was divided up into more than a dozen narrow lots, which would eventually be occupied by a row of small shops, but were instead incorporated in "S. & E. C. Hendrickson's Coal & Lumber Yard". Lot 75 and surrounding area remained an industrial site well into the 20th century. In the 1870s, the Hendricksons built a row of coal sheds along the entire east side of their property about twenty-five feet behind the row of buildings already standing along Guy R. Brewer Boulevard (Fig. 80). In the late 19th century, two railroad tracks connecting the yard to the Long Island Railroad were run across the entire length of the yard in front of the row of coal sheds. The Hendrickson's owned the yard until the early 20th century (1901 Sanborn).

By 1912, the yard was taken over by "Frank R. Smith Masons Supplies & Coal Yard" (Fig. 81). Smith expanded the operation eastwards onto the land that was originally part

of the seminary property, and beyond, to where a garage stands today. The 28.5 foot wide strip of land now making up the eastern edge of lot 75, running south of lot 7 (see above), was originally the property of the seminary and was not subsumed by lot 75 until the first decade of the 20th century (1901 Sanborn and Fig. 81). The southern edge of the lot was occupied by "Fred Adee Company Plumber Supplies" (Fig. 81). A railroad track appears on the 1912 Sanborn map branching west to run in front of his shop. By 1925, a third rail line was added that ran west of the first most of the way up the lot (Fig. 82). The coal yard closed after 1925 and by 1945 a row of shops had been built facing Guy R. Brewer Boulevard. The row was completed at its southern end between 1951 and 1955 and a bus station for the Queens Bus lines erected also during those years (Sanborn 1951 and Fig. 83). The building ran directly behind (east) of the shops on the south lot line. In 1972, the present row of larger commercial buildings was constructed along Guy R. Brewer Boulevard and the old bus station replaced by a wide structure that occupies the entire south side of the lot (Sanborn 1973). Virtually the entire area of this lot has been disturbed by the buildings and installations connected with the coal and lumber business that occupied it through much of its history. The archaeological visibility of this type of industry is not distinctive due to the lack of installations built into the ground. This lot is therefore not considered sensitive for either prehistoric or historic archaeological remains.

BLOCK 10151, lot 116 – SITE 469 (Figs. 76, 77, 78, and 79)

This lot consists of two arms, one running east-west approximately in the middle of the block and designated "92nd Rd." ("north side") on the 2005 Sanborn map, the other running north-south from the first, at its western end, and labeled "164th Street" ("south side"). Neither road was ever opened. The alleyway at the eastern end of the north side ran between the two buildings on 165th Street that stood at the south end of the "Parsonage M.E. Church" in 1868 (Conklin), noted on the 1873 Beers map as a "Carriage Sh[op]" (Fig. 80). These buildings still appear on the 1876 Dripps map but are no longer shown on the 1886 Sanborn map. From that time until the end of the century, the alley ran along the north side of the "Horse Sheds" on the property of the "First M.E. Epis.

Ch." (Wolverton 1891), across the lot of John H. Sutphin and onto the land of John Leech. At the western end of the north side there were several one-and-a-half story barns (Map of property 1862). They stood here, in the middle of a vacant tract of land, far behind the two-story dwelling at 633 Jamaica Avenue -- about 150 feet south of it -- from ca. 1886 (Sanborn) until after 1912 (Fig. 81, but the configuration of sheds is slightly different). The first building on the south side of lot 116 was the rear wing of Michael's Department store, erected between 1925 and 1945 (Sanborn maps; Fig. 83). That portion of the building was torn down after 1973 (Sanborn).

The north side alleyway will no doubt have been much disturbed by the construction of the large clothing manufacturing building on its north side and the open deck parking that occupies the southeast corner of the block. As for the western part of the north side, it would have been much too far from the dwelling on Jamaica Avenue for a privy. There are no dwellings associated with the south side in historic times before the Michael's Bros. extension. This lot is therefore not considered sensitive for historic archaeological remains.

