Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130
4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and
4323 91st Place
Elmhurst, Queens County, New York

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EXECUTIVE SUMMARY

The private developers 45-10 94th Street, LLC and 91st Place Realty, LLC, as co-applicants, have proposed a zoning map amendment to rezone a large portion of Block 1600 in the Elmhurst neighborhood of Queens, New York (Figures 1-3). The proposed rezoning would facilitate development of a mixed-use residential and commercial development in an area currently zoned for manufacturing. Block 1600, a triangular-shaped area, is bounded by Corona Avenue on the southeast, the Long Island Railroad (LIRR) tracks on the northwest, 91st Place on the west, and 94th Street on the east. The proposed action would affect Block 1600, Lots 61, 80, 86, 99, 110, and a portion of Lot 130. The remaining portion of Lot 130 (a small portion fronting 91st Place) will not require a zoning change.

As part of the City Environmental Quality Review (CEQR) process, the Landmarks Preservation Commission (LPC) has requested an Archaeological Documentary Study of Block 1600, Lots 80, 86, 99, 110, and 130 (Sutphin 2007). Block 1600, Lot 61, was the subject of a previous Phase IA Archaeological Assessment prepared by Historical Perspectives, Inc. (HPI) in 2006. Lot 61 contains the former factory building most recently known as the Art Leather Factory, but which was built as the E.R. Durkee & Co. Factory and was later known as the Glidden Company Factory. The four-story concrete factory building, thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene, has been determined eligible for the National and State Registers of Historic Places by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (Bartos 2005). The building and lot recently were leased to the New York City School Construction Authority (SCA), which is converting the factory building into a new high school facility. For the purposes of this report, the entire project site is considered the Area of Potential Effect (APE) (Figures 2 and 3).

Results of the archival research indicated that the project site has a low precontact sensitivity. As such, HPI recommends no additional archaeological investigations are necessary for precontact resources.

The 2006 HPI report, which assessed the archaeological potential of Lot 61, concluded that historic period archaeological resources such as the remains of wells, privies, cesspools, or cisterns could exist under the paved parking lot on the southern side of Lot 61, in proximity to the former Ludlow House and Card family house (see Figure 12 for these locations). Yard features and/or activity areas associated with these former buildings could also exist under the parking lot if they have not been affected by later disturbance. The conclusions from the 2006 report still stand. However, no new impacts are planned by the SCA in areas deemed archaeologically sensitive on this lot and so at this time no further archaeological testing is recommended for Lot 61. If in the future the SCA or other owners of this lot undertake subsurface excavations in these sensitive areas, then Phase IB archaeological testing still would be recommended.

Of the additional lots studied as part of the current zoning map change project, only Lot 80 appears to retain any archaeological sensitivity, based on locations of former historic structures combined with a lack of documented disturbance to the ground surface. This lot is the former location of the Card family house, which was built by 1844 and stood until ca. 1917. Portions of the lot not covered by the garage (including the paved area now covered by parked cars) may not be significantly disturbed and may retain archaeological sensitivity (see Figure 12 for locations). At this time there are no plans to change the use of Lot 80; Lot 80 is not owned by either 45-10 94th Street, LLC or 91st Place Realty, LLC, co-applicants for the rezoning. Until such time as new construction or development is proposed for Lot 80, no further archaeological testing is recommended. However, if in the future new owners of Lot 80 propose subsurface excavations in these sensitive areas, then Phase IB archaeological testing would be recommended. No additional archaeological investigations are recommended for the remainder of the project site.
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I. INTRODUCTION

The private developers 45-10 94th Street, LLC and 91st Place Realty, LLC, as co-applicants, have proposed a zoning map amendment to rezone a large portion of Block 1600 in the Elmhurst neighborhood of Queens, New York (Figures 1-3). The proposed rezoning would facilitate development of a mixed-use residential and commercial development in an area currently zoned for manufacturing. Block 1600, a triangular-shaped area, is bounded by Corona Avenue on the southeast, the Long Island Railroad (LIRR) tracks on the northwest, 91st Place on the west, and 94th Street on the east. The proposed action would affect Block 1600, Lots 61, 80, 86, 99, 110, and a portion of Lot 130. The remaining portion of Lot 130 (a small portion fronting 91st Place) will not require a zoning change.

