



**Phase 1A Archaeological Documentary Study**

**Capital Project SEQ200464:  
College Point West Outfall and Infrastructure Improvements  
Queens County, New York**

**Prepared for:**

The New York City Department of Design and Construction



**and**

The New York City Department of Environmental Protection



**Prepared by:**

AKRF, Inc.  
440 Park Avenue South, 7th Floor  
New York, New York 10016

**July 2013**

## Management Summary

---

<b>SHPO Project Review Number:</b>	13PR01416
<b>Involved Agencies:</b>	New York City Department of Transportation New York City Department of Environmental Protection New York City Department of Parks and Recreation New York State Department of Environmental Conservation New York State Department of State United States Army Corps of Engineers (USACE)
<b>Phase of Survey:</b>	Phase 1A Documentary Study
<b>Location Information</b>	
<i>Location:</i>	College Point, Queens, New York
<i>Minor Civil Division:</i>	08101
<i>County:</i>	Queens County
<b>Survey Area</b>	
<i>Length:</i>	850 meters (2,788 feet)
<i>Width:</i>	300 meters (984 feet)
<b>USGS 7.5 Minute Quadrangle Map:</b>	Flushing
<b>Report Author:</b>	Elizabeth D. Meade, M.A., R.P.A.
<b>Date of Report:</b>	July 2013

### Summary of Findings:

The following Phase 1A Archaeological Documentary Study designed to determine the likelihood that the project site was occupied during the precontact (i.e. Native American) and/or historic periods and to determine if intact archaeological resources associated with that occupation could still be present.

As described in greater detail below, the precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. The project site is situated on a peninsula near tidal marshland and high ground, and would therefore have been an ideal site for camping or hunting and gathering, or permanent occupation. At least six Native American archaeological sites have been identified within one mile of the project site, including four burial locations, one of which may have been located on the project site itself.

The project site has experienced substantial disturbance as a result of the construction, grading, and paving of streets, the installation of utilities, and the construction of bulkheads and retaining walls. The locations of the proposed outfall and the proposed wetland restoration area are determined to have no sensitivity for precontact archaeological resources as a result of previous disturbance. In addition, the portions of streetbeds that have been disturbed for utility installation are determined to have low sensitivity for precontact archaeological resources. However, the portions of the streetbeds that have not been disturbed for the installation of utilities are determined to have moderate sensitivity for archaeological resources associated with the Native American occupation of College Point, including human remains. There are several locations within the proposed project streetbeds where new utility lines will be installed in areas where no disturbance has been documented below the depth of the road itself. Archaeological monitoring during construction is recommended for these portions of the project site.

With respect to archaeological resources dating to the historic period, College Point was not extensively settled until after the Revolutionary War. The area surrounding the project site streetbeds was largely occupied by large estates until the late-19th and early 20th centuries. Water and sewer networks appear to have been available in the area by the late-19th or early 20th century. No map-documented structures were observed within any of the project site streetbeds, although in some locations, 19th century structures were immediately adjacent to the project site. However, as described in the following report, it does not appear likely that the project site would include intact historic period resources given the level of previous disturbance in areas in close proximity to historic dwellings. Therefore, the project site is determined to have low sensitivity for archaeological resources dating to the historic period.

## Table of Contents

---

<b>Chapter 1: Introduction and Methodology .....</b>	<b>1</b>
A. Project Overview and Description .....	1
B. Research Goals and Methodology.....	2
<b>Chapter 2: Environmental and Physical Settings .....</b>	<b>4</b>
A. Geology and Topography .....	4
B. Hydrology .....	4
C. Soils.....	5
D. Paleoenvironment .....	5
E. Current Conditions .....	6
<b>Chapter 3: Precontact Period .....</b>	<b>7</b>
A. Precontact Context.....	7
B. Previously Identified Native American Archaeological Sites.....	8
<b>Chapter 4: The Historic Period .....</b>	<b>11</b>
A. Historical Context of College Point.....	11
B. The Development of the Project Site .....	14
<b>Chapter 5: Conclusions and Recommendations .....</b>	<b>17</b>
A. Sensitivity Assessment.....	17
B. Recommendations .....	18
<b>References.....</b>	<b>20</b>
<b>Figures</b>	
<b>Photographs</b>	
<b>Appendix A: Site Plans</b>	

**List of Figures**

---

- Figure 1:** Project Location; United States Geological Survey (USGS) Maps, Coney Island Quadrangle.  
**Figure 2:** Project site map showing camera angles for site photographs; Sanborn Insurance Map.  
**Figure 3:** Aerial Photograph.  
**Figure 4:** 1891 USGS Map.  
**Figure 5:** 1855 Coastal Survey by F.H. Gerdes.  
**Figure 6:** 1873 Beers Atlas.  
**Figure 7:** 1891 Wolverton Atlas.  
**Figure 8:** 1903 Sanborn Map.  
**Figure 9:** Areas of Archaeological Sensitivity.

**List of Photographs**

---

*See Figure 2 for Camera Angles*

- Photograph 1:** View north at the wetland restoration area on the eastern side of Macneil Park.  
**Photograph 2:** The western terminus of Poppenhusen Avenue.  
**Photograph 3:** The proposed outfall location at the western end of Poppenhusen Avenue.  
**Photograph 4:** Poppenhusen Avenue, looking west from 117th Street.  
**Photograph 5:** The streetbed of 117th Street facing south towards 9th Avenue.  
**Photograph 6:** Looking west along 9th Avenue towards 118th Street  
**Photograph 7:** The streetbed of 115th Street looking east towards 9th Avenue.  
**Photograph 8:** The streetbed of 115th Street looking east towards 10th Avenue.  
**Photograph 9:** Looking south along 115th Street from Poppenhusen Avenue.  
**Photograph 10:** View of the southern end of the project site, looking north along 115th Street near 14th Avenue.

**List of Tables**

---

**Table 1:** Previously Identified Precontact Archaeological Sites .....8

## A. PROJECT OVERVIEW AND DESCRIPTION

The New York City Department of Design and Construction (DDC), on behalf of the New York City Department of Environmental Protection (NYCDEP), is proposing Capital Project No. SEQ200464, the College Point West Outfall and Infrastructure Improvement Project (see **Figure 1**). The project site is located within several streetbeds in the neighborhood of College Point, Queens (see **Figures 2 and 3**). The project site, which is currently served by a combined (stormwater and sanitary) sewer system, is in a low-lying area and is therefore subject to street flooding and ponding. The proposed infrastructure improvements would reduce this flooding through new the installation of new storm sewers and the replacement of an existing outfall at the western end of Poppenhusen Avenue. The proposed improvements to the combined sanitary collection sewers would also bring that component of the sewer system into conformance with the current NYCDEP standards. In addition, the proposed water main installation would replace old, unlined cast iron pipe water mains thereby improving and upgrading water distribution and supply in the project area.

The proposed project would involve the construction of new stormwater collection sewers and water mains as well as other street improvements (e.g., final paving) over an approximately 40-acre drainage area. In total about 6,000 linear feet of storm sewers are proposed. The proposed storm sewers collection system would include new catch basins designed with sumps to capture floatables and sediments. The proposed sewer system would also include the installation of new high-level storm sewers that would separate storm flows from the combined system. The proposed action would also include the relocation of sanitary sewers and water mains, where necessary, in order to install the proposed storm sewers, as well as a restoration plan for tidal wetlands at a nearby off-site location (Block 3914, Lot 1).

The following streetbeds are included within the project site (see **Figure 2**):

- Poppenhusen Avenue between 117th Street and the current shoreline (approximately 250 linear feet);
- 9th Avenue between 115th and 118th Streets (approximately 600 linear feet);
- 10th Avenue between 115th and 118th Streets (approximately 425 linear feet);
- 115th Street between 14th and Poppenhusen Avenues (approximately 2,050 linear feet); and
- 117th Street between 9th and Poppenhusen Avenues (approximately 875 linear feet).

The proposed outfall would measure 5.5 by 3 feet and would replace an existing outfall at a location approximately 100 feet west of the intersection of Poppenhusen Avenue and 115th Street. The proposed outfall would be a reinforced concrete pipe supported by a concrete cradle and would terminate at the existing bulkhead. The outfall would also have a flap gate installed in the pipe at the outlet. An area of proposed slope pavement stone would be constructed at the end of the outfall. This pavement stone would occupy an area about 10 feet long and 12 feet wide and would provide a stabilized apron below the outlet of the storm pipe.

Finally, the proposed project would also include the restoration of tidal wetlands that would be temporarily impacted during construction of the proposed outfall. This restoration area would be limited, since the proposed outfall is replacing an existing outfall. Off-site restoration is proposed for the limited area of intertidal marsh that would be permanently impacted as part of the installation of the proposed outfall structure.

The proposed project would require several permits or approvals from local, state, and federal agencies, including NYCDEP, the New York City Department of Transportation (NYCDOT), the New York City

Department of Parks and Recreation (NYCDPR), the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of State (NYS DOS), and the United States Army Corps of Engineers (USACE). The proposed project is therefore subject to City Environmental Quality Review (CEQR), the State Environmental Quality Review Act (SEQRA), and Section 106 of the National Historic Preservation Act (NHPA). NYCDEP is serving as lead agency in fulfilling the requirements of the environmental review process, including performing a coordinated review with the involved agencies (e.g., NYSDEC).

## **B. RESEARCH GOALS AND METHODOLOGY**

The following Phase 1A Archaeological Documentary Study of the Capital Project SEQ200464 project site has been designed to satisfy the requirements of the New York State Historic Preservation Office (SHPO) and the New York City Landmarks Preservation Commission (LPC) and it follows the guidelines of the New York Archaeological Council (NYAC). The study documents the development history of the proposed project site as well as its potential to yield archaeological resources including both precontact and historic cultural resources. In addition, this report documents the current conditions of the project site and previous cultural resource investigations which have taken place in the vicinity.

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

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

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

Curation of Archaeological Collections in New York State, published in 1994 and subsequently adopted by SHPO (see page 2):

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

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

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

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



### A. GEOLOGY AND TOPOGRAPHY

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

The glacial till making up the upland portions of Queens County was deposited by the massive glaciers that retreated from the area towards the end of the Pleistocene (1.6 million years before present [“BP”] to approximately 10,000 years BP). There were four major glaciations that affected New York City, culminating approximately 1n a northeast-southwest direction (Homburger 1994). The deposition of glacial till in the wake of the retreating glaciers resulted in the creation of sand hills, known as kames, across New York City, some of which rose to heights of one hundred feet.

The original shoreline on the western shore of College Point was in the approximate location of modern 115th Street and land to the west of that road is composed of landfill. Other areas along the coast of the peninsula have been expanded through the addition of landfill, although the majority of the project site appears to be located on what was originally fast land. Historic topographical maps of the area show that the coastal areas of College Point were generally at lower elevations than the central portion, where the ground surface rose to a peak to the southwest of the project site near the intersection of modern 14th Avenue and College Point Boulevard. The location of modern Macneil Park was one of the areas of highest elevation in the vicinity of the project site, featuring high bluffs rising steeply to elevations of approximately 40 feet above sea level. The remainder of the project site sloped gently upward to the east from the shoreline at approximately 115th Street. Current USGS maps (see **Figure 1**) indicate that the surface topography of the area is generally similar, ranging in elevation from approximately 13 feet to 45 feet above mean sea level (LiRo Engineers, Inc. 2007).

### B. HYDROLOGY

The project site is situated at the northern end of College Point and is bordered to the north and west by the East River. Historically, the southern half of College Point was partially isolated from mainland Queens by a thick tract of tidal marsh punctuated by brooks and streams that drained into Flushing Bay (see **Figure 4**). Additional marshland was present to the east of the project site surrounding Powell’s Cove and separating the area now known as Tallman Island from the mainland. No streams or water courses are depicted on current or historic maps within the project site. However, a small pond is shown on some historic maps (Connor 1852; Dripps 1872; Beers 1873) to the east of what is now 115th Street and south of Poppenhusen Avenue. Groundwater in the vicinity of the project site is expected to be located between 10 and 40 feet below the ground surface, depending on surface elevation (LiRo Engineers, Inc. 2007). However, a series of soil borings completed in 2009 by Weston Solutions of New York, Inc. along 115th Street and 9th Avenue were drilled to a depth of 20 feet below ground surface and no groundwater was encountered.

### C. SOILS

The *New York City Soil Reconnaissance Survey* published by the National Resource Conservation Service (2005) indicates that the soils within the project site and in the immediate vicinity belong to the following five soil complexes:

- **Pavement and Buildings-Till Substratum:** along the shoreline of College Point; found in generally level urban areas (0 to 5 percent slopes), 80 or more of which is covered with pavement and/or buildings;
- **Laguardia-Ebbetts-Pavement and Buildings-Wet Substratum:** along the shoreline of College Point; found in generally level areas (0 to 8 percent slopes) of filled swamp or marshland, 15 or more of which covered with pavement and/or buildings;
- **Montauk-Foresthills:** along the shoreline of College Point; found in generally level areas (0 to 8 percent slopes) that are “partially filled with natural soil for cemeteries, golf courses, or athletic fields with some patches of woods” (New York City Soil Survey Staff 2005: 11);
- **Pavement and Buildings-Laguardia-Ebbetts:** makes up the majority of the inland portion of College Point in the vicinity of the project site; found in generally level areas (0 to 8 percent slopes) containing both natural soils and fill made from construction debris, 80 or more of which is covered with pavement and/or buildings; and
- **Pavement and Buildings-Foresthills-Canarsie:** makes up portions of the inland portion of College Point in the vicinity of the project site; found in steeply sloping (8 to 15 percent) urban areas “that have been cut and filled with natural soil materials, mostly for residential use” (New York City Soil Survey Staff 2005: 11).

As described previously, in 2009, soil borings were conducted within a portion of the project site by a series of soil by Weston Solutions of New York, Inc. In total, five borings were advanced, four adjacent to the western side of 115th Street between 10th and 14th Avenues a fifth boring was located near the northeastern corner of 9th Avenue and 116th Street. None of the borings were located in the streetbed. The subsurface investigation identified only native soils that were classified as course to fine brown sands and clay (Weston Solutions of New York, Inc. 2009). No fill deposits or disturbed soils were identified and no inclusions were specifically described in the boring logs. Four of the five borings included varying layers of loose, dry sands and clays, although boring SB-4, located approximately 465 feet north of the northern line of 14th Avenue, included only one layer of brown medium to fine sand throughout the boring’s entire 20-foot depth.

### D. PALEOENVIRONMENT

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

Climate changes continued to re-shape the environment of the Northeast as time progressed. As the climate grew increasingly warmer, jack pine, fir, spruce, and birch trees were replaced with hardwood forests of red and white pine, oak, and beech (Ritchie 1980). Furthermore, a decrease in glacial runoff resulted in the creation of small bodies of water such as lakes as well as, later on, low-lying marshes and swampy areas. By the time of the Early Archaic period, beginning approximately 10,000 BP, there was

“considerable environmental diversity, with a mosaic of wetlands, oak stands, and a variety of other plant resources...[making it]...an attractive and hospitable quarter for both human and animal populations” (Cantwell and Wall 2001: 53). Warmer temperatures forced the herds of large mammals to travel north before eventually dying out. The new surroundings attracted other animals such as rabbit, turkey, waterfowl, bear, turtles, and white-tailed deer. The expanded water courses became home to a variety of marine life, including many varieties of fish, clams, oysters, scallops, seals, and porpoises, among others (ibid).

#### **E. CURRENT CONDITIONS**

The majority of the project site is occupied by active streetbeds. The streets included within the project site area all developed with utilities, including water, sewer, gas, electric, and telecommunications lines, although some portions of the roadbeds do not contain utilities. Project plans depicting the existing infrastructure are included as **Appendix A**.

The site of the proposed outfall is along the existing bulkhead near the western terminus of Poppenhusen Avenue. This area is a mapped wetland and is occupied by marshland and lined with riprap. The proposed wetland restoration area is located along the eastern side of Macneil Park. The eastern side of the park is lined with a concrete bulkhead and a riprap wall. Portions of the proposed wetland area are occupied by salt marsh and/or a sand and gravel beach.

