

June 18, 2003

Mr. William Ottaway
New York State Department of Environmental
Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7017

Re: Niagara Mohawk, a National Grid Company

Albany (Grand Street) Non-Owned Former MGP Site

Albany, New York

Site Characterization/Interim Remedial Measure Study

Dear Mr. Ottaway:

This letter presents proposed modifications to the New York State Department of Environmental Conservation- (NYSDEC-) approved Site-Specific Work Plan for Site Characterization (Site-Specific Work Plan) prepared by Foster Wheeler Environmental Corporation (Foster Wheeler, revised November 2002) for the Niagara Mohawk, a National Grid Company (Niagara Mohawk) Albany (Grand Street) nonowned former manufactured gas plant (MGP) site located in Albany, New York. The proposed work plan modifications are based on available information regarding historical activities at the site and on physical access limitations that prevent the completion of soil borings, test pits, and monitoring wells at several of the previously proposed sampling locations.

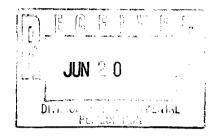
Relevant background information related to the proposed work plan modifications is presented below followed by a detailed description of the proposed modifications.

BACKGROUND INFORMATION

The Albany (Grand Street) non-owned former MGP site is situated on three separate parcels in Albany, New York. The largest parcel is located along the south side of Grand Street and is currently occupied by vacant industrial buildings (the former F. Jacobson & Son Shirt Company) and the Niagara Mohawk Trinity Substation. The remaining parcels are located to the north and south of Park Avenue, approximately 500 feet west of the Grand Street parcel. A site location map is presented on Figure 1. The three parcels that comprise the site are shown on the historical site layout map presented on Figure 2.

As the NYSDEC is aware, Niagara Mohawk has retained Blasland, Bouck & Lee, Inc. (BBL) to implement a Site Characterization/Interim Remedial Measure (SC/IRM) Study of the Albany (Grand Street) non-owned former MGP site in accordance with the NYSDEC-approved Site-Specific Work Plan. At Niagara Mohawk's request, BBL conducted a detailed review of available historical information

James F. Morgan Environmental Analyst



regarding the former MGP operations at the site. The Site-Specific Work Plan presents limited information on historical MGP site operations. The historical information presented in the Site-Specific Work Plan is based on a review of Sanborn Fire Insurance Maps (for the years 1892, 1909, 1934, 1950, 1989, 1990, 1993, and 1995) and information contained in the document entitled "Survey of Town Gas and By-Product Production and Locations in the U.S. (1880-1950)" prepared by the United States Environmental Protection Agency (USEPA, February 1985).

For the purposes of developing a more complete understanding of historical MGP operations at the site, additional historical information relating to the site was obtained from the Albany Public Library and the Albany Institute of History & Art, including information relating to the history of gas lighting and the development of energy utilities in the City of Albany. Information regarding historical site operations was also identified based on review of a map entitled "New Topographic Atlas of the Counties of Albany and Schenectady, New York," Stone & Stewart Publishers, 1866 and a map entitled "City Atlas of Albany, New York," G.M. Hopkins, C.E., 1876. Copies of these two maps and other available information relating to historical MGP operations at the site are included as Exhibit A.

The Albany (Grand Street) non-owned former MGP site is comprised of the former operations of the Albany Gas Light Company. Available historical information indicates that the original MGP operation was located on the Grand Street parcel of the site and that the parcels located north and south of Park Avenue were utilized for gas holders.

The available historical information indicates that the Albany Gas Light Company was the first MGP operation in the City of Albany. The company was incorporated in 1841 and construction of the gas works at the corner of Arch and Grand Street was completed in 1845 with 4 miles of gas main laid throughout Albany's principal streets. The original plant was reportedly capable of providing 50,000 cubic feet of gas per day. By 1846, the Albany Gas Company supplied gas to 136 consumers and 90 street lamps. The gas works were subsequently expanded until the plant was reported to be capable of manufacturing 100,000,000 cubic feet of gas per year. The gas distribution system ultimately extended to more than 48 miles of gas mains that supplied over 7,500 gas customers and 1,200 street lamps (prior to the mid-1880s when Albany street lamps were converted to electricity).

The Albany Gas Light Company was the only MGP operation in the City of Albany until 1872, when the Peoples Gas Light Company was formed and new gas works were constructed at the current location of the Niagara Mohawk North Albany Service Center. The Albany Gas Light Company and the Peoples Gas Light Company ultimately divided the City of Albany into two territories, with the Albany Gas Light Company providing gas to the portion of the city located south of Steuban and Canal Streets. In 1880, the Albany Gas Light Company and the Peoples Gas Light Company consolidated under the name of the People's Gas Company (which reportedly operating at the Grand Street site only). In 1886, the People's Gas Company was conveyed to the Municipal Gas Company of the City of Albany (Municipal Gas Company). By 1886, gas operations had resumed at the North Albany site and gas operations at the Grand Street site were phased out. In 1894, the Municipal Gas Company purchased the Albany Electric Illuminating Company (the first large-scale electrical utility for the City of Albany), which was located along Trinity Place (within the current Niagara Mohawk Trinity Substation). In 1927, the Municipal Gas Company consolidated with the Eastern New York Utilities Corporation to form New York Power & Light Corporation. Niagara Mohawk Power Corporation was formed in 1950 by the consolidation of New York Power and Light Corporation with several additional New York State utility companies.