As part of the City Environmental Quality Review (CEQR) process, the Landmarks Preservation Commission (LPC) has requested an Archaeological Documentary Study of Block 1600, Lots 80, 86, 99, 110, and 130 (Surphin 2007). Block 1600, Lot 61, was the subject of a previous Phase IA Archaeological Assessment prepared by Historical Perspectives, Inc. (HPI) in 2006. Lot 61 contains the former factory building most recently known as the Art Leather Factory, but which was built as the E.R. Durkee & Co. Factory and was later known as the Glidden Company Factory. The four-story concrete factory building, thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene, has been determined eligible for the National and State Registers of Historic Places by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (Bartos 2005). The building and lot recently were leased to the New York City School Construction Authority (SCA), which is converting the factory building into a new high school facility. Although the LPC did not request additional study of Lot 61, because much of the information included in the 2006 Phase IA Archaeological Assessment also is applicable to the remaining portions of Block 1600, pertinent sections from the earlier HPI report will be excerpted or included in this Documentary Study, as relevant. For the purposes of this report, the entire project site is considered the Area of Potential Effect (APE) (Figures 2 and 3).

This Archaeological Documentary Study was prepared to satisfy the requirements of New York City’s environmental review process, and complies with the standards of the Landmarks Preservation Commission (LPC) and the City Environmental Quality Review Manual (LPC 2002; CEQR 2001). The HPI project team consisted of Julie Abell Horn, M.A., R.P.A., who conducted research and the field inspection and wrote the report; Katrina Raben, who assisted with the research; Luc Litwinionek, M.S., R.P.A., who assisted with the graphics; and Cece Saunders, M.A., R.P.A. who managed the project and provided editorial and interpretive assistance.

II. METHODOLOGY

The present study entailed review of various resources.

- Historic maps were reviewed at the Map Division of the New York Public Library, the Long Island Division of the Queens Borough Public Library, and using various online websites. These maps provided an overview of the topography and a chronology of land usage for the study site.
- Primary and secondary sources relating to the project site, its former occupants, and its vicinity, including historic photographs, were reviewed at the Long Island Division of the Queens Borough Public Library and using various online websites.
- Federal census records and limited city directory data were reviewed at the New York Public Library, the Long Island Division of the Queens Borough Public Library, and using various online websites.
- Selected deeds and other records pertaining to the property were reviewed at the Queens Borough City Register’s Office.
- Information about the project site at the New York City Department of Buildings (DOB) was reviewed. However, despite the DOB's online database that indicated numerous records for the project site, none of the actual files could be located by the DOB staff. Use of DOB records therefore was limited to information indexed on their online database and those Certificate of Occupancy permits available online.
- Soil borings for Lot 61 were provided by the SCA as part of a Phase II environmental study of that property. These borings are discussed below.
- A site file search was conducted at the NYSOPRHP and the New York City Landmarks Preservation Commission (LPC) sensitivity study for Queens was reviewed (Boesch 1997).
• Last, a site visit was conducted on August 7, 2007, to assess any obvious or unrecorded subsurface disturbance (Photographs 1-16).

III. BACKGROUND RESEARCH

A. CURRENT CONDITIONS

The project site consists of six modern tax lots, which are addressed separately, below.

Lot 61

Lot 61 is the largest tax lot within the APE, bordering 94th Street and the LIRR tracks. It contains the former Art Leather Factory building, a four-story (with basement) rectangular shaped concrete building constructed in 1917. At the time of the field survey, the former factory building was in the process of being converted into the new high school building by the SCA. Information about this lot can be found in the Phase IA Archaeological Assessment of the property prepared by HPI in 2006.

Lot 80

Lot 80 is an irregular-shaped parcel located at the northwest corner of 94th Place and Corona Avenue (Photographs 1 and 2). It contains a one-story concrete block automobile repair shop, built initially in 1941 and expanded during later years to include office space on the east, another automobile bay on the west, and additional garage storage space on the north. The area in front of the garage on Corona Avenue serves as a wide driveway for the shop, while the area at the corner of the two streets and extending up Corona Avenue and behind the building is used to store cars, and is enclosed by chain link fencing. The areas of the lot not covered by the building contain concrete and asphalt paving, in various states of disrepair. At the time of the field survey, however, much of the area along the 94th Street side of the lot was covered with parked cars, making visibility of the pavement difficult.

Lot 86

Lot 86, a rectangular-shaped parcel, contains two buildings (Photographs 3-8). The older building covers the majority of the lot, and is set back from the street. It is a long, rectangular one-story concrete block and brick building with an addition (including a basement level) along the southwest side. It has a concrete slab floor and concrete walls. At the time of the field visit it was being used as a warehouse. There is some discrepancy as to the building's age, as no New Building permits are listed with the DOB for this lot. Modern Sanborn maps note that it was constructed in 1924, yet the 1931 Sanborn edition depicts the lot as vacant. The more recent building on the lot is located on the eastern side, adjacent to Lot 80. This building, a two-story brick structure with a basement, dates to 1954, and is used as a factory.

Lot 99

Lot 99, a rectangular-shaped parcel, contains a Hindu temple, originally constructed in 1941 as two stores and altered in 1983 to become the temple building (Photograph 9). It is one story high brick building with a basement.