## A. PRECONTACT CONTEXT

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP–AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

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

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

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

The Woodland period ended with the arrival of the first Europeans in the early 1600s. At that time, College Point and the surrounding vicinity was included within the territory of a group of Native Americans known as the Matinecock (Bolton 1922). A large Matinecock village was located in what was then the town of Flushing, at the southern end of College Point (Bolton 1922 and 1975). After the Dutch settled the colony of New Amsterdam in the early 17th century, they quickly began to purchase large areas of land from the Native Americans. Some Native Americans continued to reside in the vicinity of Powell's Cove through the end of the 17th century (Hecht 1974).

While relatively few Native American burials have been encountered in the New York City region, as discussed below, several burial sites have been identified in the College Point area (Bolton 1934). Local burial sites “were often well-defined spaces, selected for the purpose by reason of their suitable soil and the natural drainage of the surface” (Bolton 1934: 117). Native American burials have typically been identified in shallow (2 to 3 feet in depth) “oval-shaped excavation[s]” that were “scraped out by hand,” sometimes re-purposed food storage or cooking pits (ibid: 116). In addition, burials were usually in flexed positions to minimize space and burial shafts were often lined with oyster shells although few grave goods were present (ibid).

## B. PREVIOUSLY IDENTIFIED NATIVE AMERICAN ARCHAEOLOGICAL SITES

Site file searches at LPC, SHPO and NYSM indicate that at least six precontact archaeological sites have been identified within approximately one mile of the project site (see **Table 1**). The majority of the sites represented precontact villages and burial sites. While some of these sites were observed in the vicinity of the project site, most were identified more than one mile to the south of the project site, along the shores of Flushing Bay and Flushing Creek near the southern end of College Point opposite Willet’s Point. The presence of several precontact archaeological sites in the northern portion of College Point confirms that Native Americans were active in the vicinity of the project site.

**Table 1**  
**Previously Identified Precontact Archaeological Sites**

Site Number	Approximate Distance from Project Site	Time Period	Site Type and Information	Reference(s)
NYSM: 4527 Parker: 4	Project site partially overlaps with Site 4527	Precontact	Village and burial site	Parker (1922)
NYSM: 4540	0.5 to 0.75 miles	Precontact	Camp site with burials	Parker (1922) Solecki (1941)
NYSM: 4541	1 mile	Precontact	Traces of Occupation	Parker (1922)
The Wilkins Site SHPO: 08101.007355	1 mile	Possible Paleo-Indian; Late Archaic/Early Woodland; Late Woodland; Contact	Multi-component site with evidence of a Native American village, campsite, and burials.	Smith (1950) RBA Group (2000)
Graham Court NYSM: 719	0.75 miles	Late Woodland	Village site with burials and shell middens	Parker (1922) Solecki (2006)
Grantville Site SHPO: A081.01.0133	0.5 to 1.5 miles	Archaic and Woodland	Habitation site	Smith (1950)
NYSM 4542	1.5 Miles	Precontact	Campsite	Parker (1922)
NYSM 4525	0.5 miles	Precontact	Burial Site on Thomas P. Duryea’s Farm, discovered 1881	RBA Group (1997)
Nassau County Museum: 128	0.5 miles	Precontact	Shell Midden	RBA Group (1997)

**Source:** Site files of LPC (Boesch 1997), SHPO, and NYSM.

Several of these sites were discovered in the early 20th century by avocational archaeologists and were reported by author Arthur C. Parker (1922). Unfortunately, few of these sites were well-documented and little is known about the precontact sites’ exact locations, extent, or artifact collections. The map of Native American sites included in Parker’s (1922) *The Archaeological History of New York* depicts a village and two burial sites on College Point. Only one of these (now identified as NYSM site 4527) is described in Parker’s work. Parker described the area as a, “village and burial site at College Point on the E. Platt Stratton estate. Skeletons were found in 1861, when excavating for the foundation of Knickerbocker Hall” (1922: 672). HPI (1999) states that this site was located near the intersection of 10th Avenue and 117th Street and maps of the site included in SHPO’s site files indicate that the site covered a portion of the project site.

Bolton's 1922 work documenting the Native American sites and trails in New York depicts only a large habitation site more than one mile to the south of the project site at the southern end of College Point along Flushing Creek. Bolton does, however, document the large Native American village *Snakapins* at Clason's Point, in the Bronx directly opposite the project site across the Long Island Sound. Several Native American sites have been identified in this location, which is approximately one mile north of the project site.

Three sites in College Point have been well-documented and/or excavated using modern archaeological techniques: the Graham Court Site; the Wilkins Site; and the Grantville Site. These three Native American sites are discussed in greater detail below.

#### **THE GRAHAM COURT SITE (NYSM #719)**

The Graham Court site was initially excavated in 1934 by archaeologist Dr. Ralph Solecki—when he was just 16 years old—after a human burial was encountered during construction (Solecki 2006). The site at the time was situated on an eroding bluff 20 feet above the beach lining the western shore of College Point (ibid). The human remains were encountered on Graham Court between 121st and 122nd Streets (ibid). Dr. Solecki excavated additional disturbed and intact human burials as well as other Native American artifacts and numerous storage pits and middens (ibid). A dog burial was later encountered near the Graham Court site, one of several Late Woodland dog graves that have been discovered in New York City (Solecki 2006; Cantwell and Wall 2001).

#### **THE WILKINS SITE**

The Wilkins Site was identified approximately one mile east of the project site near the eastern shore of Powell's Cove. The site was described by archaeologist Carlyle Smith as having been "situated near the head of a small tidal cove on Fourteenth Avenue...[and] was excavated by the field party of the Flushing Historical Society in 1939 and 1940" (Smith 1950: 177). As originally identified, the site was composed of shell middens containing hundreds of decorated ceramic sherds—associated with the Bowmans Brook stamped and incised and East River cord marked pottery traditions—ceramic pipes, bone tools, and lithic tools and debitage (ibid). During excavations in the 1950s, amateur archaeologists and professional archaeologists from the American Museum of Natural History excavated burials from this site after they were encountered during construction (RBA 1997).

The Wilkins site has been subject to modern archaeological investigation, most notably by the RBA group in the late 1990s. Archaeological testing at the site was completed by the RBA group in 2000, which identified components dating between the Late Archaic and Late Woodland periods, as well as one potential Paleo-Indian fluted point (RBA Group 2000). This field investigation determined that the "site was a multi-component and multi-functional...camp site probably oriented chiefly to the exploitation of resources associated with Powells Cove" (ibid: 12-13). While stone tool production was also evident at the site, RBA determined that the site was likely occupied on a temporary basis and that the individuals interred at the campsite were "occupying the site at the time of their death [and] were quickly interred" (ibid: 13).

#### **THE GRANTVILLE SITE (A081.01.0133)**

This site—which was investigated in the 1930s by M.C. Schreiner and later by archaeologist Ralph Solecki—was "situated on a narrow promontory at the southwestern corner of College Point" on the shore of the Flushing Bay (Smith 1950: 173). Pottery recovered from this site were determined to be associated with the Bowman's Brook and Clason's Point traditions, the latter having been named for a site located along the southern shore of the Bronx directly opposite College Point (Smith 1950). While some non-ceramic traditions were observed among the Grantville site collections, Smith (1950) determined that they

could not be identified as belonging to a “pre-pottery” culture, and as such it is assumed that the Grantville site dates to the Woodland period.

## A. HISTORICAL CONTEXT OF COLLEGE POINT

New York was “discovered” by Giovanni de Verrazano in 1524 and explored by Henry Hudson in 1609, thus marking the beginning of European occupation in the area. Queens quickly became the home of the European fur trade in the New World. In 1621, the States-General in the Netherlands chartered the Dutch West India Company (WIC) to consolidate Dutch activities in the New World. It was at this time that the WIC began to purchase large tracts of land from the Native Americans. In exchange for furs, entrepreneurs and government officials supplied Native Americans with a wide range of goods.

Dutch Director-General William Kieft purchased all of what is now Queens County from the local Native Americans in 1639. Shortly thereafter, settlements began to be established, albeit by English citizens fleeing religious persecution rather than the Dutch (Burrows and Wallace 1999). The first settler in the College Point area was William Lawrence, who was granted a 900 acre plot of land in 1645 (Copquin 2007). The area had previously been known as Tew’s Neck, after a settler named Michael Tew, who appears to have lived nearby but not on College Point itself, which soon became known as Lawrence’s Neck (Hecht 1974). While some sources (U.S. Army Corps of Engineers 2003) suggest that Lawrence constructed a home on the site of modern Macneil Park circa 1645, a different home occupied by the Lawrence family was located further to the east on modern 14th Avenue that may have been the original Lawrence home (Hecht 1974). That house was moved to the Old Bethpage Restoration Village on Long Island in the late-20th century (Lederer 2004).

A large English population grew throughout Queens and all of New Netherlands, and soon the English outnumbered the Dutch, making it easy for them to seize the colony in 1664. Although the Dutch were able to re-take the colony—which had been re-named “New York”—in 1673, they traded it back in 1674 for “the far more lucrative colony of Surinam” (Cantwell and Wall 2001: 181). New York would remain under British control for the next hundred years. During the British period, Queens experienced significant expansion. The Dongan Charter of 1683 officially recognized it as a county and further divided it into five townships: Flushing, which included College Point, Newtown, Jamaica, Hempstead, and Oyster Bay (the land that makes up modern Nassau County was included within Queens at that time). Although Jamaica became the county seat of Queens, Newtown became more populated due to its close proximity to Manhattan while Flushing remained a relatively rural agricultural community, in part due to its inaccessibility. In fact, members of the Lawrence family were the only settlers of European descent living on College Point before the Revolutionary War (Hecht 1974).

Under British rule, Queens’ open farmland and vast coastline became essential for the production of agricultural goods and the harvesting of marine resources for export to the city. The colony’s progress was both hindered and facilitated in the mid-18th century during the French and Indian War, which concluded in 1763. Although the region experienced the economic side effects of being at war, thousands of British armed forces were stationed throughout the New York City area, bringing money to the region while at the same time increasing its population (Burrows and Wallace 1999).

By the late 18th century, political troubles had led to a schism between American patriots and British loyalists. After the retreat of General Washington after the loss of the Battle of Long Island, Queens became important to the British during the war, as many British troops were stationed there throughout the war’s duration. Although many Queens residents fled to Connecticut after the British took control of the city, many more stayed and vowed to remain faithful to the crown (Burrows and Wallace 1999). Throughout the war, British soldiers were stationed throughout Queens, wreaking havoc on the private citizens by burning farms and stealing from private citizens (Stankowski 1977). The owner of College Point, William Lawrence, was an American patriot who suffered at the hands of the marauding British



Army and as a result, he had to sell a portion of his land on College Point after the close of the war (Hecht 1974). A map published by William Stewart in 1795 (not reviewed as part of this assessment) allegedly “illustrated a building and flag in a position corresponding with either Tallman’s Island [on the eastern shore of College Point] or the northern tip of College Point” which were interpreted as possible representations of “the Lawrence house or a military installation on Tallman’s Island” and “a notation that seemed to indicate a burial plot in this area” (U.S. Army Corps of Engineers 2003: 3-39). The exact location of these developments is unknown.

Despite the loyalty of Queens County to the British, the Americans prospered and Queens soon adapted to the new American government. The availability of land brought about another surge in development in what are now the outer boroughs. Queens continued to grow steadily over the next few decades, fueled by events such as the opening of the Erie Canal in 1825, the end of the Civil War in 1865, and the relocation of the Long Island Railroad headquarters to Queens in 1861 (Burrows and Wallace 1999). As stated above, William Lawrence sold land after the close of the Revolutionary War to pay off his debts. The purchaser, Eliphalet Stratton, established an estate in southern College Point, which soon became known as “Strattonport” (Hecht 1974). A portion of that land was later sold to John A. Flammer and Peter W. Longley and a neighborhood known as “Flammersburg” was established (*ibid.*). These smaller communities were united as a single village under the name “College Point” in 1867 (*ibid.*).

One of the first major developments on College Point was that of Saint Paul’s College for Seminarians, a school established for the purpose of training Episcopalian ministers and from which the area received its name (Hecht 1974). The seminary was built on a 175-acre tract of land purchased by William Muhlenberg of Saint George’s Episcopal Church in Flushing and the cornerstone for the main school building was laid in 1836 (Hecht 1974). After financial troubles, the school was constructed on a reduced scale—containing a chapel, dormitory, and school constructed using wood rather than stone—opened in 1839 and ceased operations before 1850 (Hecht 1974; Lederer 2004). Muhlenberg had used his own funds to construct a plank walk across the impassable marshland to the south to connect the village of Flushing with College Point and the college (Von Skal 1908). This road was replaced with a formal causeway in 1855; both roads ran in the vicinity of modern College Place (Von Skal 1908; U.S. Army Corps of Engineers 2003).

Early maps of the area (e.g., Burr 1839, Mather 1842, and Smith 1844 and 1847) are relatively inaccurate, but depict a cluster of development centered around what is now College Place on the historic projection of land formerly known as Lawrence Point (now Macneil Park). These structures likely represent the buildings of Saint Paul’s College, which had been constructed on the site in the late-1830s. J.C. Sidney’s 1849 *Map of Twelve Miles around New York* is one of the first detailed maps of the region. While not particularly accurate, the map depicts several structures in the vicinity of the project site including two buildings on the projection known as Lawrence’s Point, which by that time was renamed College Point as a result of the construction of Saint Paul’s College. To the south, the homes of Dr. Muhlenberg and I. Nichols were present along College Place north of 14th Avenue.

In the mid-19th century, around the time that the college closed, Queens began expanding at an astonishing rate. Between 1840 and 1880, the population of Queens tripled, echoing similar increases in Manhattan and the other future boroughs. As Manhattan’s population became denser, industries were relocated to the surrounding counties, including Queens (Stankowski 1977). Connor’s 1852 map of Queens depicts the area in greater detail, showing Saint Paul’s College on the eastern side of College Point (now Macneil Park) and the mansion of William E. Chisholm on the west half of College Point. Chisholm, who was married to Reverend Muhlenberg’s niece, had been a student at Saint Paul’s College. After the school was closed, his mother-in-law acquired the land constructed a home for Chisholm and her daughter as a wedding present using unused materials that had been purchased for the school’s construction but had not been used (Hecht 1974). In 1924, the former Chisholm estate was sold to the City of New York so that a park could be established in the site (*ibid.*). The mansion was left in place and

used as a summer home by Mayor Fiorello LaGuardia before it was demolished in the 1940s (ibid).

The Connor map depicts other buildings associated with the Chisholm estate on the large property, which covered the northern portion of the project site. In addition to the main Chisholm mansion, which was located within the boundaries of Macneil Park, the map depicts several smaller structures, dirt roads, and a pond in the area now bounded by Poppenhusen Avenue, College Place, what would later be known as Avenue E, along the line of modern 8th Avenue. A property line in the vicinity of what would later be the line of modern 8th Avenue separated the Chisholm estate from the 60-acre property to the south, which the map indicates was inhabited by Nichols, Robert B. Carter, and Henry Carey.

One of the first accurate maps of the project site is an 1855 Coastal Survey prepared by F.H. Gerdes (see **Figure 5**). Within what is now Macneil Park, the map depicts the structures formerly making up Saint Paul's College and the Chisholm mansion at the top of a hill. Smaller structures were depicted to the south at the base of the hill in the vicinity of modern Poppenhusen Avenue. To the south, the land making up the remainder of the project site was occupied by large estates and cultivated fields. The map also depicts modern 14th Avenue as a formal road bisecting the northern and southern halves of College Point. A similar—but less detailed—coastal survey was prepared by C. Rockwell in 1858.

Beginning in the mid-19th century, College Point became a small industrial hub, aided in large part to the establishment of Conrad Poppenhusen's Enterprise Rubber Works on the southwestern shore of College Point in 1854 (Copquin 2007). Poppenhusen, a wealthy German immigrant, had an arrangement with Goodyear to exclusively produce their hard rubber products and the factory was extremely successful (Lederer 2004). As a result of Poppenhusen's "advanced social ideas," he made great efforts to develop College Point to provide housing and other amenities for the individuals he employed, many of them fellow German immigrants (ibid: ii). Among the advancements introduced by Poppenhusen were paved streets and gas and water connections for individual homes (Hecht 1974). Historically, 14th Avenue (then called First Avenue) divided the northern portion of College Point—occupied by wealthy landowners, farmers, and factory owners—from the working class housing that was constructed to the south of the avenue (Lederer 2004). The Poppenhusen Institute, located near the intersection of 15th Avenue and 114th Street, was originally constructed for use as a school, town hall, jail, and other municipal purposes (ibid). Poppenhusen's factory closed in the late-19th century, by which time many other industrial enterprises had established themselves in College Point (Copquin 2007).