Based on available information, the original MGP operation was located almost entirely within the limits of the vacant multistory buildings located along Arch Street. The 1876 City Atlas indicates that the northern portion of the Grand Street parcel (the majority of the current substation) was the location of the

Perry & Company Stove Works Foundry No. 3. Historical site features associated with the former MGP operations at the Grand Street parcel include a series of horizontal coal retorts that were located in the southern portion of the current substation or the northern portion of the former shirt factory property, the Shaw & McArdle Coal Yard which occupied the southwest corner of the current substation, a gas holder located at the corner of Arch and Grand Streets which was demolished between 1876 and 1892, and the brick and iron gas holder located in the northwest corner of the current substation that was constructed between 1876 and 1892. By 1892, the location of the original MGP operation (the southern portion of the Grand Street parcel) was occupied by carpentry shops, blacksmith shops, and storage buildings. By 1909, the coal retorts had been removed and a "coal trestle" is shown at the location where the coal yard was formerly present. A small building located at the corner of Grand Street and Arch Street was occupied by a shirt factory and the former Albany Gas Light Company building at the corner of Arch Street and Trinity Place was used for storage by the Albany Electric Illuminating Company. By 1934, the shirt manufacturing operations expanded to occupy the entire block along Arch Street between Grand Street and Trinity Place. Based on the Sanborn maps and substation drawings maintained by Niagara Mohawk, the gas holder at the northwest corner of the current substation property was demolished between 1950 and 1971.

Historical MGP-related features at the parcel located south of Park Avenue include an iron gas holder, a small office and gas meter house, and two Albany Gas Light Company-owned buildings located along Warren Street and Phillip Street. The 1866 topographic atlas indicates that a small stream formerly crossed the southern portion of this parcel along Warren Street. The former MGP features on this parcel were constructed between 1866 and 1876. Historical use of the Albany Gas Light Company buildings located along Warren and Phillip Streets is not well documented. The Sanborn map indicates that by 1892 the building along Warren Street was vacant and that the building along Phillip Street was being used for storage. By 1909, the gas holder was noted to be "not in use" and the buildings along Warren Street and Phillip Street were listed as "J.C. Washerback - Wagon Storage and Sales Stable." By 1934, the iron gas holder was gone, although the office and meter house remained and the portion of the parcel where the gas holder was located was listed as "McArdle & Casazza Garages and warehouse." The garage that currently occupies the former location of the gas holder was constructed between 1934 and 1950.

Historical MGP-related features at the parcel located north of Park Avenue consist of a gas holder that was constructed prior to 1866. Review of the available site maps indicate that the original gas holder on the parcel may have been demolished and replaced by a larger holder at some time between 1866 and 1876. By 1909, the gas holder was gone. The waste recycling building that currently occupies the former location of the gas holder was constructed between 1909 and 1934.

PROPOSED SC/IRM MODIFICATIONS

Based on the additional background information reviewed by BBL, Niagara Mohawk is proposing to modify the SC/IRM investigation approach to address the following issues:

- The original sampling locations presented in the Site-Specific Work Plan (shown on Figure 3 to this letter) do not account for the presence of existing site features. Numerous soil borings, test pits, and monitoring wells are located within the footprint of existing buildings and/or energized electrical equipment.
- The sampling approach outlined in the Site-Specific Work Plan does not support an adequate characterization of the groundwater flow conditions. Based on existing site topography and drainage pattern in the vicinity of the site, it is unclear whether proposed upgradient monitoring well locations are upgradient or sidegradient to the former gas holder locations.

• The soil boring and test pit locations specified in the Site-Specific Work Plan are heavily focused on identified locations of former gas holder. However, the history of the former MGP operation was not extensively researched prior to 1892 in preparing the sampling approach outlined in the Site-Specific Work Plan. As indicated by the discussion of historical MGP operations presented above, the configuration of the MGP operation changed over time and the layout of the original MGP operation significantly differed from the layout shown on the 1892 Sanborn map (including different gas holder locations, etc.).