Lot 110

Lot 110, a rectangular-shaped parcel, contains another automobile repair shop, dating to 1954 (Photographs 10-11). The building is one story high, constructed of brick. Areas surrounding the building are covered with concrete and asphalt paving, in various states of disrepair. A number of cars covered the parking areas at the time of the field visit.

Lot 130

Lot 130 is the second-largest tax lot on the APE. It contains a rectangular-shaped section along Corona Avenue (which is located between Lots 99 and 110) and a roughly triangular shaped section within the interior of the block, which formerly contained ancillary buildings and structures associated with the Durkee Company and Glidden 2
Company factory on Lot 61 (Photographs 12-16). With the exception of driveways bordering Lot 99 on Corona Avenue and 91st Place on the northwest, this lot is completely covered by one-story brick warehouse/factory buildings. The buildings were constructed in two stages, with the first one built in 1961 (accessed from 91st Place) and the second one built in 1966 (accessed off Corona Avenue). Neither building has a basement; the concrete slab floors rest directly on the ground.

B. TOPOGRAPHY AND HYDROLOGY

Early maps of the vicinity of the study area record the topography and environment of the area at the beginning of historic development. Topographical maps made in the late nineteenth and early twentieth centuries show that in its natural condition the project site was approximately 50-55 feet above sea level and was generally level (Bien and Vermeule 1891; Queens Final Maps 1915). According to modern topographical maps, the property is still about 50-55 feet above mean sea level, suggesting there has been minimal overall change to the site’s elevation. The project site is about 2000 feet west and 2500 feet north of former wetlands that bordered Horse Brook (which in turn fed into Flushing Creek) (Bien and Vermeule 1891). Horse Brook was filled in during the twentieth century and is no longer visible within the urban landscape.

C. GEOLOGY

Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift, in reality an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. In the last million years, as glaciers advanced and receded three times, the surficial geology of the island, including the project site, was profoundly altered. “The glacier was an effective agent of erosion, altering the landscape wherever it passed. Tons of soil and stone were carried forward, carving and planing the land surface. At the margins of the ice sheet massive accumulations of glacial debris were deposited, forming a series of low hills or terminal moraines” (Eisenberg 1978:19). Circa 18,000 years ago, the last ice sheet reached its southern limit, creating the Harbor Hill moraine that traverses the length of Long Island. The moraine lies several miles south of the project site. North of the moraine, the complex rising and subsidence of the coastal plain, relieved of its glacial burden, and the rising sea level, caused by the volume of melting ice, created the coastline of embayed rivers and estuaries, with extensive marsh tracts, which stabilized approximately 3,000 years ago (Schubert 1968:195,199).

D. SOILS

The USDA soil survey for New York City indicates that the project site falls within a large area mapped as “Pavement & buildings, till substratum, 0 to 5 percent slopes.” It is described as:

Nearly level to gently sloping, highly urbanized areas with more than 80 percent of the surface covered by impervious pavement and buildings, over glacial till; generally located in urban centers (USDA 2005:14).

Additionally, as part of the SCA project on Lot 61 a Phase II environmental site investigation was completed which included 12 soil borings (Shaw Environmental & Infrastructure 2005). These soil borings were submitted to the SCA and copies were provided to HPI. Of the 12 soil borings, 4 were located on the southern side of the factory building, 2 were located on the western side of the factory building, and the remaining 6 were located on the northern side of the factory building. All of the soil borings were within the paved parking lot areas.

With the exception of one boring located at the western periphery of the property, which was abandoned at 3 feet below grade when the top of an underground basement was encountered, the majority of the remaining soil borings were extended as deep as the water table, which generally was found at 40 feet below grade. However, only 4 of the soil borings (on the north side of the factory building) provided descriptions for the entire soil column; the remaining 7 soil borings presented selected excavation increments and began the recording process at 5 feet below grade. The 4 soil borings that did provide data for the first 5 feet of the soil column indicated an upper layer of silty sand. It is likely that the silty sand stratum was the upper layer of natural soil throughout the site, although since the upper layer of soil was not recorded for the remaining soil borings, this cannot be confirmed. Lower strata recorded on the property generally consisted of sandy soils, often with some silt and gravel or pebbles noted as inclusions. Two of the soil borings, both located in close proximity to the factory building, encountered pockets of brick fill.
deep within the soil column (one boring found the fill at 25 feet below grade and the other at 37 feet below grade). This fill may be related to excavation and backfilling activities associated with the initial construction of the building. The fact that the strata above the fill were not also identified as fill suggests that there may have been some isolated tunneling or other intrusive excavations in these areas as the building’s basement was constructed.