Access to the area increased dramatically with the introduction of railroad lines in the 1860s. The Flushing and North Side Railroad was founded in 1868 and tracks—now part of the Long Island Railroad's Port Washington line—were constructed to connect College Point with the Village of Flushing and points west shortly thereafter (Hinsdale 1898; Walsh 2006). College Point soon became a sandy resort area known for its beaches (Hecht 1974). The area did not lose its rural nature, however, and by 1876, few streets in College Point were paved and most were dirt roads (Hecht 1974). As described in greater detail below, many of the streetbeds making up the project site were not constructed until the first half of the 20th century, when the large estates were divided for residential development beginning in the late 19th century.

The region's prosperity caused Manhattan and its surrounding counties to become increasingly co-dependent, both economically and culturally. It was therefore suggested that the counties surrounding Manhattan—including Queens—be consolidated under the name "New York City." With only moderate resistance from some Queens residents, the county officially became a city borough on New Year's Day, 1898. As part of the consolidated city, Queens flourished throughout the 20th century. Increased mass transit connected the boroughs and intensified their union, allowing more people to live outside of Manhattan while still having access to its varied resources. As the population exploded, the area was forced to augment its development in order to accommodate the rapidly increasing population.

## **B. THE DEVELOPMENT OF THE PROJECT SITE**

While a general development context for the project site has been provided above, a specific discussion of the historic development of each portion of the project site is included below.

### **PROPOSED WETLAND RESTORATION AREA**

The Lawrence family may have established a home as early as 1645 in the vicinity of the project site on the site of today's Macneil Park. By the 1830s, Saint Paul's College had been established on the eastern shore of the park. The buildings associated with the college are depicted on maps in the vicinity of the proposed wetland development area through the late 19th century. Beginning in the 1860s, maps begin to depict a small pier projecting out into the Long Island Sound from the northern tip of College Point. The remnants of this pier are still visible today.

Historic maps and photographs suggest that this portion of the project site was originally a sandy beach that led to the water. Dripps' 1872 map of New York City depicts the continued presence of the buildings of the former Saint Paul's College—now owned by T.W. Ogden, who also owned a small estate near the intersection of College Place and 8th Avenue—and the Chisholm mansion, which had several outbuildings to the south, near Poppenhusen Avenue, then known as Avenue G.

The 1873 Beers and 1891 Wolverton maps depict an irregular shoreline along the waterfront with the line of a proposed road superimposed along the water's edge, suggesting that landfill and road construction was planned for that area. While Wolverton's atlas depicts the area as vacant, the 1903 Sanborn map depicts two structures identified as the "old college buildings"—one of which was identified as a dwelling and the other as a vacant structure—on the eastern side of the peninsula. Other small structures, including a vacant outbuilding and a boat building, were also located on the property at that time. These structures are also depicted on Hugo Ullitz' 1908 atlas of Queens (updated through 1913) and G.W. Bromley's 1909 atlas, although all maps show that the buildings were located on the higher ground to the west and were not immediately on the waterfront in the location of the proposed wetland restoration area.

The 1916 map depicts the entire eastern portion of what is now Macneil Park as vacant and by that time, only the structures on the western portion of the Chisholm estate remained standing. The Sanborn map of 1943, published after the area had been converted into a park, depicts only the existing comfort station—then a play house—within the park's boundaries. Historic aerial photographs dating to the second half of the 20th century<sup>1</sup> do not appear to depict any changes to the wetland restoration area, however, they do suggest that a sandy beach is present to the east of the existing retaining wall (which was in place by the early 1950s) at low tide.

### **PROPOSED OUTFALL LOCATION**

The proposed outfall located is located at the western terminus of Poppenhusen Avenue, which historically divided the Chisholm estate. The road is depicted on historic maps from the first half of the 19th century, although it is not depicted as extending as far west as the waterfront, which was likely a sloping, sandy beach similar to that seen on the eastern side of the peninsula. The 1873 Beers and 1891 Wolverton atlases depict an irregular, undeveloped shoreline in the vicinity of the proposed outfall and indicate that modern 115th Street was proposed but not constructed in that portion of College Point.

The 1903 Sanborn map reflects the construction of a small pier and boat house just north of the foot of Poppenhusen Avenue, then known as Avenue G. The boat house was for a time used as a life guards' cabin, as depicted in three photographs taken by Photographer P.L. Sperr in the 1930s that are currently in

---

<sup>1</sup> See <http://gis.nyc.gov/doitt/nycitymap/> and <http://historicaerials.com/>.

the collection of the New York Public Library.<sup>1</sup> These images depict the remnants of the pier, which had been destroyed by that time. This pier was not depicted on the 1943 Sanborn, which also indicates that landfill had been added to this area, extending the shoreline out to the west. Historic aerial photographs dating to the second half of the 20th century depict the location of the proposed outfall in a similar manner to that seen in current aerial photographs: as a low, sandy beach near the end of the developed street. The area immediately to the south of the outfall location was developed and redeveloped multiple times during the last half of the 20th century.

## **PROPOSED SEWERS IN STREETBEDS**

### *POPPEHUSEN AVENUE BETWEEN 115TH AND 117TH STREETS*

As described previously, Poppenhusen Avenue, formerly Avenue G, at one time divided the northern and southern halves of the Chisholm estate and now serves as the southern boundary of Macneil Park. Several nautical charts published in the 1860s as well as the 1872 Dripps map depict a dashed or single line (rather than the two solid lines typically used to identify the location of a road) along the approximate route of the modern road, suggesting that it may have originated as a dirt path rather than a formal road. The 1855 Gerdes coastal survey (see **Figure 5**) may depict a structure to the south of the road.

The 1873 Beers atlas is the first to depict it as a developed street, although no structures were located in the immediate vicinity of the street at that time. The 1891 Wolverton atlas depicts a shed or stable on the Chisholm estate to the north of, but not adjacent to, the road. By the publication of the 1903 Sanborn map, an additional dwelling had been constructed on the Chisholm estate to the south of Poppenhusen Avenue and west of modern 119th Street, but once again, it was not adjacent to the road. That map also depicts a water line within the streetbed. An aerial photograph taken in 1924 indicates that the street, then still part of the Chisholm estate, was lined with trees on either side. However, aerial photographs from 1951 through the present depict an active, paved roadway.

### *115TH STREET BETWEEN POPPEHUSEN AVENUE AND 14TH AVENUE*

Modern 115th Street runs along the western coast of College Point and a precursor to this street appears to be first depicted on the 1855 Gerdes coastal survey (see **Figure 5**). The 1872 Dripps map depicts the road as a proposed road or dirt path through the entire Chisholm estate, but not through the area to the south. The 1873 Beers atlas indicates that the road had been constructed at 6th Street almost as far north as modern 10th Avenue and that the road continued as West Boulevard, a proposed street, in the areas to the north. That map depicts a home on the estate of F. Stoiber immediately adjacent to the eastern side of 6th Street between what is now 14th Avenue and Avenue A, a proposed road approximately 300 feet to the north that does not appear to have ever been constructed. This building may also be depicted on the 1852 Connor and 1855 Gerdes maps (see **Figure 5**), although no homes in that location appear to be depicted on the 1849 Sidney map.

The Beers map depicts the very large Stoiber estate as divided into lots, presumably for residential development. The 1891 Wolverton Atlas does not indicate that this development occurred in the vicinity of the project site, however, it does indicate that the buildings seen on the Stoiber property on the 1873 map had been demolished and replaced with three smaller structures further to the north.

The 1916 Sanborn map indicates that the blocks between 115th and 117th Street to the south of the Chisholm estate had been divided into lots, although few were developed with dwellings by that time. On the 1924 aerial photograph, the street appears to be narrower and lined with trees. However, by 1951, the

---

<sup>1</sup> See <http://digitalgallery.nypl.org/nypldigital/id?734103f>.

road had taken on its present appearance and development surrounding the streetbed intensified through the late 20th century.

The 1903 Sanborn map indicates that water lines only ran within 115th Street as far north as a point midway between 14th and 10th Avenues. The 1916 Sanborn map depicts additional water lines within 115th Street, but only in the area of the developed lots between 9th and 10th Avenues. Sanborn maps from 1943 and 1951 do not depict water lines within the streetbed of 115th Street between 9th and Poppenhusen Avenues and therefore most utilities in that portion of the street appear to have been added in the second half of the 20th century.

#### *117TH STREET BETWEEN POPPENHUSEN AVENUE AND 9TH AVENUE*

This portion of 117th Street was not constructed until the late-19th century. Before that time, the land now occupied by the streetbed was included within two large estates. As seen on the 1873 Beers atlas, north of the line of 8th Avenue, then known as Avenue 8, was the Chisholm estate and between 8th and 9th Avenues was the estate of P. Cassidy. The 1873 Beers, the 1891 Wolverton atlas, and the 1903 Sanborn map, 1908-1913 Ullitz atlas, and the 1909 Bromley atlas do not depict any structures associated with either property within the line of 117th Street.

The Sanborn map of 1916 shows that by that time, 117th Street had been constructed between 14th Avenue and a point approximately 250 feet north of 9th Avenue and contained water lines. The continuation of the street as far north as Poppenhusen Avenue was proposed at that time, but was not yet constructed at the time the 1924 aerial photograph was taken. The 1943 Sanborn map depicts the streetbed as fully constructed, with water lines running through its entire length.

#### *9TH AVENUE BETWEEN 115TH AND 118TH STREETS*

This two-block stretch of 9th Avenue was constructed at approximately the same time as 117th Street. Through the end of the 19th century, the land now occupied by this portion of 9th Avenue was part of the Cassidy (later Beck) estate, although no maps depict any structures within the street's path at that time. Originally planned as Avenue D, the line of the street separated the Cassidy estate from the much smaller Streuli estate, which was located along 118th Street between 8th and 9th Avenues, as seen on the 1873 Beers atlas (see **Figure 6**). By the early 20th century, the former Streuli estate—by then belonging to Ralph Brown—had been extended as far west as the waterfront with what would later become the line of 9th Avenue serving as the boundary between the two properties.

The 1916 Sanborn Map is the first to depict 9th Avenue—formerly Avenue D—as a built street containing water lines along its entire length. No significant changes appear to the streetbed on aerial photographs or historic maps dating to after that time.

#### *10TH AVENUE BETWEEN 115TH AND 118TH STREETS*

Like 9th Avenue, 10th Avenue was included within an undeveloped portion of the former Cassidy estate through the early 20th century. No maps depict any structures within the path of the street at any point in history. The street, formerly known as “Lucerne Place,” is first depicted on the 1916 Sanborn map with water lines running through its full length. No significant changes appear to the streetbed on aerial photographs or historic maps dating to after that time.

## **A. SENSITIVITY ASSESSMENT**

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

### **DISTURBANCE ASSESSMENT**

#### *PROJECT SITE STREETBEDS*

The locations of the project site streetbeds have all been disturbed to some extent as a result of the construction of the streets and grading and paving associated with street maintenance. It is assumed that all of the streetbeds are disturbed to depths of approximately 1 to 1.5 feet below the existing streetbeds. In addition, all of the project site streetbeds have been disturbed to greater depths during the installation of utilities. However, portions of some of the streetbeds do not contain utility lines or feature large gaps between existing utility lines and may therefore contain undisturbed soils.

#### *PROPOSED OUTFALL*

The location of the proposed outfall has experienced disturbance as a result of the construction of the existing outfall and bulkhead. The modern shoreline appears to have been extended to the west, and therefore portions of the outfall location appear to be made up of landfill deposits.

#### *PROPOSED WETLAND RESTORATION AREA*

The proposed wetland restoration area is located along the eastern side of Macneil Park, which was constructed in the 1940s. Historically, this area was occupied by a sandy beach adjacent to the early-19th century seminary that once occupied that area. The construction of the existing park, bulkhead, and riprap wall would have resulted in disturbance to this part of the project site.

### **PRECONTACT SENSITIVITY ASSESSMENT**

The precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. The project site is situated on a peninsula near tidal marshland and high ground, and would therefore have been an ideal site for camping or hunting and gathering, or permanent occupation. At least six Native American archaeological sites have been identified within one mile of the project site, including four burial locations, one of which may have been located on the project site itself.

The project site has experienced substantial disturbance as a result of the construction, grading, and paving of streets, the installation of utilities, and the construction of bulkheads and retaining walls. The locations of the proposed outfall and the proposed wetland restoration area are determined to have no sensitivity for precontact archaeological resources as a result of previous disturbance. In addition, the portions of streetbeds that have been disturbed for utility installation are determined to have low sensitivity for precontact archaeological resources. However, the portions of the streetbeds that have not been disturbed for the installation of utilities are determined to have moderate sensitivity for archaeological resources associated with the Native American occupation of College Point, including human remains.

## HISTORIC SENSITIVITY ASSESSMENT

College Point was not extensively settled until after the Revolutionary War. The area surrounding the project site streetbeds was largely occupied by large estates until the late-19th and early 20th centuries. Water and sewer networks appear to have been available in the area by the late-19th or early 20th century. No map-documented structures were observed within any of the project site streetbeds. However, historic structures were located immediately adjacent to the streetbed of 115th Street near 14th Avenue. This structure was depicted on the 1873 Beers map within the F. Stoiber estate immediately adjacent to the eastern side of modern 115th Street to the north of modern 14th Avenue. This structure may be depicted on earlier maps dating to the 1850s and appears to have been demolished before 1891. Given the building's proximity to the streetbed, it is possible that shaft features associated with the home could have been located within that is now the roadway. However, the proposed work in this area as depicted in the project drawings included as **Appendix A** would involve the installation of a new 15-inch storm sewer adjacent to an existing 30-inch interceptor sewer and 4-inch gas line and the installation of a new 8-inch water main in the vicinity of an existing 4-inch gas line. It does not appear likely that this portion of the project site would include intact historic period resources in the location of the proposed utilities. Therefore, the project site is determined to have low sensitivity for archaeological resources dating to the historic period.

## B. RECOMMENDATIONS

There are several locations within the proposed project streetbeds where new utility lines will be installed in areas where no disturbance has been documented (i.e., where no utility lines are present or where there are gaps of more than 5 feet between existing utilities). These areas have been determined to have moderate sensitivity for precontact archaeological resources, including human burials. Archaeological monitoring during the installation of the proposed utilities is recommended in the following locations (depicted on **Figure 9**):

- The location of the proposed new 5.5 foot by 3.5 foot storm sewer in 115th Street between 10th and Poppenhusen Avenues;
- The location of the proposed new 15-inch and 30-inch storm sewers in 117th Street between 9th and Poppenhusen Avenues;
- The location of the proposed new 12-inch sanitary sewer in 9th Avenue between 115th and 118th Streets; and
- The location of the proposed new 15-inch sanitary sewer in 10th Avenue between 115th and 117th Streets.

Archaeological monitoring during construction is recommended for these portions of the project site. As seen on the project drawings in Appendix A, the remainder of the proposed work is planned in close proximity to existing utilities and is therefore considered to be previously disturbed. An Archaeological Monitoring Plan should be prepared to document the steps that will be taken during the monitoring effort to document and protect any archaeological resources observed during construction, including potential human remains.

In the remaining areas within the project site where archaeological monitoring is not recommended, contract drawings (see **Appendix A**) show that the proposed work will be in the locations in close proximity to existing utilities. Therefore, work in those locations is not expected to impact previously undisturbed soils. No archaeological monitoring is recommended for those areas that have been identified as previously disturbed. However, it is recommended that a Plan for the Unanticipated Discoveries of Human Remains be prepared for the entire project site to outline the procedures that would be followed to

ensure the proper management of human remains in the event that such remains are encountered anywhere on the project site the construction of the proposed project.

Both the Archaeological Monitoring Plan and the Unanticipated Discoveries Plan should be submitted to LPC and SHPO for review and approval before the start of construction.