Based on the above-listed concerns, Niagara Mohawk proposes to modify the SC/IRM Study sampling approach presented in the Site-Specific Work Plan in order to provide better coverage and a more efficient characterization of the three parcels that comprise the site. Except where indicated in this letter, the modified SC/IRM Study sampling approach proposed in this letter will be implemented in accordance with the generic work plan documents prepared by Foster Wheeler (November 2002). Proposed modifications to the soil and groundwater investigation activities outlined in the Site-Specific Work Plan are discussed below.

Soil Investigation

The modified soil investigation approach will include:

- Collecting surface soil samples at 10 locations for laboratory analysis;
- Completing soil borings at 18 locations for laboratory analysis; and
- Excavating test pits at five locations.

Proposed sampling locations for the modified soil investigation approach are shown on Figure 4. An overview of the field activities to be conducted as part of the modified soil investigation approach is presented below.

Collection of Surface Soil Samples

Consistent with the sampling activities outlined in the Site-Specific Work Plan, the modified sampling approach will include the collection of 10 surface soil samples for laboratory analysis to support the future completion of a Human Exposure Evaluation, if necessary. Surface soil sampling locations will be selected based on a site reconnaissance. Five surface soil samples will be collected from the parcels located along Park Avenue and five samples will be collected from the Grand Street parcel. The surface soil samples will be collected from a depth of 0 to 2 inches using a stainless steel spoon. The surface soil samples will be submitted for laboratory analysis for target compound list (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), and target analyte list (TAL) inorganic constituents. In addition, the surface soil samples collected from the Grand Street parcel will be submitted for laboratory analysis for polychlorinated biphenyls (PCBs). As a departure from the sampling approach presented in the Site-Specific Work Plan, Niagara Mohawk does not propose to focus the surface soil samples towards the characterization of background inorganic constituent concentrations. Due to the highly urban and commercial/industrial nature of areas adjacent to the site, it would be difficult to adequately characterize surface soil background concentrations. Subsurface samples from the upgradient soil boring completed at monitoring well MW-4 will be regarded as representative of background inorganic constituent concentrations for the purposes of the SC/IRM Study.

Completion of Soil Borings

The Site-Specific Work Plan proposes to complete 29 soil borings on the parcels that comprise the site (including borings for 10 groundwater monitoring wells) at locations that are heavily focused on the former gas holders identified on the 1892 Sanborn map. The soil boring locations proposed in the Site-Specific Work Plan are shown on Figure 3 (note that only 27 boring locations were identified).

The modified subsurface soil investigation approach will include the completion of 18 soil borings at the locations indicated on Figure 4 (including borings for groundwater monitoring wells discussed below). Although the modified sampling approach includes fewer boring locations, Niagara Mohawk believes that the modifications will provide a more focused spatial distribution of sampling points resulting in better coverage of the former MGP operation.

Target depths for the soil borings include the following: 13 borings will be advanced to a target depth of approximately 30 feet below ground surface (bgs); 4 borings (located within the footprint of the former gas holders) will be advanced to a target depth of approximately 20 feet bgs; and one boring (located in the eastern portion of the Grand Street parcel) will be completed to a target depth of bedrock, the first confining layer, or 40 feet (whichever is encountered first). Care will be taken during the subsurface drilling and sampling activities to minimize the potential for creating subsurface pathways for vertical dense, non-aqueous phase liquid (DNAPL) migration. Niagara Mohawk will develop a DNAPL Contingency Plan for implementation by field personnel in the event that DNAPL is encountered. The four borings located within the limits of the former gas holders are intended to evaluate whether the foundations of the holder structures were constructed at grade or below grade and whether subsurface foundations remain. The Site-Specific Work Plan indicates that if subsurface foundations are encountered at any of the borings within the former gas holder locations, the boring will be advanced by coring though the foundation. On further consideration, Niagara Mohawk proposes to revise this sampling approach due to concerns over encouraging potential subsurface DNAPL migration. If subsurface foundations are encountered and there is any evidence of NAPL or residual MGP waste, the boring will not be advanced through the foundation (based on potential concerns with facilitating subsurface DNAPL migration). The remaining soil borings will be completed at locations that are upgradient, sidegradient, and downgradient of former MGP features in order to determine the potential presence and extent of any MGP-related subsurface impacts.