E. ARCHAEOLOGICAL SITES WITHIN A ONE MILE RADIUS

Research conducted at the NYSOPRHP, the LPC, and the library of HPI revealed no precontact period archaeological sites within the project site. However, two precontact sites have been recorded within one mile of the project site. Boesch (1997) references a site (75A) situated on the north and south banks of Horse Brook, which was excavated by Ralph Solecki in the 1930s, but which has not been relocated since then. Boesch (1997) also references another site (20) originally recorded by Parker (1922) as “traces of occupation” along the west side of Flushing Creek. These sites are summarized in the table, below.

<table>
<thead>
<tr>
<th>NYSOPRHP Site #</th>
<th>Additional Site #</th>
<th>Distance from APE</th>
<th>Time Period</th>
<th>Site Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boesch 75A</td>
<td>Ca. 0.5 mile south</td>
<td>Unknown</td>
<td>Ca. 1 mile southeast</td>
<td>Unknown</td>
</tr>
<tr>
<td>Boesch 20</td>
<td>Ca. 1 mile southeast</td>
<td>Unknown</td>
<td>Traces of Occupation</td>
<td></td>
</tr>
</tbody>
</table>

Based on the proximity of Horse Brook and Flushing Creek, Boesch’s sensitivity study for the Borough of Queens (1997), commissioned by the LPC, labels nearly all of the Elmhurst, Corona and Flushing neighborhoods, including the project site, as possessing a high sensitivity for Native American resources. It should be stressed, however, that the identification of such a large urban area as highly sensitive for precontact resources is based primarily on the location of former natural water sources, and does not take into account modern construction and other disturbances to the original landscape. Last, Archaeologist/Historian Robert S. Grumet notes the presence of a Native American trail following the route of Grand Avenue to Roosevelt Avenue, which would have passed very close to the project site, although the map that Grumet provides is at a scale that it is not possible to determine exactly which modern streets correlate to the trail in the project site vicinity. Grumet does not identify any other Native American resources in the project site vicinity (Grumet 1981).

F. HISTORY OF THE PROJECT SITE

The present Elmhurst neighborhood, including the project site, was formerly part of the town of Newtown, whose boundaries once included the entire northwestern quarter of present Queens County, from the East River on the west and north to Flushing River on the east, and the moraine on the south. The village and town boundaries were established in 1652 and named Middleburgh by the Dutch governor, Peter Stuyvesant. In about 1663, the Newtown Commons were set aside, which included the project site, and in about 1700 this tract was divided (WPA 1938, Vol. 3:175). What is now known as Corona Avenue began as a colonial era country lane (informally called “Church Lane”) which passed between the Reformed and Episcopal churches and led to the Newtown Commons. In 1823, the road was formally opened as Dutch Lane; after the Civil War its name was changed to Union Avenue (Seyfried 1995).

The earliest mention of the project site itself was in relation to the “Ludlow House,” a structure that was built by Newtown Village resident Samuel Fish just north of Corona Avenue between the lines of 92nd and 93rd Streets, in about 1780 (WPA 1938, Vol. 3:175). From the 1770s through the 1840s, the property on which the house sat was owned by John R. Ludlow and Gabriel Ludlow (Liber E, 1774:167; Liber 59, 1842:98; Liber 59, 1842:95). This house formerly stood within the approximate boundaries of modern Lot 99 (where the Hindu temple now stands); its yard area would have extended into the adjacent lots (see Figure 12 for the house locations). Photographs of the house taken by Eugene Armbruster in 1922 and 1923 (on file at the Queens Borough Central Library’s Long Island Division; Photographs 17-20) indicate that it was a two-story frame building with a gabled roof, oriented roughly east-west and set back from the street. There was a porch along the side of the house facing Corona Avenue and two chimneys, one along the eastern side of the main part of the house, and another, smaller one within a one-story wing off the eastern side of the building, which presumably contained the kitchen. In 1929 the house was partially burned, and it was razed in 1930. The house appears to have been rented out for much of its history, and because there was no house numbering here during the nineteenth century, determining occupancy using available archival
records is difficult, although for at least a time it was used as a Methodist parsonage (WPA 1938, Vol. 3:175; Federal Census 1850, 1860, 1870, 1880, 1900, 1910).

At least by the 1840s, the project site had acquired an additional house. One of the earliest available historic maps, the United States Coast Survey from 1844, clearly shows the lines of Corona Avenue and Junction Avenue, which is one block east of the project site (Figure 4). Although the northern portion of the block appears to be undeveloped or used as farmland, three structures are visible along Corona Avenue. At least two of these buildings, presumably dwellings, were located within the footprint of the lots now covered by commercial buildings and the used car lot along Corona Avenue. The Sidney map from 1849 mirrors the information shown on the 1844 map, and identifies several of the owners or occupants of the houses just south of the project site (Figure 5). The eastern building is attributed to "C. Card" and the western building to "J.R. Ludlow."