## References

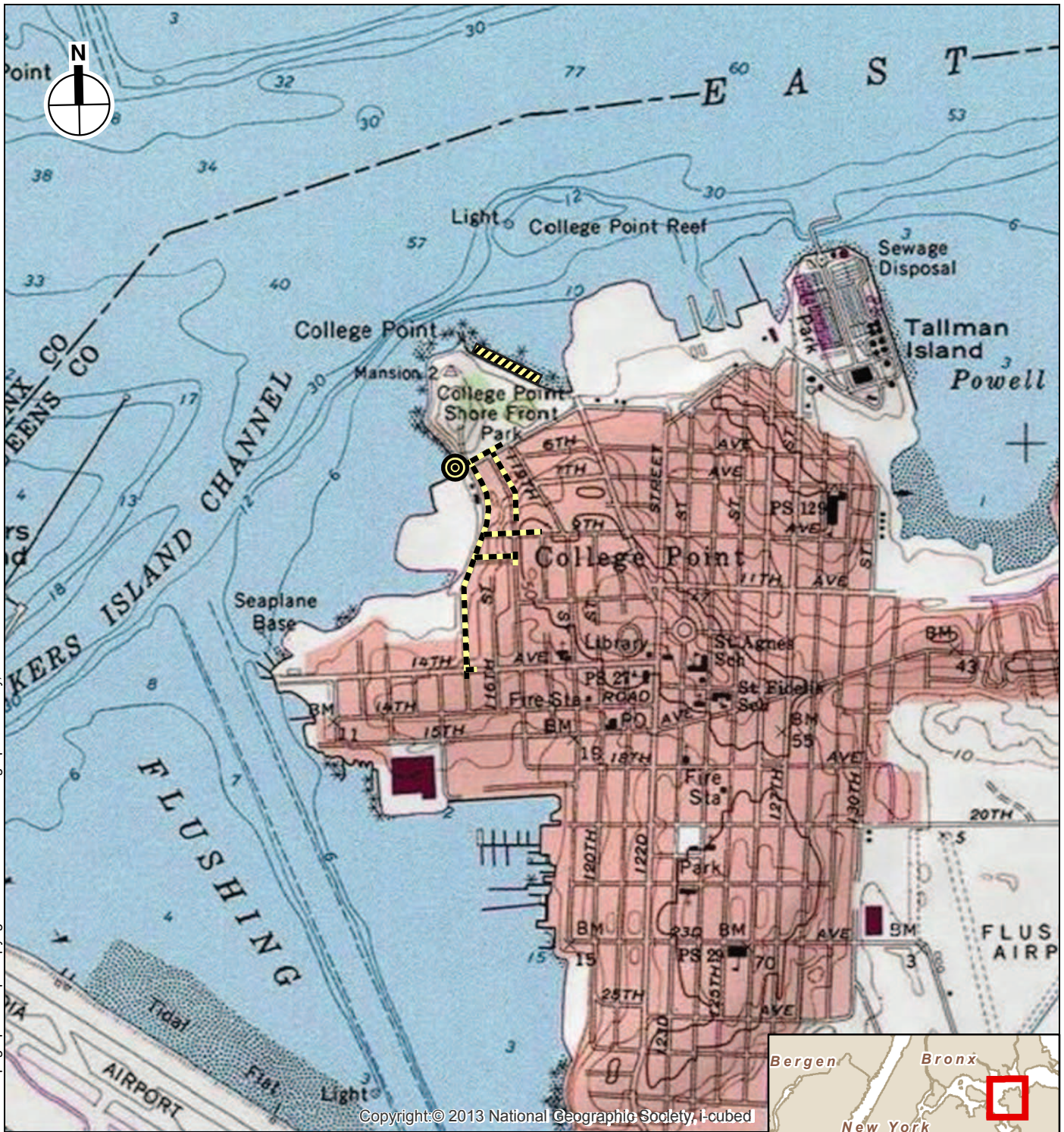
---

- Beers, F.W.  
1873 *Atlas of Long Island, New York From Recent and Actual Surveys and Records*. New York: Beers, Comstock, and Cline.
- Bien, J.R. and C.C. Vermule  
1891 *Atlas of the Metropolitan District and Adjacent County comprising the Counties of New York, Kings, Richmond, Westchester, and part of Queens in the State of New York*. New York: Julius Bien & Co.
- Boesch, Eugene  
1997 *Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of Queens, New York*. Submitted to the New York City Landmarks Preservation Commission.
- Bolton, Reginald Pelham  
1922 "Indian Paths in the Great Metropolis." In *Indian Notes and Monographs*. Miscellaneous #22. New York: Museum of the American Indian, Heye foundation.  
1934 *Indian life of long ago in the city of New York*. New York: J. Graham.  
1975 *New York City in Indian Possession*. Museum of the American Indian, Heye Foundation, New York.
- Bromley, G.W. and W.S.  
1909 *Atlas of the City of New York: Borough of Queens*. Philadelphia: G.W. Bromley & Co.
- Burr, David H.  
1839 *Map of the State of New-York and the Surrounding Country*. New York: Rawdon, Clark, and Co.
- Cantwell, Anne-Marie and Diana diZerega Wall  
2001 *Unearthing Gotham: The Archaeology of New York City*. New Haven: Yale University Press.
- Copquin, Claudia G.  
2007 *The Neighborhoods of Queens*. New York: Citizens Committee for New York City and New Haven: Yale University Press.
- Connor, R.F.O.  
1852 *Map of Kings and Park of Queens Counties*. New York: M. Dripps. Reprinted in Eugene J. Boesch (2001), *Sub-Surface Archaeological Investigation of the Parking Area at Poppenhusen Institute, College Point, Queens*. Prepared for the Poppenhusen Institute, College Point, NY.
- Dincauze, Dena F.  
2000 "The Earliest Americans: The Northeast." *Common Ground: Archaeology and Ethnography in Public Interest*. Washington, D.C.: National Park Service.
- Dripps, M.  
Ca. 1872 *Map of Kings County with Parts of Westchester, Queens, New York, and Richmond*. New York: M. Dripps.
- Gerdes, F.H.  
1855 "No. 488." New York: U.S. Coast Survey: A.D. Bache, superintendent.
- Grumet, Robert S.  
1981 *Native American Place Names in New York City*. New York: Museum of the City of New York.  
1995 *Historic Contact*. Norman, OK: University of Oklahoma Press.
- Hecht, Robert A.  
1974 *A History of College Point, N.Y.* Queens, New York: Published by the Bicentennial Committee of College Point, Inc.

- Hinsdale, E.B.  
1898 *History of the Long Island Railroad Company, 1834-1898*. New York: The Evening Post Job Printing House.
- Historical Perspectives, Inc.  
1999 *Archaeological Assessment: Waterview Nursing Care Center, College Point, Queens, New York*. Principal Investigators: Cece Saunders and Betsy Kearns. Prepared for: Wall and Associates, New York, NY.
- Homberger, Eric  
1994 *The Historical Atlas of New York City: A Visual Celebration of New York City's History*. 2005 reprint. New York: An Owl Book, Henry Holt and Company.
- Isachsen, Y.W., E. Landing, J.M. Lauber, L.V. Rickard, W.B. Rogers, editors.  
2000 *Geology of New York: A Simplified Account*. Second Edition. New York: New York State Museum Educational Leaflet 28.
- Lederer, Victor with the Poppenhusen Institute  
2004 *Images of America: College Point*. Portsmouth, NH: Arcadia Publishing.
- LiRo Engineers, Inc.  
2007 "Corridor Assessment Report for 9th Avenue Storm Sewer and Sanitary Sewer Work, Queens, NY." Prepared for the New York City Department of Design and Construction; New York, NY.
- Mather, W.W.  
1842 *Geological Map of Long and Staten Islands with the Environs of New York*. Based on the surveys of J. Calvin Smith. Lithograph by W. Endicott & Co.
- New York City Soil Survey Staff  
2005 *New York City Reconnaissance Soil Survey*. United States Department of Agriculture, Natural Resources Conservation Service, Staten Island, New York.
- Arthur C.  
1922 *The Archaeological History of New York*. Albany: The University of the State of New York.
- RBA Engineers, Architects, and Planners  
1997 *Phase IA Documentary Study of the Wilkins Site for Proposed Improvements to 14th Avenue and 141st Street, Borough of Queens, New York*. Prepared by Jean Howson. Prepared for the New York City Department of Design and Construction.
- 2000 *The Wilkins Site: Archaeological Testing & Data Recovery at 14th Avenue and 141st Street, Borough of Queens, New York*. Prepared by Eugene J. Boesch and Leonard Bianchi & Jean Howson. Prepared for the New York City Department of Design and Construction.
- Reeds, Chester A.  
1925 *The Geology of New York City and Vicinity*. New York: The American Museum of Natural History Guide Leaflet Series No. 56.
- Rockwell, C.S.  
1858 *Map of the North Shore of Long Island from Little Neck Bay to Flushing Bay*. United States Coastal Survey Register No. 695.
- Ritchie, William A.  
1980 *The Archaeology of New York State: Revised Edition*. Harrison, New York: Harbor Hill Books.
- Sanborn Map Company  
1903 *Insurance Maps of the City of New York*. New York: Sanborn Map Co.  
1916 *Insurance Maps of the City of New York*. New York: Sanborn Map Co.  
1943 *Insurance Maps of the City of New York*. New York: Sanborn Map Co.  
1951 *Insurance Maps of the City of New York*. New York: Sanborn Map Co.  
2012 *Insurance Maps of the City of New York*. New York: Sanborn Map Co.

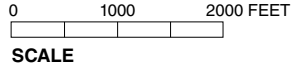
- Schubert, Christopher J.  
1968 *The Geology of New York City and Environs*. Garden City, New York: The American Museum of Natural History, the Natural History Press.
- Sidney, J.C.  
1849 *Sidney's Map of Twelve Miles around New-York*. Philadelphia: engraved by N. Friend.
- Smith, Carlyle S.  
1950 *The Archaeology of Coastal New York*. New York: Anthropological Papers of the American Museum of Natural History: Volume 23, Part 2.
- Smith, John Calvin  
1844 *Map of Long Island with the Environs of New-York and the Southern Park of Connecticut*. New York: S. Stiles and Co.  
1847 *Map of Long Island with the Environs of New-York and the Southern Park of Connecticut*. New York: S. Stiles and Co.
- Solecki, Ralph S.  
2006 "A Late Woodland Double Indian Burial at College Point, New York." In, *The Bulletin: Journal of the New York State Archaeological Association*. No. 122: pp. 70-79.
- Ullitz, Hugo  
1908 *Atlas of the Borough of Queens, City of New York*. Updated through 1913. Brooklyn, New York: E. Belcher Hyde.
- United States Army Corps of Engineers  
2003 *Cultural Resources Baseline Study: Flushing Bay Ecosystem Restoration Project, Queens, New York Draft Report*. Prepared by Panamerican Consultants, Inc., Buffalo, New York. Prepared for: Barry A. Vittor & Associates, Inc., Mobile, Alabama, under contract to the U.S. Army Corps of Engineers, New York District, New York, NY.
- United States Geological Survey  
1891 *New Jersey-New York: Brooklyn Sheet*. Washington, DC: United States Geological Survey.  
1897 *New Jersey-New York: Brooklyn Sheet*. Washington, DC: United States Geological Survey.
- Von Skal, George  
1908 *Illustrated Historic of the Borough of Queens, New York City*. New York: Compiled by the F.T. Smiley Publishing Co. for the Flushing Journal.
- Walsh, Kevin  
2006 *Forgotten New York: The Ultimate Urban Explorer's Guide to All Five Boroughs*. New York: Harper Collins.
- Weston Solutions of New York, Inc.  
2009 "Final Phase II Subsurface Corridor Investigation Report for Storm and Sanitary Sewers in 9th Avenue (Outfall); 9th Avenue between 118th Street and U.S. Bulkhead Line; Queens, New York." Prepared for the New York City Department of Design and Construction; New York, NY.
- Wolverton, Chester  
1891 *Atlas of Queens County, Long Island, New York*. New York: Chester Wolverton.

## Figures



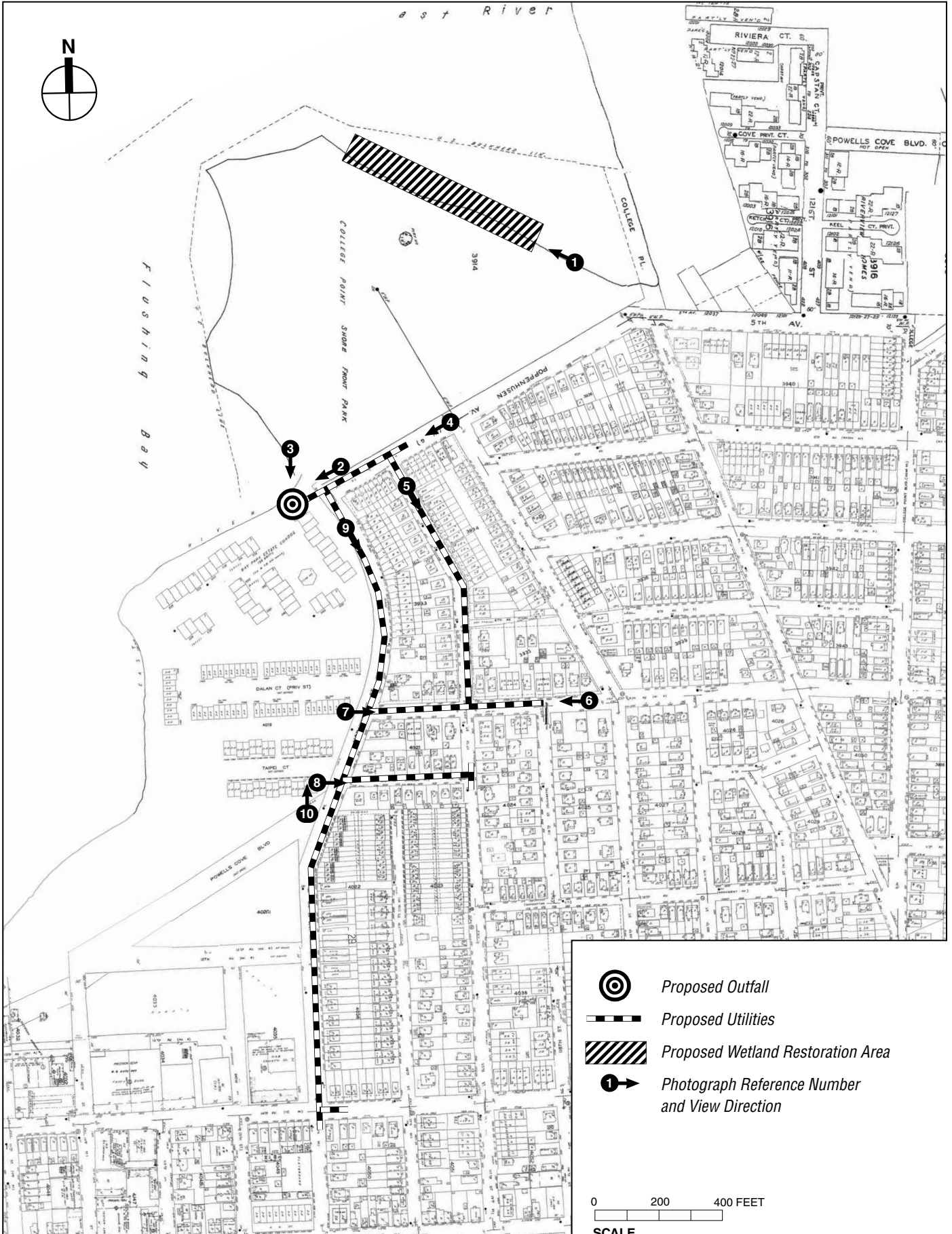
Copyright © 2013 National Geographic Society, i-cubed