Soil samples recovered from the soil borings will be visually examined by BBL's field geologist (for color, texture, grain size, and the presence of any visual impact or sign of NAPL). A portion of each recovered soil sample will be placed in a sample container for headspace screening using a photoionization detector (PID). The Site-Specific Work Plan indicates that up to three soil samples from each boring will be submitted for laboratory analysis (with no explanation of how the samples will be selected for laboratory analysis). Niagara Mohawk proposes to modify this analytical approach to include the analysis of up to two samples from each boring. The sample exhibiting the highest PID measurement and/or the most visually-impacted material (if encountered) and the sample collected from the interval immediately above the groundwater table will be submitted for laboratory analysis. If elevated PID measurements or visually-impacted material is not encountered at a soil boring location, then only the sample from the interval immediately above the groundwater table will be submitted for laboratory analysis. Approximately 75% of the soil samples will be analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX); polynuclear aromatic hydrocarbons (PAHs); and cyanide (total and amenable). The remaining 25% of the soil samples will be submitted for laboratory analysis for TCL VOCs, TCL SVOCs, and TAL inorganic constituents (including total and amenable cyanide). Samples for analysis of the full list of TCL/TAL constituents will be selected by BBL's field personnel based on spatial distribution and field screening results (with several of the most obviously impacted samples [if encountered] submitted for the full list of constituents). One soil sample from each soil boring will be submitted for laboratory analysis for total organic carbon (TOC) (with samples selected to represent a cross section of different strata encountered in the borings). In addition, five subsurface soil samples collected in the Trinity Substation portion of the Grand Street parcel will also be submitted for laboratory analysis for PCBs. Subsurface soil samples will be selected for PCB analysis based on proximity to current and historical electrical equipment locations and spatial distribution. Two Shelby tube samples will also be collected for analysis of geotechnical parameters, including porosity, permeability, bulk density, grain size, Atterburg limits, percent moisture, and specific gravity. The Shelby tube samples will focus on any subsurface confining layer encountered and will most likely include one sample from the Grand Street parcel and one sample from either of the parcels located along Park Avenue. If NAPL-impacted soil samples are encountered, a limited number of soil samples will be submitted for GC fingerprint analysis. Quality assurance/quality control (QA/QC) samples will be collected from the soil borings as required in accordance with the NYSDEC 2000 Analytical Service Protocol (ASP).

Soil borings that are not completed at designated groundwater monitoring well locations will be grouted to grade following completion using cement grout. Drill cuttings from the soil borings will be consolidated in a roll-off waste container to be staged at the Trinity Substation. Prior to disposal, one waste characterization sample of the soil cuttings will be collected and submitted for laboratory analysis for toxic characteristic leaching procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, reactivity, corrosivity, and ignitability.

Excavation of Test Pits

The Site-Specific Work Plan indicates that nine soil test pits will be excavated at the locations indicated on Figure 3. As a practical matter, it will not be possible to excavate test pits at the majority of the locations indicated on Figure 3 due to the presence of existing structures and energized electrical equipment.

Niagara Mohawk's modified sampling approach includes the excavation of five soil test pits at the locations indicated on Figure 4. The proposed test pit locations for the modified investigation approach include one test pit at the southeast edge of the former gas holder located south of Park Avenue (TP-1, which is the only accessible location for a test pit on either of the parcels located along Park Avenue), two test pits at the downgradient edge of a retaining wall located at the eastern boundary of the parcel located south of Park Avenue (TP-2 and TP-3), one test pit at the eastern edge of the former gas holder located in the northwest corner of the current substation (TP-4), and one test pit near the central portion of the current substation (TP-5). The location of test pit TP-4 may be adjusted toward the northern edge of the former holder, if necessary, based on the location of subsurface utilities. The location of test pit TP-5 was selected to provide spatial distribution of sampling locations. A drill rig cannot be used in the vicinity of proposed test pit TP-5 due to clearance requirements for the overhead steel structure associated with an oil-filled circuit breaker bank. The test pits will be excavated with a rubber-tired backhoe to a depth of up to approximately 9 feet below grade. Consistent with the sampling approach described in the Site-Specific Work Plan, soil samples will not be collected from the test pits for laboratory analysis. However, BBL's onsite geologist will complete visual characterization and headspace sample screening for soil collected at 2-foot sampling intervals from each test pit. If obviously impacted soil or elevated headspace screening measurements are encountered, samples will be collected and placed in appropriate sample containers for possible laboratory analysis (based on concurrence with Niagara Mohawk's and the NYSDEC's project managers).

Groundwater Investigation

The Site-Specific Work Plan includes the installation and sampling of 10 groundwater monitoring wells at the locations indicated on Figure 3. As indicated above, Niagara Mohawk is concerned that the groundwater monitoring well locations in the Site-Specific Work Plan are not ideally situated for the

purposes of evaluating groundwater quality and flow conditions in the vicinity of the site or for evaluating potential MGP-related impacts to groundwater.

Niagara Mohawk's modified groundwater investigation approach includes:

- Constructing eight monitoring wells (MW-1 through MW-8) at the locations indicated on Figure 4;
- Developing monitoring wells MW-1 through MW-8;
- Conducting specific capacity testing prior to groundwater sampling;
- Obtaining one round of groundwater levels prior to initiating groundwater sampling activities; and
- Collecting groundwater samples from monitoring wells MW-1 through MW-8 for laboratory analysis.