C. Card is an abbreviation for Clark Card, a former Westchester County resident who in 1844 purchased 20 acres of land north of Corona Avenue (then known as Dutch Lane) formerly owned by Benjamin Betts and most recently owned by Daniel Morell (Liber 61, 1844:342). Card built (or perhaps acquired with the property) a house east of the Ludlow House, which appears on the 1840s maps. In 1847 he married his wife Elizabeth, and they, and their extended family (including William Card and Isaac Card), and at times various non-related male farm hands, lived on and farmed the property (including much of Block 1600) for the remainder of the nineteenth century and into the first decades of the twentieth century (Federal Census 1850, 1860, 1870, 1880, 1900, 1910).

The 1852 Conner map, which does not note owners of the houses depicted, does however indicate that the western portion of Block 1600 (part of a larger 70 acre plot) was owned at that time by Samuel Lord (Figure 6). Lord, an English immigrant, was a founder of the well-known department store Lord and Taylor, which began operation in Manhattan around 1835. Lord settled in Newtown in about 1840 and began purchasing land as it became available in the area (Seyfried 1995). During the 1840s Lord acquired several properties in the area, including title to the Ludlow House and its tract from the Ludlows in 1842 (Liber 59, 1842:98). He continued to own the property for much of the nineteenth century, although never lived there himself, and for a time leased the vacant part of the land to the Card family for farming (Liber 508, 1877:235).

The project site vicinity continued to grow during the 1850s. Adjacent Corona was developed in 1854 by a group of speculators from New York City. Additional streets were laid out in relation to the Flushing and North Side Railroad route (now the Long Island Rail Road, just north of the project site), which began service in the same year (Jackson 1995:1142; Munsell 1882:359,397). By issuance of the 1859 Walling map, which also indicated one of the occupants was "C. Card," the railroad tracks that mark the northern boundary of the project site were now shown to be in place.

The 1873 Beers map of Newtown illustrates the Ludlow House (albeit unmarked) and two structures west of Division Street (a road formerly running east of and parallel to 94th Street) (Figure 7). An enlargement of West Flushing shows that the two houses west of Division Street were both attributed to "W illiam. Card." The western of the two Card structures fell within the footprint of the used car lot on Lot 80. The 1891 Wolverton map again shows the two houses of the Card family on a 20-acre property straddling both sides of the railroad tracks and labeled "W illia)m. Eliz[abeth]. Card." The Ludlow House to the west of the Card structures shown on earlier maps is again depicted in 1891, although no owner or occupant is given. The 1902 Sanborn map confirms that the two structures just south of the project site were indeed dwellings. The one formerly located within Lot 80 was two stories high, and the one formerly located within the approximate boundaries of Lot 99 was two and a half stories high. The present line of 94th Street was shown as a projected street called "Card Avenue." However, according to the Newtown Register, this was a public right-of-way that had been in existence since 1852 (Newtown Register Jan. 15, 1914).

The 1903 Hyde map, made the next year, still attributed the eastern of the two houses, which now sat on a two-acre parcel, to "W illiam). Card" (Figure 8). The western house (the Ludlow House) sat on a 2.005-acre parcel, but was not labeled as to ownership. The middle section of the project site, including the area extending to Corona Avenue, was a 1.368-acre parcel attributed to "Meyer." This notation presumably refers to the "Cord Meyer Company," a real estate development company established in 1890 by Cord Meyer with land holdings recently acquired by his brother Christian Meyer from Samuel Lord. Cord Meyer was also the man responsible for changing the name of the local community from Newtown to Elmhurst in the 1890s (Seyfried 1995). The 1915 Sanborn map again showed
the two houses along Corona Avenue, but now indicated the location of “Card Place” and Lurting Avenue (which was an extension of the line of Tulip Street to the east) (Figure 9). According to the Newtown Register, however, Lurting Avenue was never officially opened (Newtown Register January 18, 1917).

Until the 1910s, the project site contained only the two nineteenth-century houses (the Ludlow House and the Card House); the majority of the APE was used as farmland. For a time, it was thought that the railroad might purchase a portion of the project site to build a freight yard, but this never occurred. In 1917, the project site irrevocably changed when the food manufacturers E.R. Durkee & Co. acquired the majority of the APE and made plans to construct their factory building on what is now Lots 61 and 130. The Newtown Register published a description of the proposed building:

The Durkee Co., it is reported, will erect a model factory upon this land, similar to that of the Doubleday-Page Publishing Co. at Garden City. It is to be of artistic construction and will be surrounded by shade trees and a park. It will prove a decided addition to the beauties of Elmhurst and will be welcomed here. The factory will be a model one in every respect and will only be recognized as a factory by those who know what is there. Its general appearance will be that of an academy. The buildings will contain rest rooms, playgrounds, tennis courts, and a swimming pool for the employees. About 300 people will be employed. There was no opposition to this new factory on the part of the large Elmhurst delegation present when it was announced at the meeting of the Board of Estimate on Friday (Newtown Register January 18, 1917).