-  Proposed Outfall
-  Proposed Utilities
-  Proposed Wetland Restoration Area



USGS 7.5 Minute Topographic Map  
Flushing Quad

Figure 1





E A S T R I V E R



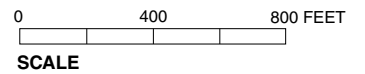
*Proposed Outfall*

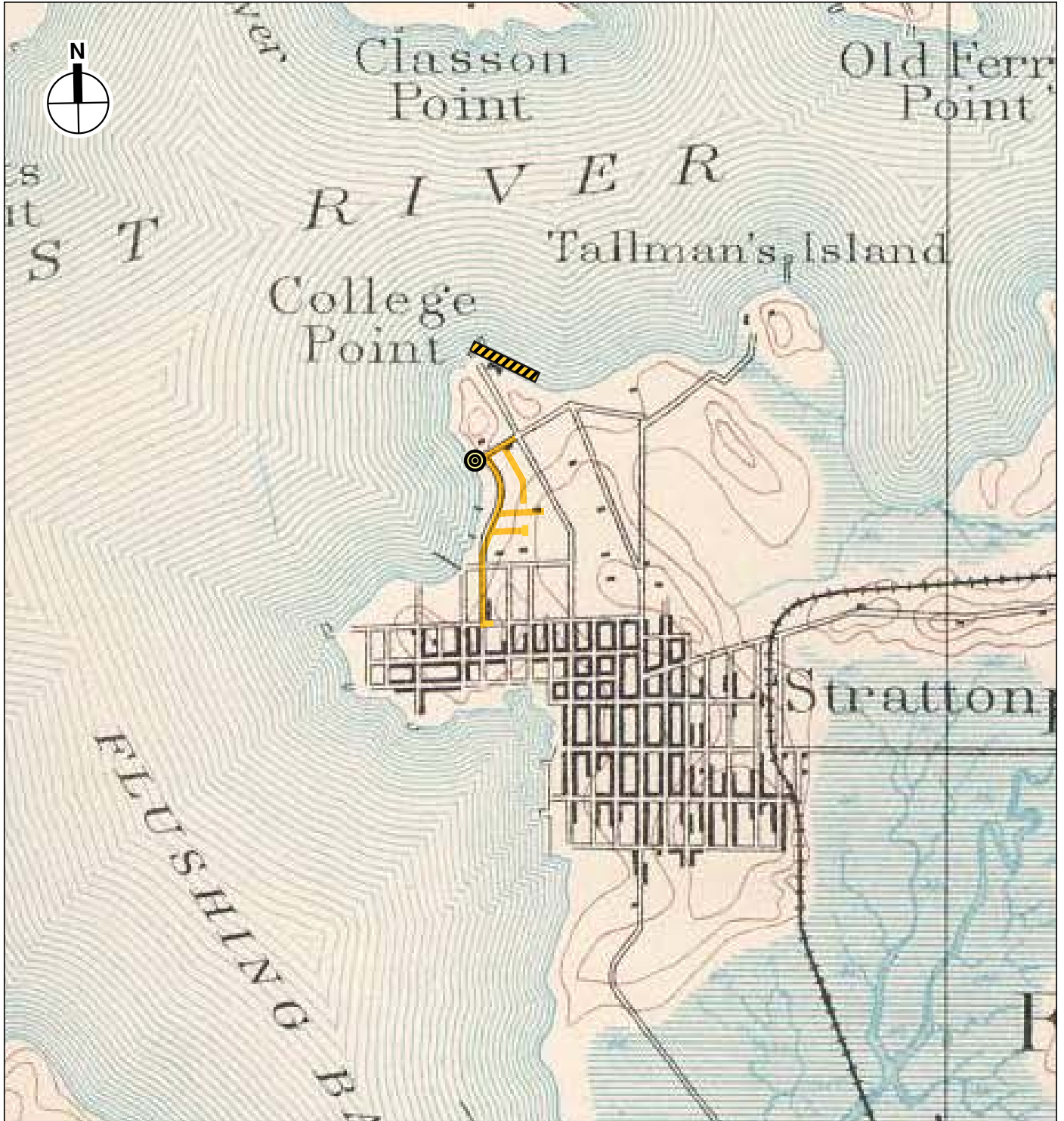


*Proposed Utilities*



*Proposed Wetland Restoration Area*





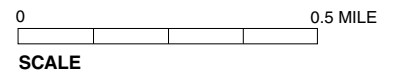
*Proposed Outfall*



*Proposed Utilities*



*Proposed Wetland Restoration Area*



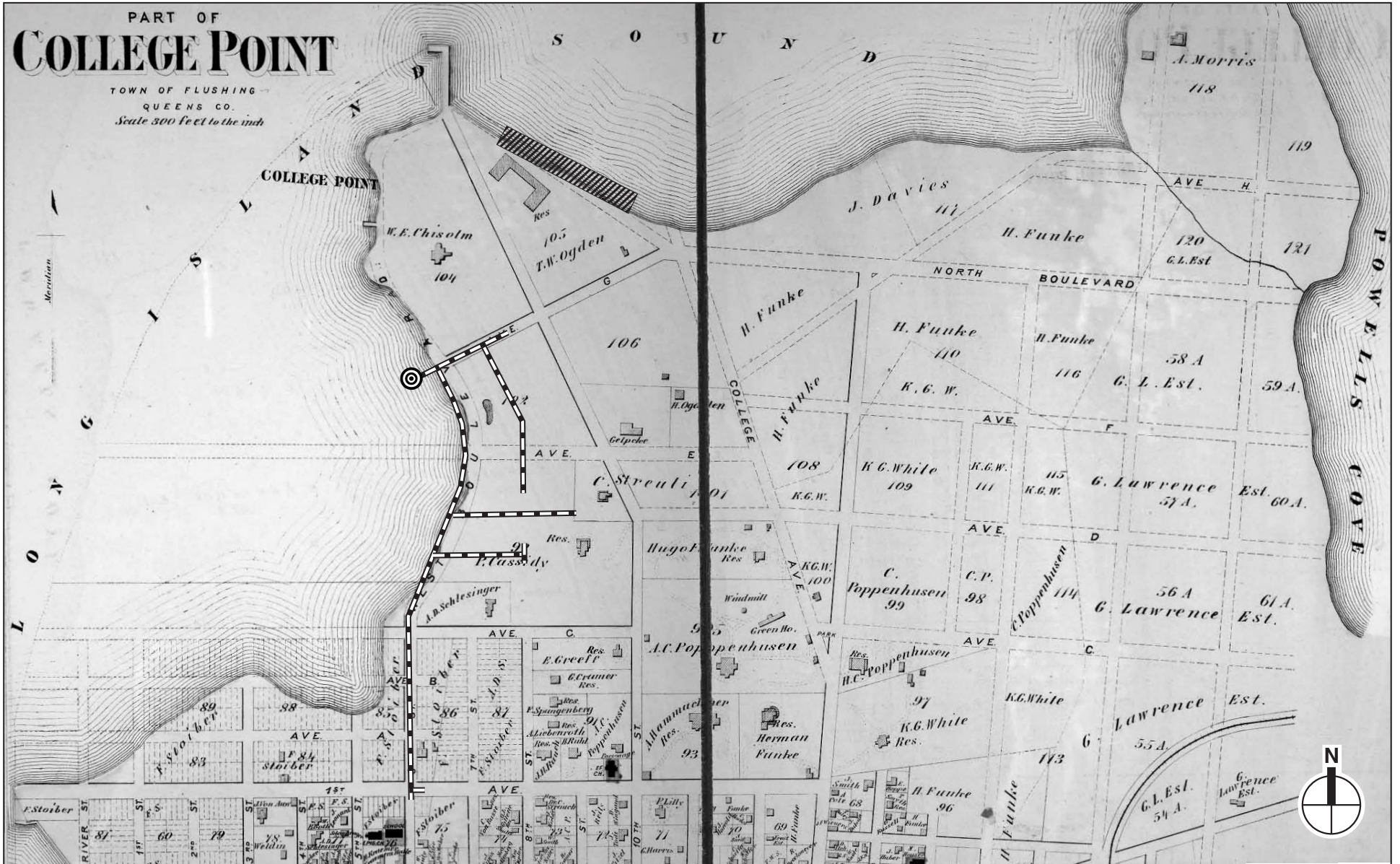




-  Proposed Outfall
-  Proposed Utilities
-  Proposed Wetland Restoration Area

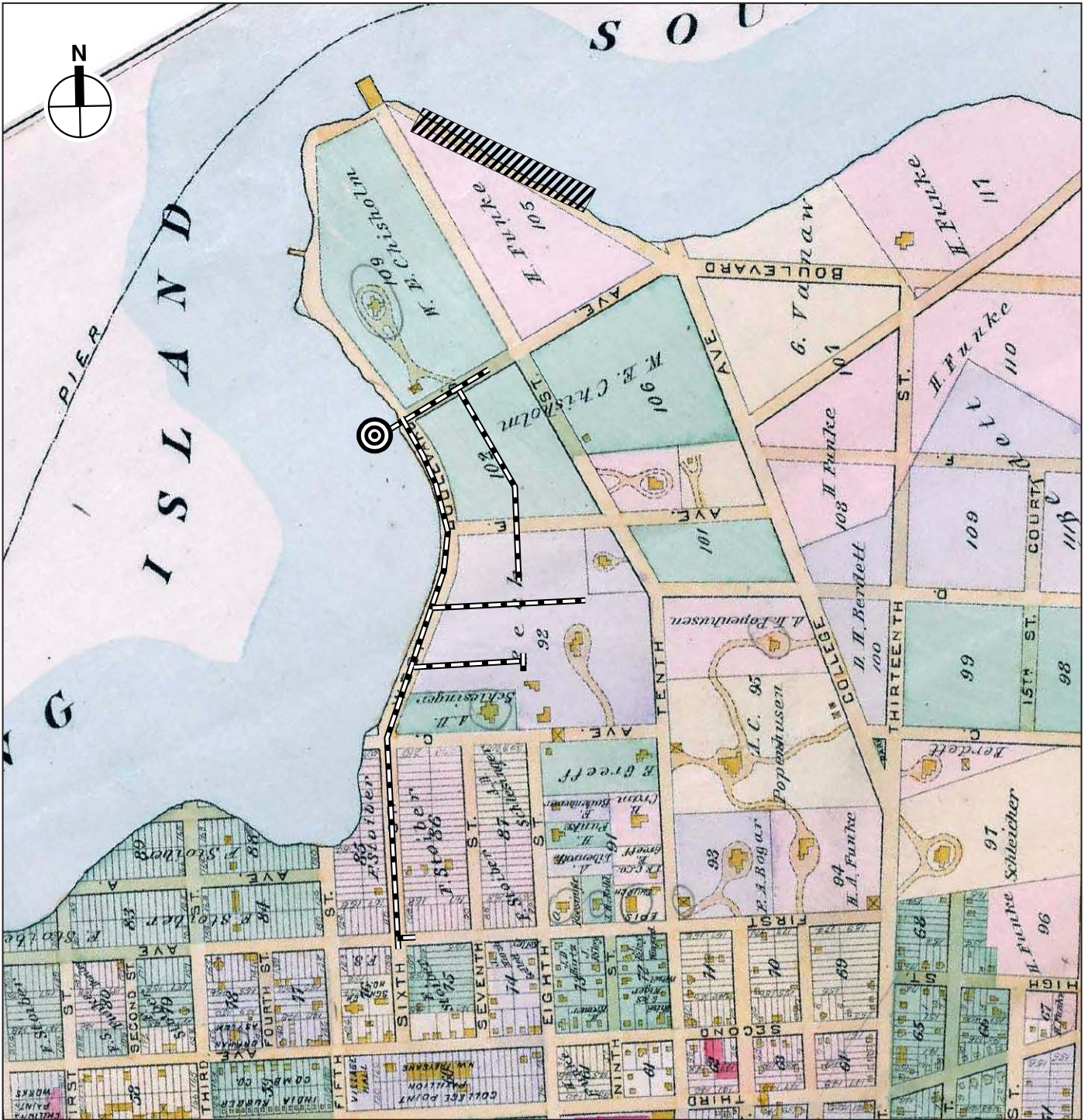
0 1700 FEET  
SCALE

*NOTE: Due to inaccuracies in this map, the location of the project site has been approximated*