Under the modified investigation approach, groundwater monitoring wells will be installed within eight of the soil borings to be completed as part of the soil investigation activities (described above). Each monitoring well location assumes that groundwater flow is generally to the east and southeast (toward the Hudson River). The monitoring well locations include one well upgradient of the parcels located along Park Avenue (MW-1), two monitoring wells located downgradient of the former gas holders located at the Park Avenue parcels (MW-2 and MW-3), two monitoring wells located upgradient of the Grand Street parcel (MW-4 and MW-5), one well near the center of the Grand Street parcel (MW-6), and two wells located downgradient of the Grand Street parcel (MW-7 and MW-8). Based on surface topography and the presence of the former stream that previously flowed along Warren Street (as indicated on the 1866 topographic atlas), there is a possibility that shallow ground flow beneath the parcels along Park Avenue has a southern component. Therefore, monitoring wells MW-1 through MW-3 will initially be installed and differential leveling of groundwater elevations within these wells will be utilized (if practical based on line-of-sight) to evaluate the approximate direction of groundwater flow. If a southern flow component is suspected, Niagara Mohawk will contact the NYSDEC to discuss modifying the monitoring well locations, or potentially converting soil boring SB-10 (located along Warren Street) into a ninth groundwater monitoring well. Prior to installing the monitoring wells downgradient of the Grand Street parcel, differential leveling will be conducted for groundwater levels in monitoring wells MW-4 through MW-6, and the locations for monitoring wells MW-7 and MW-8 will be adjusted, if appropriate.

Two-inch-diameter, schedule 40 polyvinyl chloride (PVC) wells will be constructed in the selected borings to a target depth of 30 feet, with a 10-foot-long PVC well screen set at the bottom of each well. Wells installed in areas where DNAPL is encountered will be equipped with a sump to collect mobile DNAPL. If a confining unit or bedrock is encountered, options for completing the drilling program will be discussed between the NYSDEC and Niagara Mohawk. Overburden in the area is mapped as approximately 100 feet deep in the vicinity of the site, however, overburden thickness can be highly variable in the local area.

At least 24 hours following installation, each groundwater monitoring well will be developed in accordance with the Generic Field Sampling Plan prepared by Foster Wheeler (November 2002). As a departure from the field methods outlined in the Generic Field Sampling Plan, the hydraulic conductivity of the formation surrounding the screened interval of each well will be estimated using specific capacity testing completed during the collection of groundwater samples (as opposed to performing slug testing following development). The estimated hydraulic conductivity values obtained from using specific capacity testing are as accurate as or more accurate than slug tests.

At least one week following development, one round of groundwater samples (including required QA/QC samples as per the NYSDEC 2000 ASP) will be collected from the monitoring wells using low-flow sampling methods and submitted for laboratory analysis for TCL VOCs, TCL SVOCs, and TAL inorganic constituents (including total and amenable cyanide). A complete round of groundwater level measurements from each well will be obtained prior to initiating the sampling event. Groundwater

samples will not be collected for laboratory analysis from any monitoring well where LNAPL or DNAPL is encountered (because the analytical results would not be representative of dissolved chemical constituent concentrations in groundwater). However, if recoverable DNAPL is encountered, a sample of the DNAPL will be collected for laboratory analysis for interfacial tension, specific gravity, and viscosity.

Monitoring well development and purge water will be placed in a polyethylene storage tank that will be staged at the Trinity Substation property for subsequent offsite transport and disposal by Niagara Mohawk.

Following completion of the soil and groundwater investigation activities, soil boring, test pit, and surface soil sampling locations for the SC/IRM Study will be surveyed in accordance with the requirements of the Site-Specific Work Plan. The location, ground elevation, and top-of-casing elevation for each of the groundwater monitoring wells installed for the SC/IRM will also be surveyed.

SCHEDULE

No change to the overall schedule for completion of the SC-IRM Study is anticipated as a result of the sampling approach modifications described in this letter. Niagara Mohawk is currently coordinating with property owners to obtain site access for the purpose of completing the field investigation activities. Following NYSDEC approval of the sampling modifications described in this letter and execution of required property access agreements, Niagara Mohawk will submit a revised project schedule to the NYSDEC.

Niagara Mohawk trusts that the proposed sampling modifications described in this letter will be acceptable to the NYSDEC. Niagara Mohawk will contact you during the week of June 30, 2003 to discuss any NYSDEC comments on the proposed sampling modifications. In the meantime, please do not hesitate to contact me at (315) 428-3101 if you have any questions or require additional information.