It is unclear whether all of the proposed amenities were included as part of the finished factory building, although the grounds were extensively landscaped with trees and shrubs brought from the Durkee estate on Long Island (Newtown Register January 18, 1917). Photographs of the original factory building on file at the Queens Borough Central Library’s Long Island Division illustrate that the area on the south side of the building now occupied by the parking was originally landscaped with grasses and small trees, as was the area immediately east of 94th Street that is now occupied by residences.

As described in the Introduction, the original four-story building, which constitutes the northern portion of the current building on Lot 61, is thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene. The 1931 Sanborn map shows the footprint of the original factory building on Lot 61, as well as a number of ancillary tanks, a machine shop, and a refinery west of the factory on Lot 130 (Figure 10). The 1931 Sanborn map also shows that Card Place had now been renamed 94th Street, as well as the location of unopened 46th Avenue (Lurting Avenue) which ran south of the factory building in an area now partially covered by the later addition and the current parking lot. Two short railroad spurs were located north of the factory and connected to the Long Island Railroad tracks bordering the project site. The nineteenth-century houses along the Corona Avenue portion of the APE were now gone and the only other structure shown on the project site at this time was a one-story store on what is now the Corona Avenue frontage of Lot 130.

Two years before the publication of the 1931 Sanborn map, the Glidden Company, well-known manufacturers of paint and varnish, branched out and began acquiring a number of food companies, including E.R. Durkee & Co. After that, the newly formed Glidden food division was marketed under the Durkee name (Shurtleff and Aoyagi 2004). The 1950 Sanborn map noted that the original Durkee factory was now called the Glidden Company Durkee Plant (Figure 11). The 1947 addition to the building, along the southern side of the structure, is clearly shown on this map. In order to build the addition, however, it appears that 46th Avenue had to be closed. The roadway is no longer shown on the 1950 map. A number of the buildings located along Corona Avenue are also shown by the 1950 map edition, including those on Lots 80, 86, and 99. Updates to the Sanborn maps, made in 1968 and 1972, show no appreciable change to the factory building footprint on Lot 61, although by this time the Glidden Company no longer occupied the building and the former factory was labeled as “Lofts.” Additionally, by this time Lot 130 had been divided from Lot 61 and sold, and the warehouse buildings now occupying this lot had been constructed. The two-story brick factory building on the east side of Lot 86 and the garage on Lot 110 had also been built by this time. From 1986-2006, the Art Leather Manufacturing Company leased the factory building on Lot 61; as of this writing the factory is being converted into a new high school by the SCA.
IV. CONCLUSIONS

A. PRECONTACT SENSITIVITY

From what is known of precontact period settlement patterns in Queens, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water (Boesch 1997). Although Boesch’s sensitivity model for Queens (1997) identifies the project site and vicinity as sensitive for precontact resources due to the former locations of Horse Brook and Flushing Creek in the general area (in fact, he identifies a very large amount of land including virtually all of the Elmhurst, Corona and Flushing neighborhoods), it should be stressed that the project site is approximately 2000 feet from these natural water sources, and therefore was probably not a suitable area for precontact occupation. Although there was a Native American trail in the vicinity of the project site, its exact location (and distance from the project site) cannot be pinpointed. For these reasons, HPI concludes that the project site does not possess precontact archaeological sensitivity.

B. HISTORIC PERIOD SENSITIVITY

As described above, the APE formerly contained two historic houses along Corona Avenue: the Ludlow House was built in 1780 and the Card house was constructed by at least 1844 (see Figure 12 for the house locations). The Ludlow House appears to have been rented to a variety of tenants over its 150-year history, whereas the Card house was owned and/or occupied by members of the Card family and various farm hands for over 50 years. For these reasons, HPI concludes that portions of the project site not disturbed by later earthmoving and construction may be sensitive for eighteenth- and nineteenth-century historic period archaeological resources. HPI does not believe that any possible remaining subsurface features associated with the NRHP-eligible former Durkee factory building would have any additional research value beyond what is depicted on existing maps and detailed in other documents. The majority of the former structures (such as the above-ground tanks and other ancillary equipment) associated with the factory were located in Lot 130, which is now covered by the large warehouse building.