BLOCK 10156, lot 17 -- SITE 475 (Figs. 84, 85, 86 and 87)

The 1782 Pass map records two buildings near the project site (Fig. 3). One was on Jamaica Avenue, near the corner of Canal Street, the other, on Canal Street near Jamaica Avenue. Neither the exact location nor the purpose of these buildings could be verified, but there is a possibility that the latter was on the project site.

A row of buildings on Canal Street, first recorded on the 1842 Johnson map, were evidently commercial in nature. They were part of L. Reeve & Co.'s establishment. This map also shows a large building that extended to the rear (west) lot line. But until very recently, a large, one-story storage building on the north lot line covered approximately 43 feet of the lot's 104.65 feet width, ending only a few feet short of west lot line (about

four feet, Fig. 87).¹ This portion of the lot ("north section") may therefore be eliminated from consideration for potential archaeological sensitivity: All but the southern end of the structures shown at the rear of the lot on the 1842 Johnson map stood in the area of the north section.

The southern 60% of the lot had buildings on it in the 1840s to 70s on the front of the lot, along Canal Street, and at the rear. On the 1868 Conklin, 1873 Beers and 1876 Dripps maps, lot 17 was part of a large property on the corner of Jamaica Avenue and Canal Street that belonged to Jacob Smith (Fig. 89). The smaller building on the south side of the lot may already be the shed identified on the 1886 Sanborn map as a carpenter shop (Fig. 90). On the 1891 Wolverton map, the lot was made up of parts of four old lots belonging to: C.E. Zimmer, at the corner of Jamaica Avenue and Canal Street; M. Meegan, west of Zimmer's; a lot running perpendicular to Canal Street south of these with no owner named, and part of the property of S.T. Wooley Est. south of this, on Canal Street. Note that the two roughly equal parts making up the present-day lot were not drawn until ca. 1951. Prior to that date, the southern half of the lot was either part of a larger lot, or made up of one and part of a second lot (or of two lots, Hyde 1955). A detailed list of the old lot numbers, their configuration, the addresses associated with them, and the various sheds etc. located on them, are included in the *Catalogue*.

From 1886 (Sanborn), the building on the south side of the lot, first depicted on the 1868 Conklin map, may be identified as a carpenter's workshop. It survived in various forms – and was put to other uses, such as a wagon house – until between 1901 and 1912 (Sanborn maps). The portion of the lot extending from the rear of the earliest buildings on Canal Street to approximately half of the lot's depth and slightly overlapping the shed was covered by the two-story dwellings, approximately 36 feet long, that were erected between 1912 and 1925 (Sanborn 1912 and Fig. 91). Only a small area between the south side of the present storage building and the north side of the two-story dwelling formerly

¹ The street was widened between 1955 (Hyde) and 1989 (Sanborn) from 60 to 80 feet according to the maps, although no alterations map was located in the Queens Topographical Bureau that records this street widening. The width of the block before and after the street widening, however, remained the same, so the extra 20 feet was evidently taken from the east side of Canal Street.

located at 9214 Canal Street (Sanborn 1925) may enclose an undisturbed section, approximately 12 feet wide, of the backyard area that belonged to the earliest buildings on Canal Street and which could contain a cistern and privy connected with that period of the lot's occupation. Note, however, that the 1886 Sanborn records that the project site was situated approximately midway between two reservoirs, which might have obviated a cistern. The 1891 Sanborn map shows that water pipes had been installed in the street by that date.

The earliest buildings were part of a commercial establishment erected around a large yard that is north of the project site. This would appear to be a more convenient location for a privy or privies connected with that complex. The non-residential nature of the project site in the 19th century and the extent of disturbance from subsequent building episodes on the front of the lot, where the buildings were located, make it unlikely to contain any backyard features associated with that era of the site's occupation. The rear of the project site, however, was never built upon. There is a possibility that the 18th century building shown on the 1782 Pass map may have had installations connected with it that were located on the project site. These could include a privy, well, or cistern, or the foundations of the building itself. This site is therefore considered sensitive for historic remains connected with its possible occupation in the 18th to early 19th centuries.

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