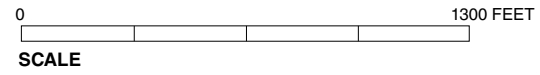


⊙ Outfall

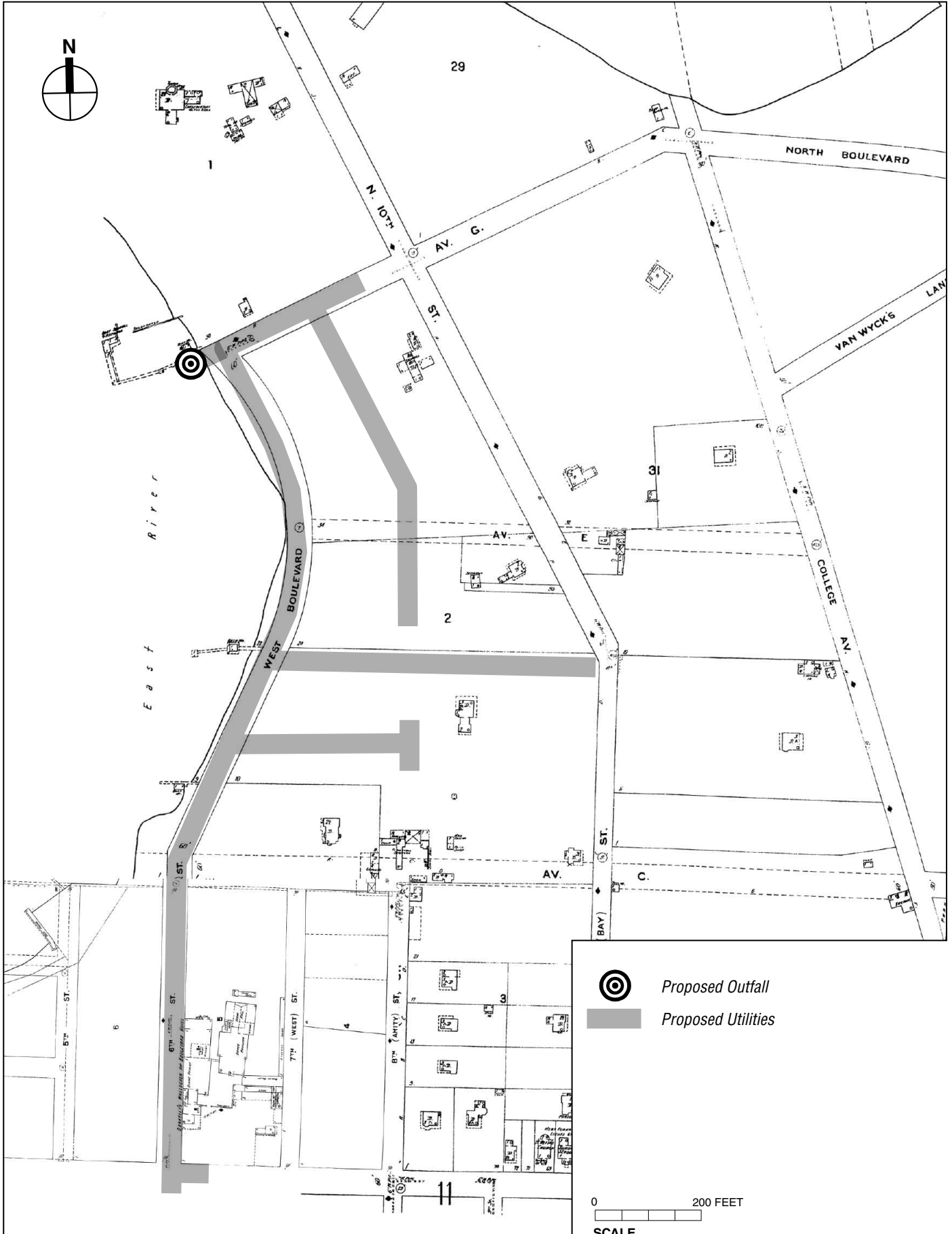
--- Proposed Utilities





-  Proposed Outfall
-  Proposed Utilities
-  Proposed Wetland Restoration Area

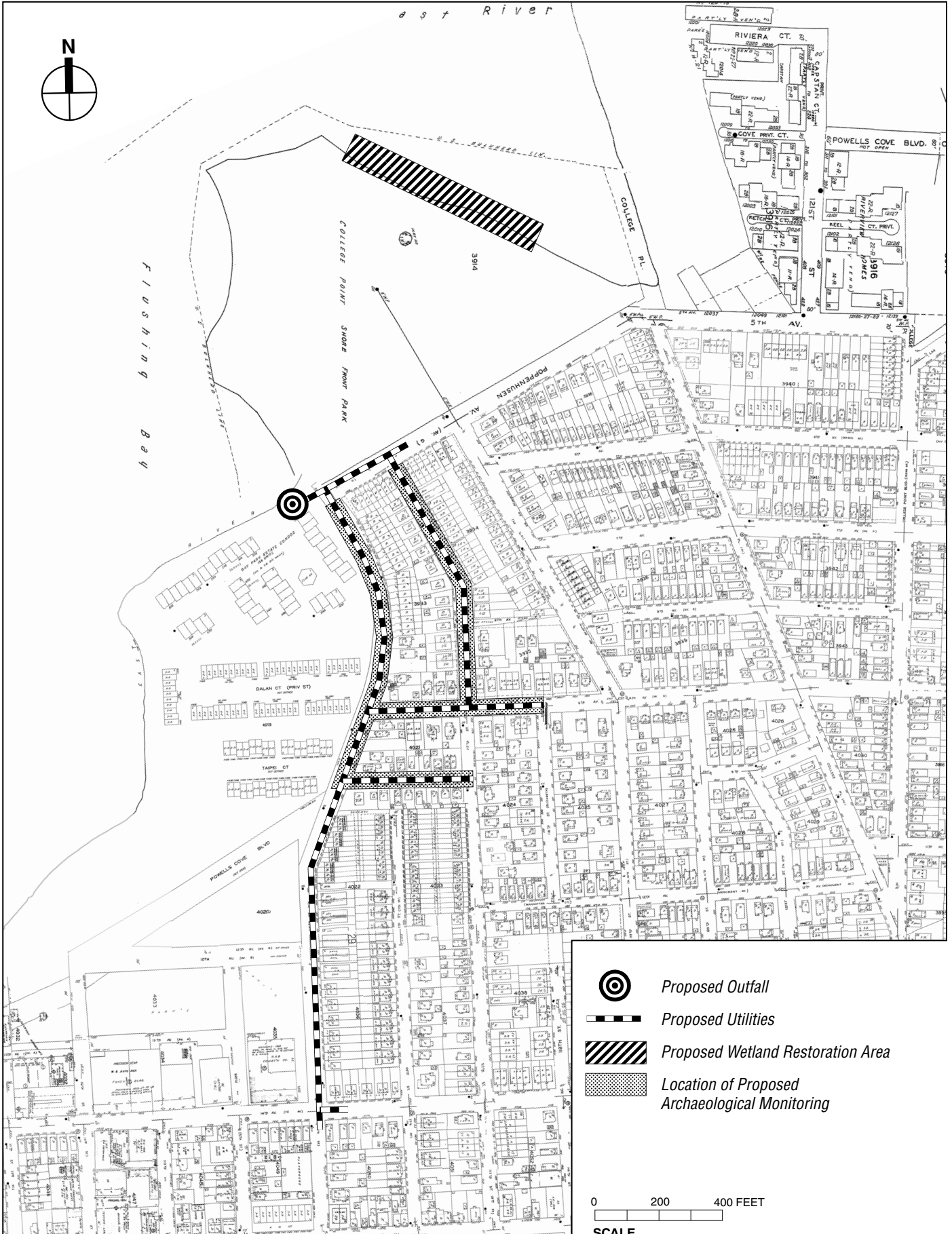






SCALE



-  Proposed Outfall
-  Proposed Utilities

0 200 FEET  
SCALE



-  Proposed Outfall
-  Proposed Utilities
-  Proposed Wetland Restoration Area
-  Location of Proposed Archaeological Monitoring

0 200 400 FEET  
SCALE

**Areas Where Archaeological Monitoring is Proposed**

## **Photographs**



View north at the wetland restoration area on the eastern side of MacNeil Park 1



The western terminus of Poppenhusen Avenue 2



The proposed outfall location at the western end of Poppenhusen Avenue 3



Poppenhusen Avenue, looking west from 117th Street 4





The streetbed of 117th Street facing south towards 9th Avenue 5



Looking west along 9th Avenue towards 118th Street 6



The streetbed of 115th Street looking east towards 9th Avenue 7



The streetbed of 115th Street looking east towards 10th Avenue 8



Looking south along 115th Street from Poppenhusen Avenue 9



View of the southern end of the project site, looking north along 115th Street near 14th Avenue 10

## **Appendix A: Site Plans**



**NEW YORK CITY DEPARTMENT OF  
DESIGN + CONSTRUCTION**

**PROJECT ID: SEQ200464**

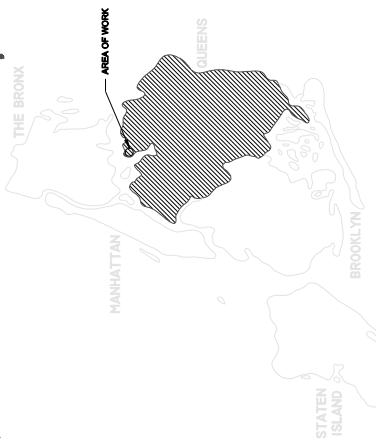
FOR THE CONSTRUCTION OF STORM SEWER AND  
REPLACEMENT OF SANITARY SEWER AND WATER MAIN IN:

- 115TH STREET  
BETWEEN POPPENHUSEN AVENUE AND 14TH AVENUE
- 117TH STREET  
BETWEEN POPPENHUSEN AVENUE AND 8TH AVENUE
- 9TH AVENUE  
BETWEEN 118TH STREET AND 115TH STREET
- 10TH AVENUE  
BETWEEN 117TH STREET AND 115TH STREET

**TOGETHER WITH ALL WORK INCIDENTAL THERETO:  
BOROUGH OF QUEENS**

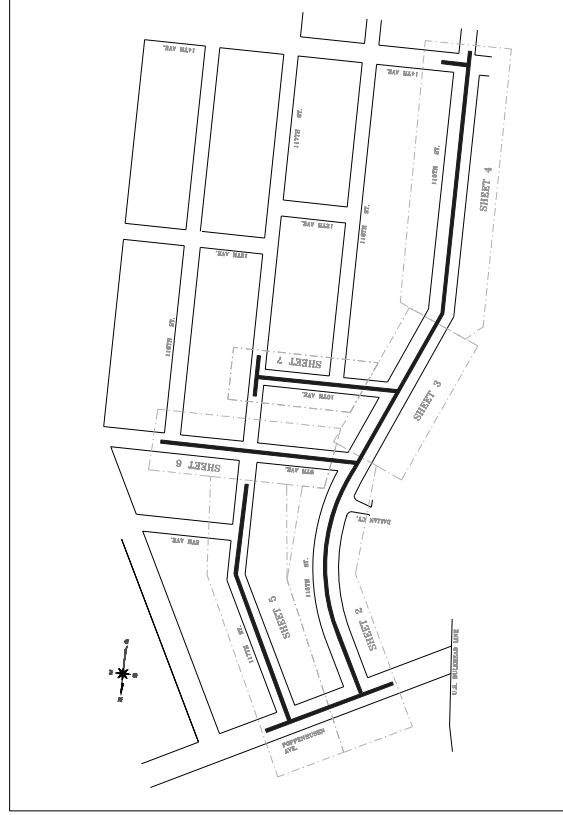
**LEGEND**

- POINT OF CURVATURE
- POINT OF TANGENCY
- RADIUS OF BLECTION
- DIAMETER
- INVERT ELEVATION
- BUILDING LINE
- COMBINED SEWER
- STANDARD CAST IRON
- REINFORCED CONCRETE PIPE
- WORKING POINT
- BLUE STONE
- GRANITE BLOCK
- BRICK
- FLAT TOP REINFORCED CONCRETE
- BRICK REINFORCED CONCRETE
- EXISTING
- CONCRETE CURB
- CONCRETE CURB
- CONCRETE
- TRAFFIC SIGN
- DOUBLE BARREL
- EXISTING SEWER LINE
- WATER LINE DP STEAM MAIN
- TELEPHONE
- NEW SEWER UNDER 24" DIA.
- NEW MANHOLE
- EXISTING CATCH BASIN
- NEW CATCH BASIN
- NEW CATCH BASIN REPLACING EXISTING BASIN
- STREET LIGHT (METAL POLE)
- UTILITY POLE WITH STREET LIGHT
- FIRE HYDRANT-HIGH PRESSURE, LDW PRESSURE
- HYDRANT TO BE REMOVED
- NEW HYDRANT
- NEW HYDRANT
- 3-WAY
- 4-WAY
- FIRE ALARM BRACKET ON STREET LIGHT POLE
- GAS VALVE
- CLASS 5 IRON PIPE
- SURFACE RUN-OFF DIRECTION
- TRAFFIC FLOW



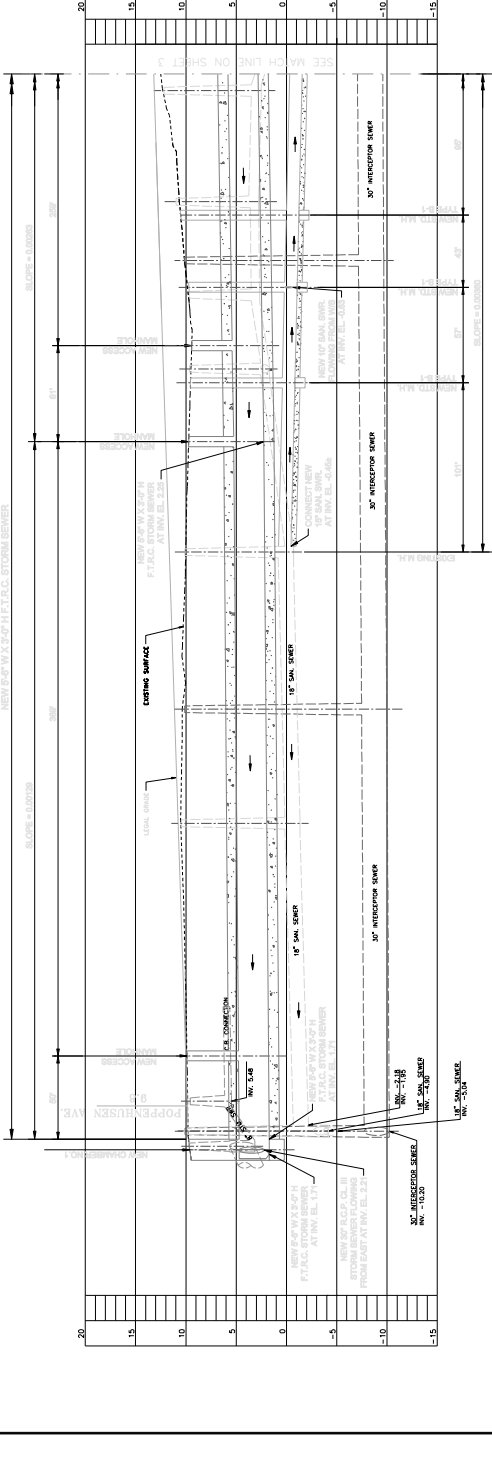
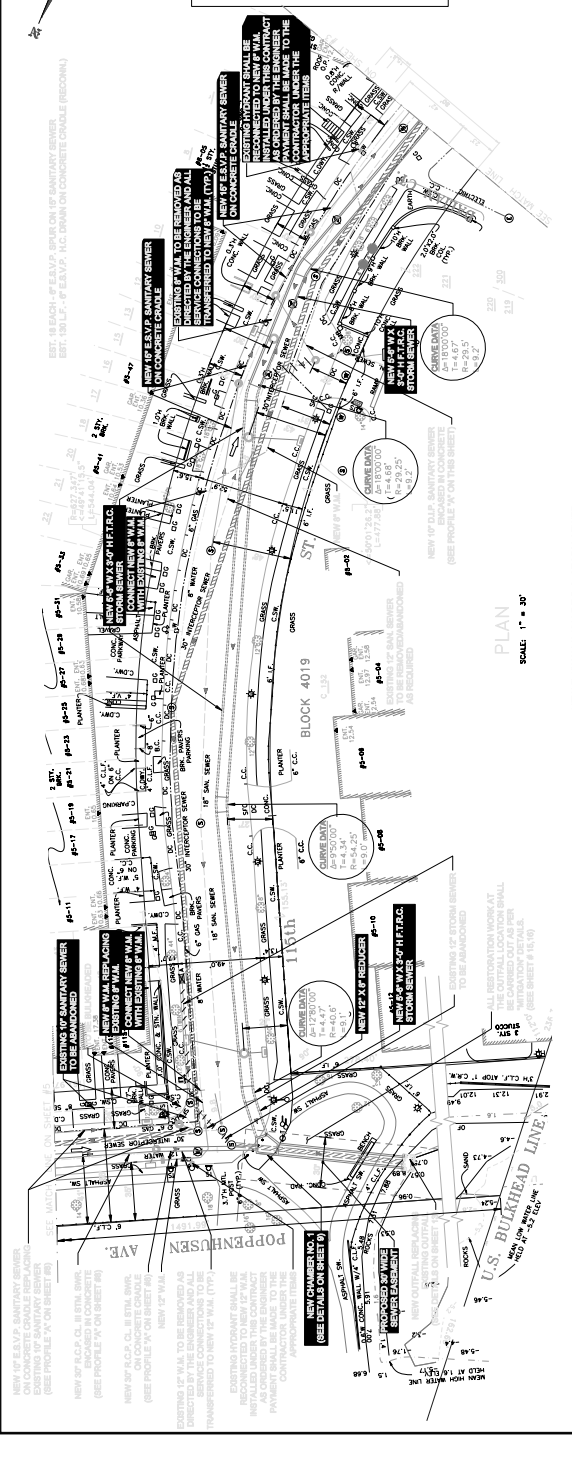
**NOTE:**  
ALL ELEVATIONS REFER TO THE BOROUGHS OF QUEENS DRAIN  
WHICH IS 2 FEET ABOVE MEAN SEA LEVEL AS ESTABLISHED BY THE U.S.  
COAST AND GEODETIC SURVEY AT SANDY HOOK, NEW JERSEY.