Privies, wells, and cisterns, which are often filled with contemporary refuse related to the dwellings and their occupants, can provide important stratified cultural deposits for the archaeologist and frequently provide the best remains recovered on sites. Since the Elmhurst/Corona neighborhood had not been provided with piped water or sewers at the time that the houses along Corona Avenue were initially constructed, occupants of the households would have relied on these shaft features exclusively for a number of decades. Although portions of Elmhurst received piped water by 1894, and sewers were available by 1903 (Seyfried 1995), the 1902 Sanborn map does not yet indicate water pipes under Corona Avenue, suggesting that the houses may never have been hooked up to city water before their demolition. Frequently, wells or cisterns would be located in reasonably close proximity to a house, for use in washing or cooking (additional wells and/or cisterns might be located further away from a house for other uses, such as watering horses). Privies often were situated further away from the house, for sanitary purposes. Portions of these shaft features are often encountered on residential lots because their deeper and therefore earlier layers remain undisturbed by subsequent construction, and in fact, construction often preserves the lower sections of the features by sealing them beneath structures and fill layers. Wells would have been excavated as far as the water table, and cisterns and privies often were dug up to 10-15 feet below grade. Other commonly occurring but more fragile backyard remains include fence lines, paths, traces of landscaping and sheet midden scatter.

The level of disturbance to the project site, which varies across the APE (see below), would not necessarily preclude the recovery of truncated shaft features within some of the former yards areas of the historic houses. The soil borings indicated that the current water table is about 40 below grade. The modern water table and the historic water table are not necessarily the same. Usually the historic water table was higher, and over the years it sank lower, due to changes brought about by later earthmoving activities and constant use of private wells. The water table also can fluctuate due to natural conditions such as precipitation and time of year. Nonetheless, it seems reasonable to assume that because the historic water table generally was higher than the modern water table, any wells on the property would not have been excavated much beyond this 40 foot depth, and more likely were shallower in extent.
C. DISTURBANCE RECORD

Disturbance to each of the six tax lots is described below. However, because no plans or records for construction of the buildings on these lots could be located by DOB staff, the following disturbance assessment relies primarily on observations from the field visit.

Lot 61

Disturbance for Lot 61 was detailed in the Phase IA Archaeological Assessment of the property prepared by HPI in 2006. That report concluded that all portions of the lot within the footprint of the factory building, as well as ca. 15-20 feet out from the walls of the building should be considered to be extensively disturbed. Sections of the parking lot south of the building, however, were believed to be less disturbed, and could retain archaeological sensitivity if not affected by later earthmoving.

Lot 80

The footprint of the repair shop building on Lot 80 should be considered to be moderately disturbed. Because this building does not have a basement, it is possible that the disturbance from foundation construction could be limited to the periphery of the building, and may be reasonably shallow. The portion of the lot fronting Corona Avenue appears to have once contained underground fuel tanks (1950 Sanborn map notes that this building formerly was used as a filling station), and other subsurface utilities may run through this area. Although it was difficult to see much of the car lot ground surface during the field visit due to all the parked cars, because maps do not show any additional building here after the Card house was razed, it is possible that there may be portions of the car lot, which is now covered in asphalt, that have not been significantly disturbed.

Lot 86

Disturbance varies across Lot 86. The most disturbed sections of the lot are areas containing basements, namely the two-story building on the eastern end bordering Lot 80 and the area on the southwestern side bordering Lot 99 and Corona Avenue. The remainder of the lot contains a warehouse building with no basement. Here, deep disturbance could be limited to underlying foundation supports, with much of the building’s footprint having only shallow disturbance from construction of the concrete slab floor.

Lot 99

The majority of Lot 99 appears to be disturbed from construction of the basement within the Hindu temple building.

Lot 110

As with Lot 80, the moderate disturbance on Lot 110 should be limited to the footprint of the repair shop building and any subsurface tank or utility locations. The paved parking lot portion of the lot may not be significantly disturbed.

Lot 130

With the exception of the driveway leading from Corona Avenue to the interior of the block, all of Lot 130 is covered by buildings. The footprints of these buildings should be only moderately disturbed, however, because the structures have no basements. The paved driveways bordering both Corona Avenue and 91st Place appear to have some utilities running beneath them, but otherwise may be reasonably undisturbed.

V. RECOMMENDATIONS

A. PRECONTACT RESOURCES

As described above, HPI assigned the project site a low precontact sensitivity. As such, HPI recommends no additional archaeological investigations are necessary for precontact resources.
B. HISTORIC PERIOD RESOURCES

The 2006 HPI report, which assessed the archaeological potential of Lot 61, concluded that historic period archaeological resources such as the remains of wells, privies, cesspools, or cisterns could exist under the paved parking lot on the southern side of Lot 61, in proximity to the former Ludlow House and Card family house (see Figure 12 for these locations). Yard features and/or activity areas associated with these former buildings could also exist under the parking lot if they have not been affected by later disturbance. The conclusions from the 2006 report still stand. However, no new impacts are planned by the SCA in areas deemed archaeologically sensitive on this lot and so at this time no further archaeological testing is recommended for Lot 61. If in the future the SCA or other owners of this lot undertake subsurface excavations in these sensitive areas, then Phase IB archaeological testing still would be recommended.