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Sincerely,

James F. Morgan Environmental Analyst

Enclosures

cc:

Ms. Allyson Donahoe, National Grid Services Company

Mr. Charles Willard, Niagara Mohawk, a National Grid Company

William J. Holzhauer, Esq., Niagara Mohawk, a National Grid Company

Mr. William Dow, Niagara Mohawk, a National Grid Company

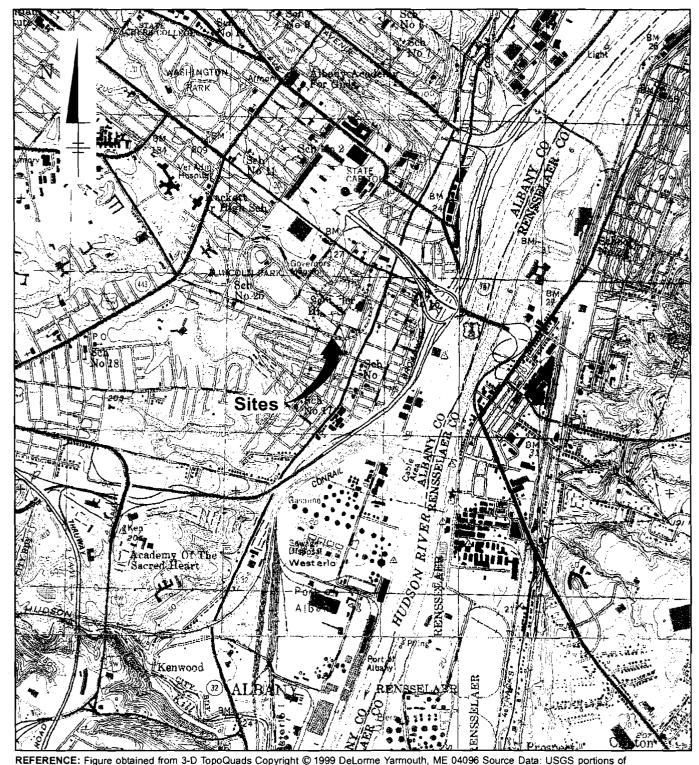
Mr. David J. Ulm, Blasland, Bouck & Lee, Inc.

Mr. James M. Nuss, P.E., Blasland, Bouck & Lee, Inc.

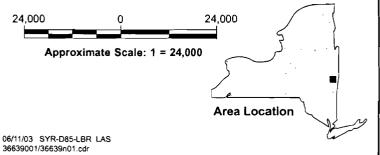
Mr. Michael C. Jones, Blasland, Bouck & Lee, Inc.

Figures





REFERENCE: Figure obtained from 3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS portions of Albany, Troy South, Delmar, and East Greenbush Quadrangle.



NIAGARA MOHAWK, A NATIONAL GRID COMPANY
ALBANY (GRAND STREET) NON-OWNED FORMER MGP SITE
SITE CHARACTERIZATION/
INTERIM REMEDIAL MEASURES STUDY