LIST OF DRAWINGS	
SHEET NO.	DESCRIPTION
1 OF 16	TITLE SHEET
2-4 OF 16	PLAN AND PROFILE - 115TH STREET
5 OF 16	PLAN AND PROFILE - 9TH AVENUE
6 OF 16	PLAN AND PROFILE - 10TH AVENUE
7 OF 16	PROFILE - POPPENHUSEN AVENUE
8 OF 16	CHAMBER NO. 1
9 OF 16	CHAMBER NO. 2
10 OF 16	CHAMBER NO. 3
11 OF 16	ACCESS-MANHOLE
12 OF 16	LANDSCAPING PLAN
13 OF 16	STAINLESS STEEL FLAP GATES DETAILS AND SIGN DETAILS
14 OF 16	DOTFALL DETAILS
15 OF 16	LANDSCAPING PLAN
16 OF 16	SEDIMENT AND EROSION CONTROL PLAN
FBI	FIRE DEPARTMENT BASE MAPS DRAWING
B11 THRU B12	BORING DRAWINGS
U1 THRU U8	UTILITY DRAWINGS (REFERENCE ONLY)



NO.	DATE	DESCRIPTIONS	BY	APPROV

**LOCATION PLAN  
N.T.S.  
COMMUNITY BOARD NO. 7**



NOTE: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM. BENCHMARKS 11290, 11289, AND 11288 WERE USED TO TIE INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM. NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 2.726 FEET ABOVE MEAN SEA LEVEL, AT SANDY HOOK, NEW JERSEY, AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

15TH STREET BETWEEN POPPENHUSEN AVENUE AND 9TH AVENUE  
 PROFILE  
 SCALE: VERT. 1" = 5'

CONSTRUCTION OF SANITARY SEWER WITH INTERSECTIONS BETWEEN POPPENHUSEN AVE. AND 9TH AVE., ETC.  
 BOROUGH OF QUEENS  
 PROJECT ID: SEC200464

NO.	DATE	DESCRIPTION	BY	APP'D

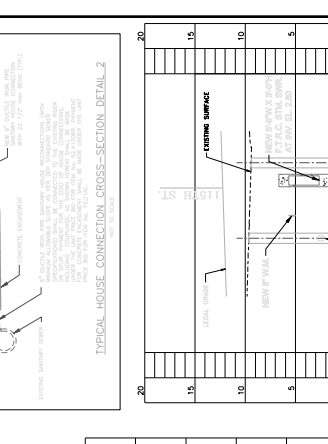
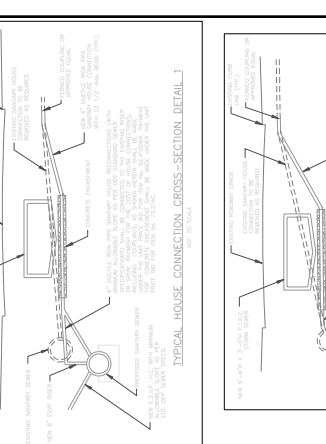
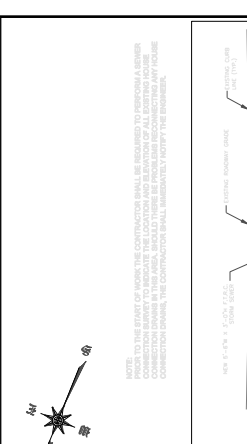
CITY OF NEW YORK  
 DEPARTMENT OF DESIGN + CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE  
 BUREAU OF DESIGN

PLANNING AND PROFILE

RECORDED: C.V.  
 DRAWN: M.M.  
 CHECKED: A.K.  
 SCALE AS SHOWN  
 CLAMP FILE

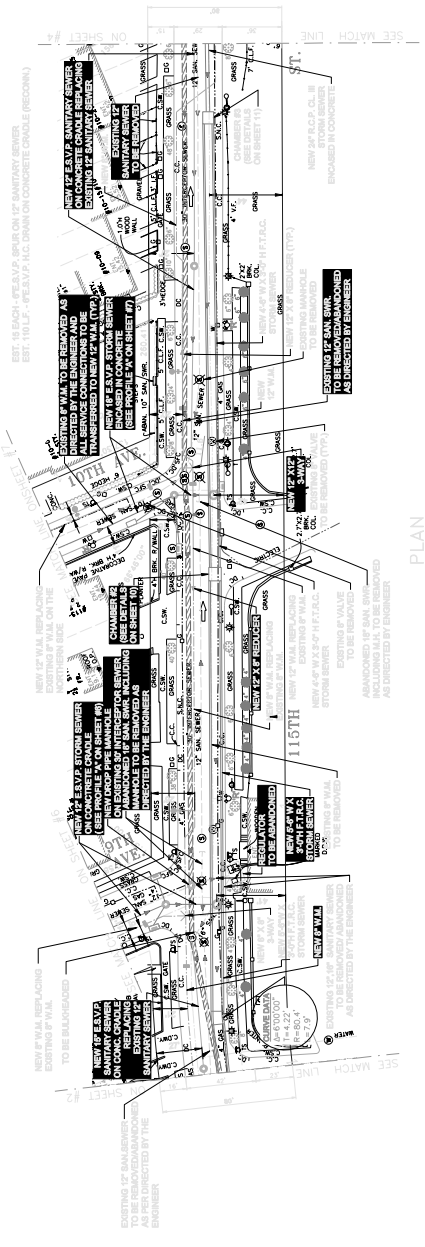
TOPOGRAPHIC SURVEY PREPARED BY:  
 J. P. MOSELEY  
 LICENSED LAND SURVEYOR

FIELD SHEET NO. 10 OF 10  
 DATE: JAN 14, 2014

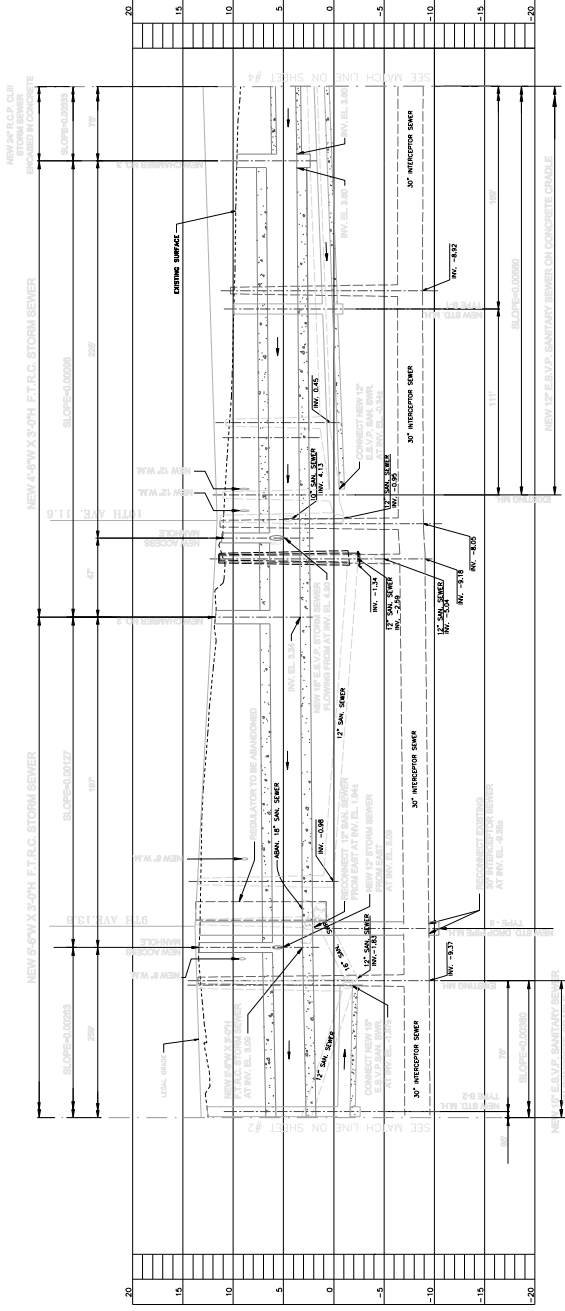


NOTE: TO THE EXTENT OF WORK THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM A SURVEY TO DETERMINE THE EXISTING HOUSE SEWER LOCATION AND DEPTH. THE CONTRACTOR SHALL VERIFY THE EXISTING HOUSE SEWER LOCATION AND DEPTH BY EXCAVATING TO THE EXISTING HOUSE SEWER. THE CONTRACTOR SHALL VERIFY THE EXISTING HOUSE SEWER LOCATION AND DEPTH BY EXCAVATING TO THE EXISTING HOUSE SEWER. THE CONTRACTOR SHALL VERIFY THE EXISTING HOUSE SEWER LOCATION AND DEPTH BY EXCAVATING TO THE EXISTING HOUSE SEWER.

NEW 12" X 12" SANITARY SEWER  
 NEW 12" X 12" SANITARY SEWER  
 NEW 12" X 12" SANITARY SEWER



PLAN  
SCALE: 1" = 30'



PROFILE  
SCALE: VERT. 1" = 30'

"ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MADE BY AN ORIGINAL OF THE LAND SURVEYOR'S BLUE INKED OR ENGRAVED COPY SHALL BE CONSIDERED TO BE A TRUE AND CORRECT COPY".  
ALL EXISTING UTILITIES AND STRUCTURES, WHETHER FUNCTIONAL OR ABANDONED, ARE SHOWN ON THIS PLAN.  
FIELD SURVEY WAS COMPLETED ON JAN 14, 2019

TOPOGRAPHIC SURVEY PREPARED BY: J.P.F. INC.  
DESIGNED: C.Y.  
DRAWN: M.M.  
CHECKED: A.K.  
SCALE: AS SHOWN  
DATE: 1/14/19  
CADD FILE: [blank]

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN  
DIRECTOR: [blank]

PLAN AND PROFILE

NO.	DATE	DESCRIPTION	BY	APP'D

CONSTRUCTION OF 12" AND 30" SEWERS IN FURTH STREET BETWEEN POPPENHANS AVENUE AND 14TH AVE, ETC. BOROUGH OF QUEENS  
PROJECT ID: 202300464

CONSTRUCTION OF 30" R.C.P. STORM SEWERS ON CONCRETE CHANNEL BETWEEN POPPENHANS AVENUE AND 14TH AVE, ETC.		
CITY OF NEW YORK		
DEPARTMENT OF DESIGN & CONSTRUCTION		
DIVISION OF INFRASTRUCTURE		
BUREAU OF DESIGN		
PROJECT NO.	SECTIONAL	DATE
NO.	DATE	BY
1	APPROX.	DESIGNER
2		CHECKER
3		APPROVER

1. THE CONTRACTOR SHALL NOTE THAT ALL CONCRETE DIMENSIONS HAVE BEEN PROVIDED IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS AND EXCAVATIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS.

2. THE CONTRACTOR SHALL NOTE THAT ALL CONCRETE DIMENSIONS HAVE BEEN PROVIDED IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS AND EXCAVATIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS.

# PLAN AND PROFILE

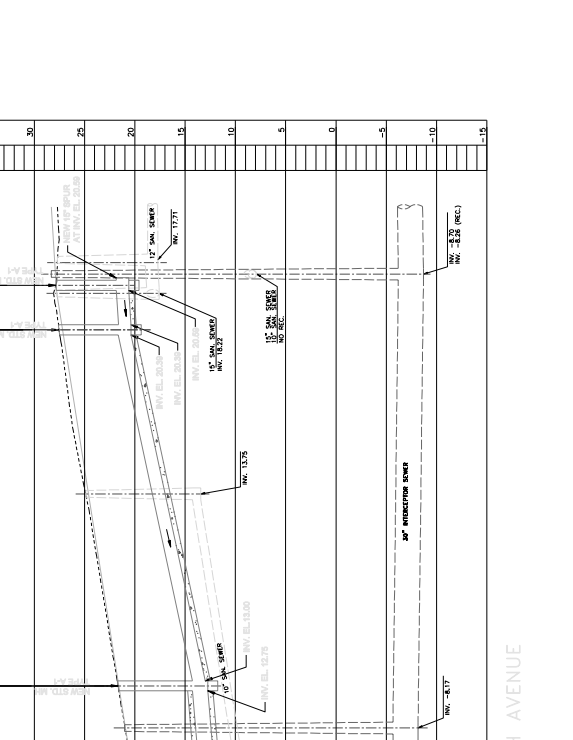
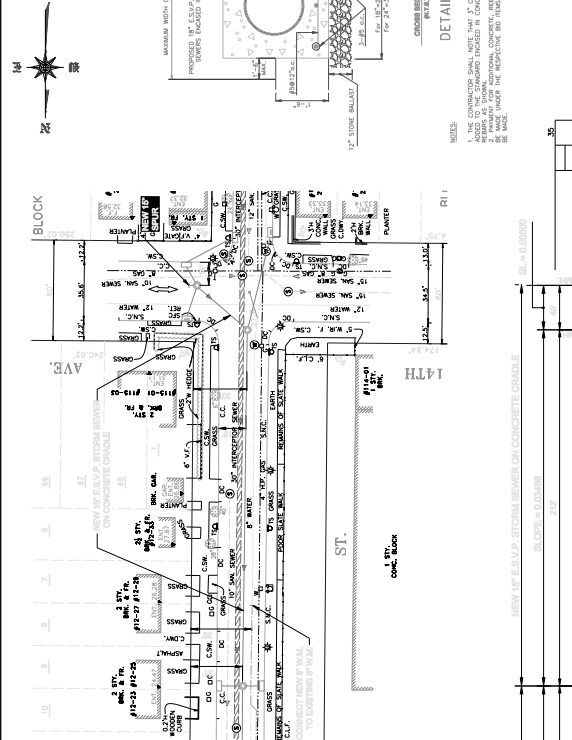
**115TH STREET BETWEEN 10TH AVENUE AND 14TH AVENUE**  
**PROFILE "A"**

SCALE: PLAN: 1" = 30'  
 SCALE: PROFILE: 1" = 5'

NOTED: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM, BOROUGH MANHATTAN 11200, 11250, AND 11300 WERE USED TO FIT INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM. NOTES: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 27.26 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

TOPOGRAPHIC SURVEY PREPARED BY: [NAME] DATE: [DATE]

LOCATION, EXTENT AND SIZE OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON IS BASED ON RECORD DRAWINGS AND FIELD SURVEYS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. ANY UNDISCOVERED UTILITIES OR STRUCTURES SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE AND UNDER THE SUPERVISION OF THE ENGINEER.



SECTION "A" SHOWS THE LOCATION OF THE NEW 30" R.C.P. STORM SEWERS TO BE INSTALLED UNDER THE EXISTING 30" R.C.P. STORM SEWERS ON CONCRETE CHANNEL. THE NEW SEWERS SHALL BE INSTALLED IN THE EXISTING CHANNELS AND SHALL BE CONNECTED TO THE EXISTING SEWERS AT THE MANHOLES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. ANY UNDISCOVERED UTILITIES OR STRUCTURES SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE AND UNDER THE SUPERVISION OF THE ENGINEER.

**DETAIL "A"**

SECTION "A" SHOWS THE LOCATION OF THE NEW 30" R.C.P. STORM SEWERS TO BE INSTALLED UNDER THE EXISTING 30" R.C.P. STORM SEWERS ON CONCRETE CHANNEL. THE NEW SEWERS SHALL BE INSTALLED IN THE EXISTING CHANNELS AND SHALL BE CONNECTED TO THE EXISTING SEWERS AT THE MANHOLES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. ANY UNDISCOVERED UTILITIES OR STRUCTURES SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE AND UNDER THE SUPERVISION OF THE ENGINEER.

THE CONTRACTOR SHALL NOTE THAT ALL CONCRETE DIMENSIONS HAVE BEEN PROVIDED IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS AND EXCAVATIONS SHALL BE MADE UNDER THE RESPECTIVE PROJECTIONS.

CONSTRUCTION OF 30" R.C.P. STORM SEWERS ON CONCRETE CHANNEL BETWEEN POPPENHANS AVENUE AND 14TH AVE, ETC.

CITY OF NEW YORK  
 DEPARTMENT OF DESIGN & CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE  
 BUREAU OF DESIGN

SCALE: PLAN: 1" = 30'  
 SCALE: PROFILE: 1" = 5'

NOTED: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM, BOROUGH MANHATTAN 11200, 11250, AND 11300 WERE USED TO FIT INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM. NOTES: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 27.26 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.



NO.	DATE	DESCRIPTIONS	BY	APP'D

CONSTRUCTION OF A SANITARY SEWER IN HIGH STREET BETWEEN POPPENHUSEN AVE AND 14TH AVE, ETC. BOROUGH OF QUEENS

PROJECT NO. 2020044

PLAN AND PROFILE

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

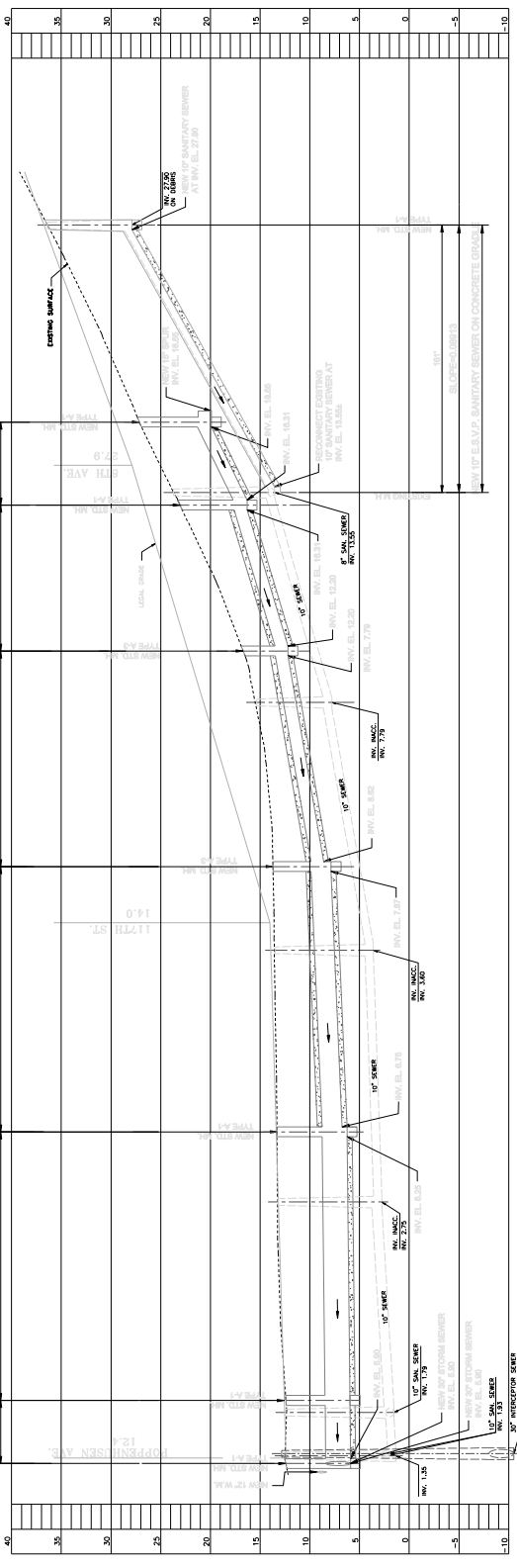
ENGINEER-IN-CHARGE  
P.E.