Of the additional lots studied as part of the current zoning map change project, only Lot 80 appears to retain any archaeological sensitivity, based on locations of former historic structures combined with a lack of documented disturbance to the ground surface. This lot is the former location of the Card family house, which was built by 1844 and stood until ca. 1917. Portions of the lot not covered by the garage (including the paved area now covered by parked cars) may not be significantly disturbed and may retain archaeological sensitivity (see Figure 12 for locations). At this time there are no plans to change the use of Lot 80; Lot 80 is not owned by either 45-10 94th Street, LLC or 91st Place Realty, LLC, co-applicants for the rezoning. Until such time as new construction or development is proposed for Lot 80, no further archaeological testing is recommended. However, if in the future new owners of Lot 80 propose subsurface excavations in these sensitive areas, then Phase IB archaeological testing would be recommended. No additional archaeological investigations are recommended for the remainder of the project site.
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Elmhurst, Queens County, New York

Figure 1. Project Site on USGS map.
Archaeological Documentary Study  
Elmhurst Zoning Map Change Project Site  
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 2. Project Site on tax map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 3. Project Site and Photograph Locations on 1995 Sanborn map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place.
Elmhurst, Queens County, New York

Figure 4. Project site on 1844 United States Coast Survey Map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place.
Elmhurst, Queens County, New York

Figure 5. Project Site on 1849 Sidney map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 6. Project Site on 1852 Conner map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
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Figure 7. Project Site on 1873 Beers map.
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Elmhurst, Queens County, New York

Figure 8. Project Site on 1903 Hyde map.
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Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place.
Elmhurst, Queens County, New York

Figure 9. Project Site on 1915 Sanborn map.
Legend
Project Site

Source: Sanborn 1931: Insurance Maps of the Borough of Queens

Archeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 10. Project Site on 1931 Sanborn map.
Archaeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 80, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 11. Project Site on 1950 Sanborn map.
Archeological Documentary Study
Elmhurst Zoning Map Change Project Site
Block 1600, Lots 61, 86, 99, 110 and 130. 4510 94th Street, 9323, 9303, 9205 and 9123 Corona Avenue, and 4323 91st Place. Elmhurst, Queens County, New York

Figure 12. Locations of former historic structures and areas of archeological sensitivity on 1995 Sanborn map.
Photograph 1: Project site showing Lot 80 at corner of 94th Place and Corona Avenue. View looking north from south side of Corona Avenue.

Photograph 2: Project site showing Lot 80 at corner of 94th Place and Corona Avenue. View looking northwest from east side of 94th Place at Corona Avenue.
Photograph 3: Project site showing buildings on Lot 86 along north side of Corona Avenue. View looking northeast from south side of Corona Avenue.

Photograph 4: Project site showing main warehouse building on Lot 86. View looking north from south side of Corona Avenue.
Photograph 5: Project site showing addition to main warehouse building on Lot 86. View looking northwest from south side of Corona Avenue.

Photograph 6: Project site showing entrance to main warehouse building on Lot 86. View looking north from sidewalk along Corona Avenue.
Photograph 7: Project site showing interior of main warehouse building on Lot 86. View looking north from entrance to building along Corona Avenue.

Photograph 8: Project site showing two-story factory building on eastern side of Lot 86. View looking northeast from south side of Corona Avenue.
Photograph 9: Project site showing temple building on Lot 99. View looking northeast from south side of Corona Avenue.

Photograph 10: Project site showing automobile repair shop building on Lot 110. View looking northeast from south side of Corona Avenue.
Photograph 11: Project site showing entrance to automobile repair shop building on Lot 110. View looking northwest from sidewalk along Corona Avenue.

Photograph 12: Project site showing warehouse building on Lot 130 along Corona Avenue. View looking northwest from south side of Corona Avenue.
Photograph 13: Project site showing driveway on east side of Lot 130 along Corona Avenue. View looking north from sidewalk along Corona Avenue.

Photograph 14: Project site showing paved area at intersection of Lots 61 and 130. View looking northwest from end of driveway on east side of Lot 130.
Photograph 15: Project site showing entrance to building on Lot 130 from 91st Place. View looking northeast from sidewalk along 91st Place.

Photograph 16: Project site showing interior of warehouse building on Lot 130. View looking northwest from eastern interior of building.