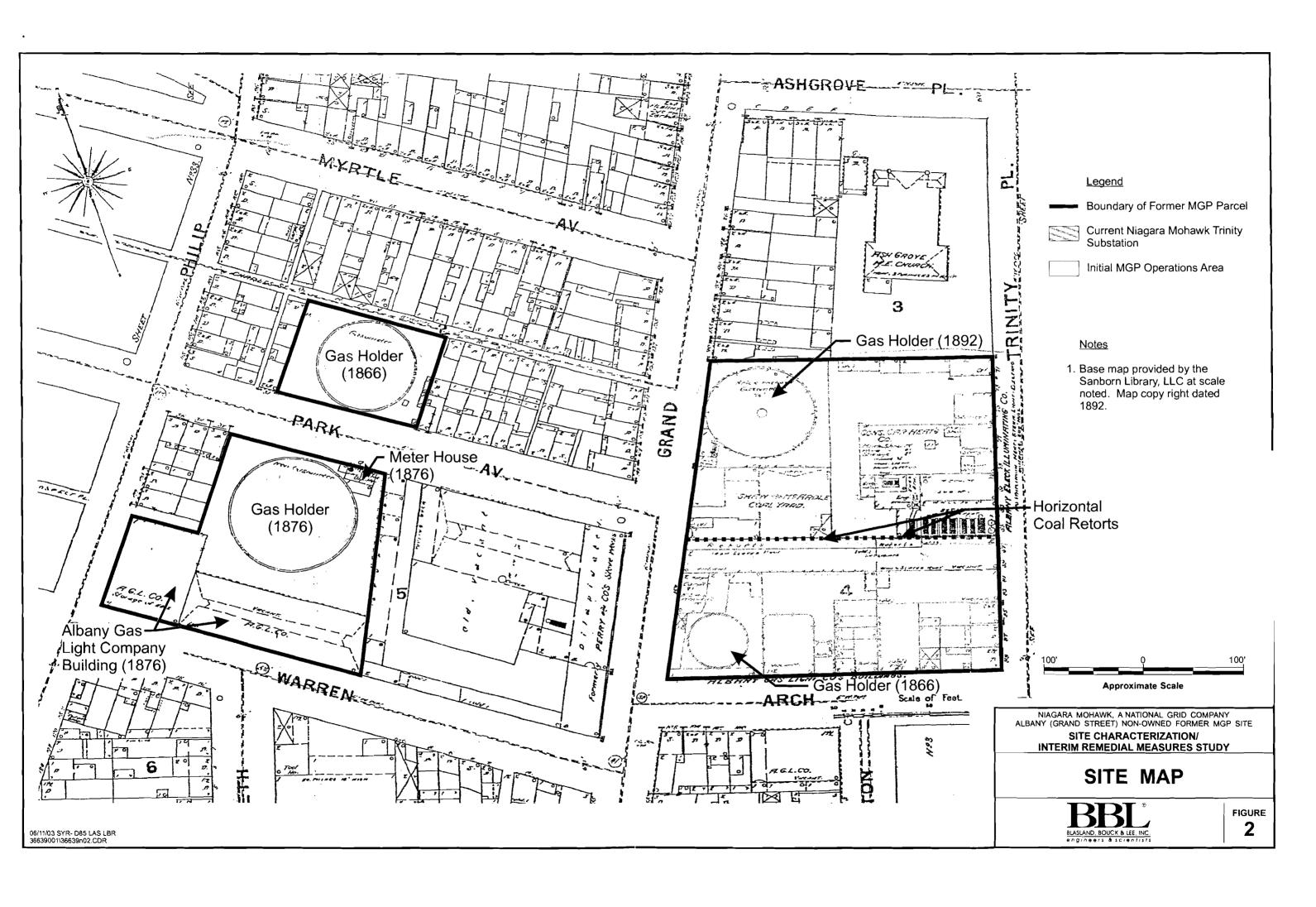
SITE LOCATION MAP

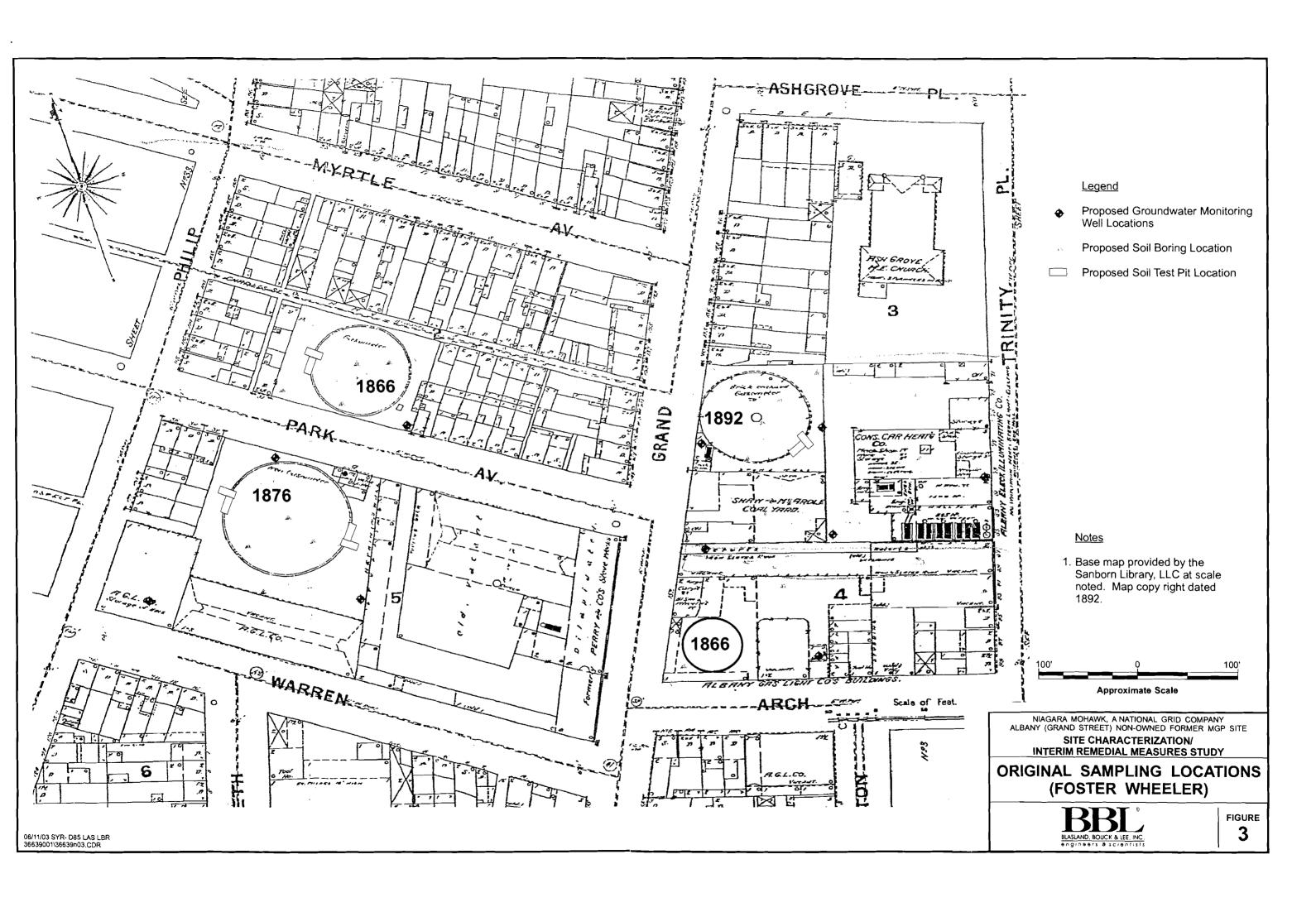
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