SCALE AS SHOWN  
CADD FILE

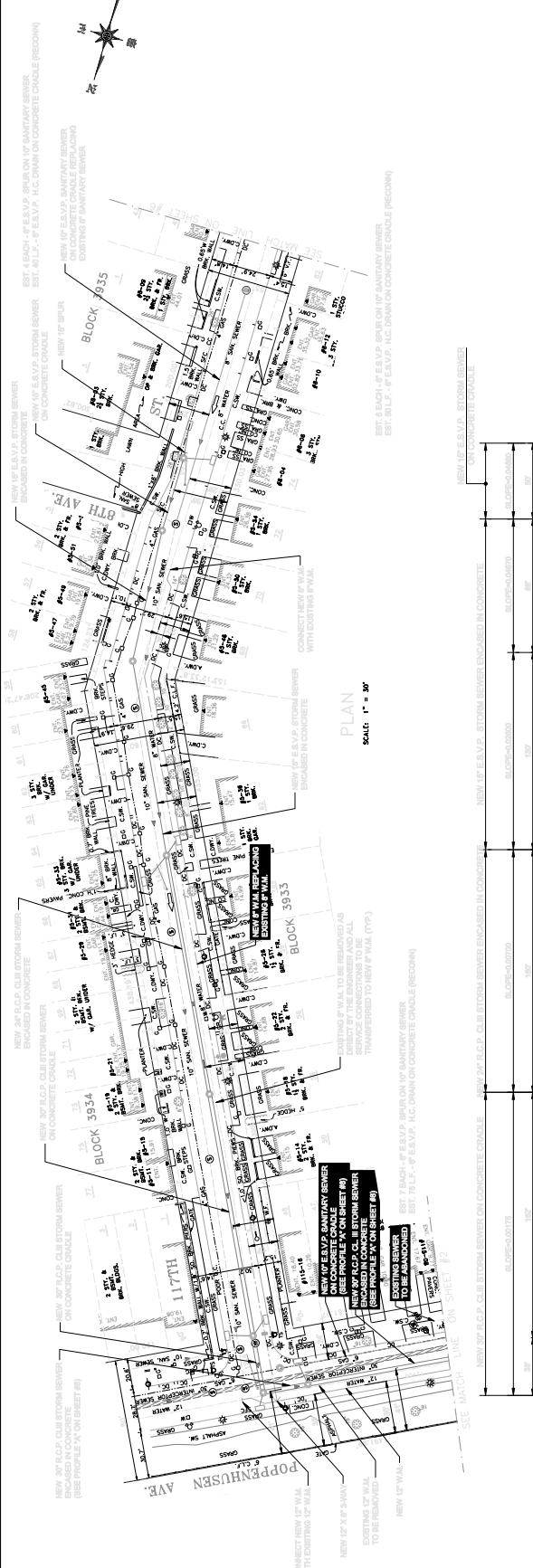
TOPOGRAPHIC SURVEY PREPARED BY:  
DATE: 11/11/19  
DRAWN: [Name]  
CHECKED: [Name]  
DESIGNED: [Name]

NOTE: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM. BOUNDARY MARKERS 11206, 11264, AND 11266 WERE USED TO TIE INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM.  
NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 2.726 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

117TH STREET BETWEEN POPPENHUSEN AVE AND 9TH AVE



PLAN  
SCALE: 1" = 30'



SEE 117TH AVE ON STREET P.P.

TOPOGRAPHIC SURVEY PREPARED BY:  
DATE: 11/11/19  
DRAWN: [Name]  
CHECKED: [Name]  
DESIGNED: [Name]

NOTE: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM. BOUNDARY MARKERS 11206, 11264, AND 11266 WERE USED TO TIE INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM.  
NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 2.726 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

CONSTRUCTION OF NEW 12" SANITARY SEWER BETWEEN 15TH STREET AND 18TH STREET, BOROUGHS OF QUEENS

PLAN AND PROFILE

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

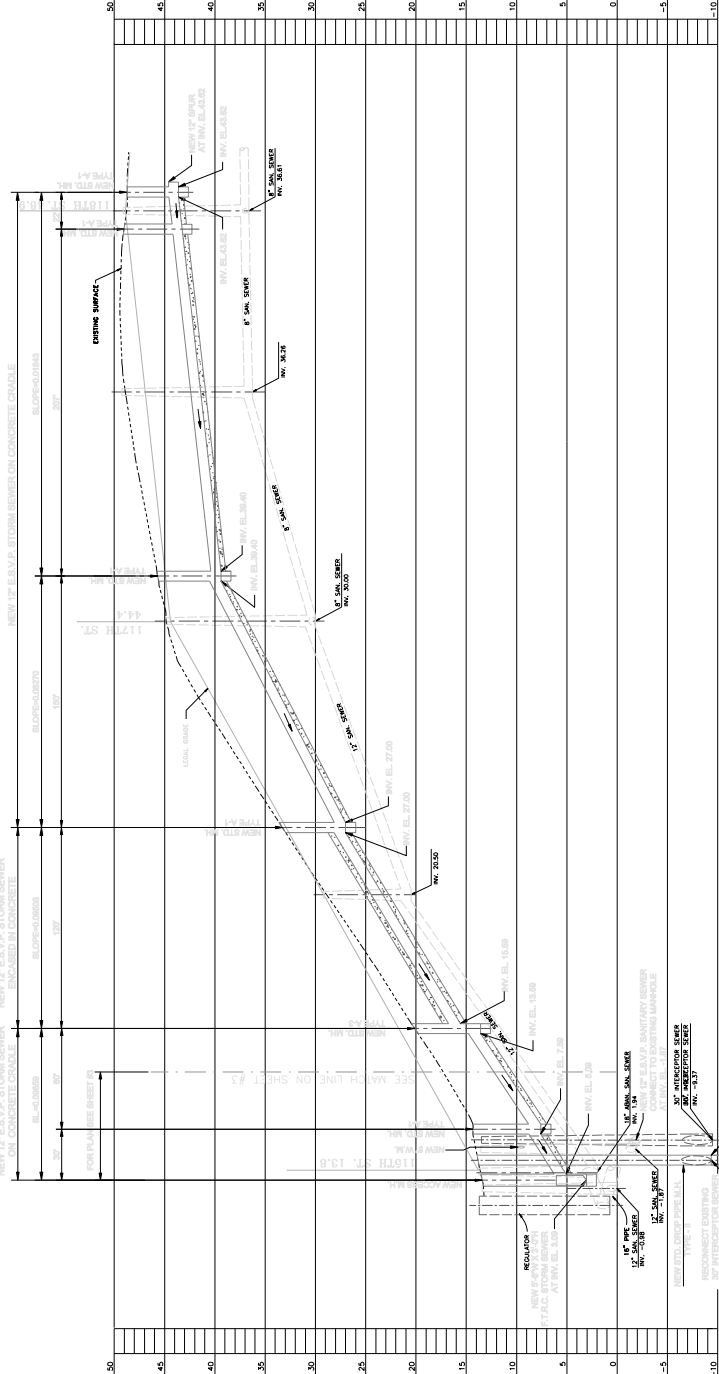
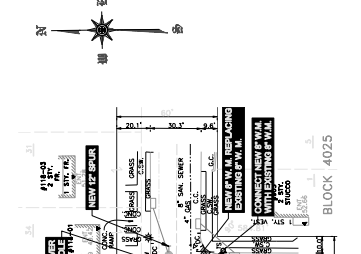
SCALE: AS SHOWN  
CADD FILE

DESIGNED: C.Y.  
DRAWN: M.M.  
CHECKED: A.K.DIRECTOR: P.E.

TOPOGRAPHIC SURVEY PREPARED BY: J.P. HARRIS

NOTE: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM, BOROUGHS 1120A, 1120B, AND 1120C WERE USED TO BE INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM. NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 2.726 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

LOCATION, ELEVATION AND SIZE OF UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN DETERMINED FROM RECORD INFORMATION, FIELD SURVEY AND VISUAL INSPECTION. THE LOCATION OF ALL UTILITIES HAS BEEN VERIFIED BY FIELD SURVEY. ALL UTILITIES SHOWN ARE BASED ON THE LATEST AVAILABLE RECORD DRAWING BEARING A LICENSED PROFESSIONAL LAND SURVEYOR'S SEAL IS A VALIDATION OF ACCURACY HAS BEEN TAKEN FROM THE BOROUGH OF QUEENS RECORD DRAWING. THIS SURVEY WAS COMPLETED IN JULY 12, 2010.



9TH AVENUE BETWEEN 15TH STREET AND 18TH STREET

SCALE: VERT. 1" = 5'  
HORIZ. 1" = 30'

REGULATOR  
NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

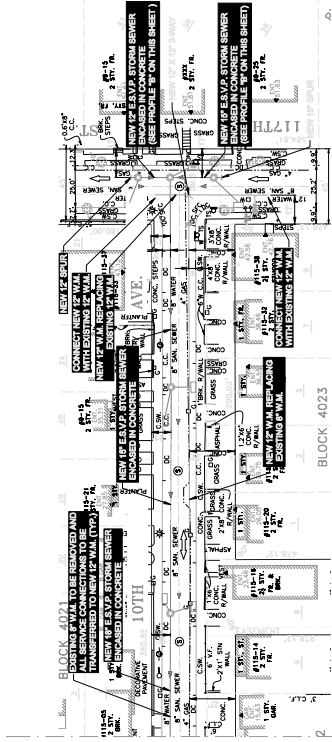
NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

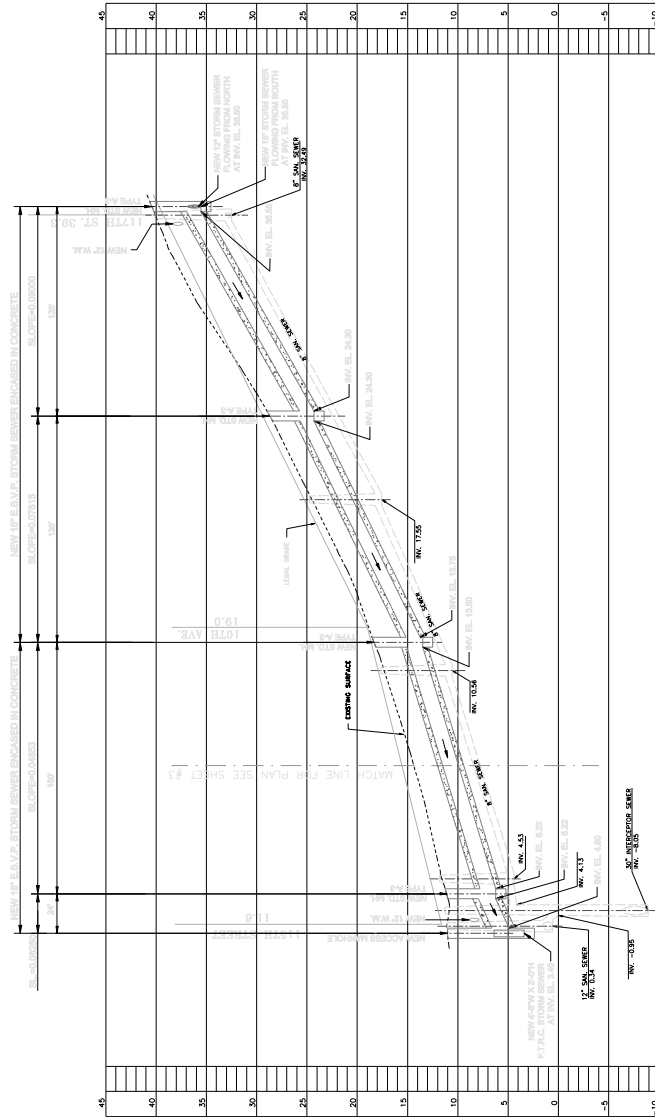
NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

NEW 12" SANITARY SEWER  
AT INV. EL. 2.75

NEW 12" SANITARY SEWER  
AT INV. EL. 2.75



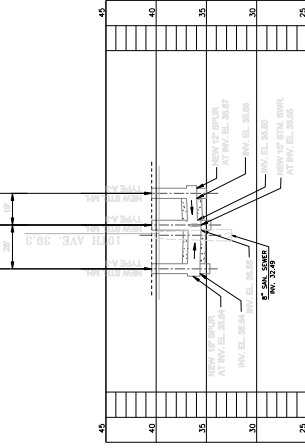
PLAN  
SCALE: 1" = 50'



10TH AVENUE BETWEEN 115TH STREET AND 117TH STREET  
PROFILE "A"  
SCALE: VERT. 1" = 5'  
HORIZ. 1" = 50'

NOTE: HORIZONTAL COORDINATES BASED ON THE BOROUGH OF QUEENS COORDINATE SYSTEM. BOROUGH MONUMENTS 11204, 11358, AND 11359 WERE USED TO TIE INTO THE BOROUGH OF QUEENS COORDINATE SYSTEM.  
NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF QUEENS HIGHWAY DATUM, WHICH IS 3.75 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

117TH STREET  
PROFILE "B"  
SCALE: VERT. 1" = 5'  
HORIZ. 1" = 50'



117TH STREET  
PROFILE "B"  
(SEE PLAN ON THIS SHEET)  
SCALE: VERT. 1" = 5'  
HORIZ. 1" = 50'

NOTE: COORDINATES FROM THE ORIGINAL SURVEY MARKED WITH UNIDENTIFIED MONUMENTS WERE OBTAINED FROM THE BOROUGH OF QUEENS PLAT BOOKS AND COMPARED TO THE BOROUGH OF QUEENS COORDINATE SYSTEM. UNIDENTIFIED MONUMENTS IN ADDITION TO A LAND SURVEYING MONUMENT WERE FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET. THE MONUMENTS WERE IDENTIFIED AS FOLLOWS:  
1. A MONUMENT IDENTIFIED AS '117TH STREET' WAS FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET.  
2. A MONUMENT IDENTIFIED AS '117TH STREET' WAS FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET.  
FIELD SURVEY WAS COMPLETED ON JULY 12, 2010.

LOCATION, EVENT AND SIZE OF UNDERGROUND UTILITIES AND STRUCTURES WERE OBTAINED FROM THE BOROUGH OF QUEENS PLAT BOOKS AND COMPARED TO THE BOROUGH OF QUEENS COORDINATE SYSTEM. UNIDENTIFIED MONUMENTS IN ADDITION TO A LAND SURVEYING MONUMENT WERE FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET. THE MONUMENTS WERE IDENTIFIED AS FOLLOWS:  
1. A MONUMENT IDENTIFIED AS '117TH STREET' WAS FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET.  
2. A MONUMENT IDENTIFIED AS '117TH STREET' WAS FOUND AT THE INTERSECTION OF 10TH AVENUE AND 117TH STREET.  
FIELD SURVEY WAS COMPLETED ON JULY 12, 2010.

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

SCALE AS SHOWN  
PROJECT FILE: \_\_\_\_\_  
DIRECTOR: \_\_\_\_\_

TOPOGRAPHIC SURVEY PREPARED BY: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

NO.	DATE	DESCRIPTIONS	BY	APP'D.

CONSTRUCTION OF 15" D.I. STORM SEWERS IN 10TH AVENUE BETWEEN POPPENHANS AVENUE AND 14TH AVE, ETC. BOROUGH OF QUEENS

PROJECT NO.	SECTION/DATE	DATE	NO.	DATE

PLAN AND PROFILE

PROJECT ID: SEC200484

REVISIONS