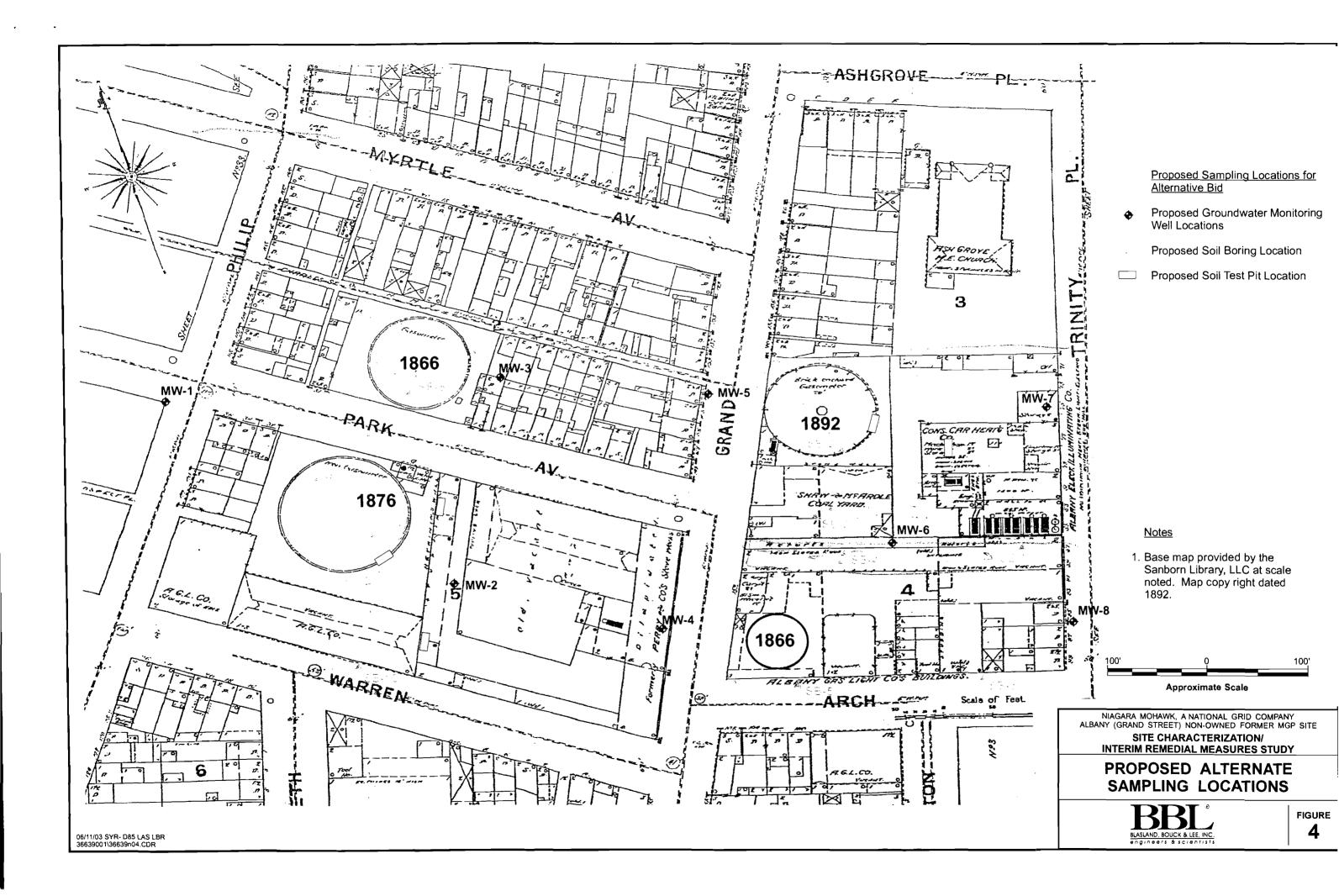
BLASLAND, BOUCK & LEE, INC.
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FIGURE

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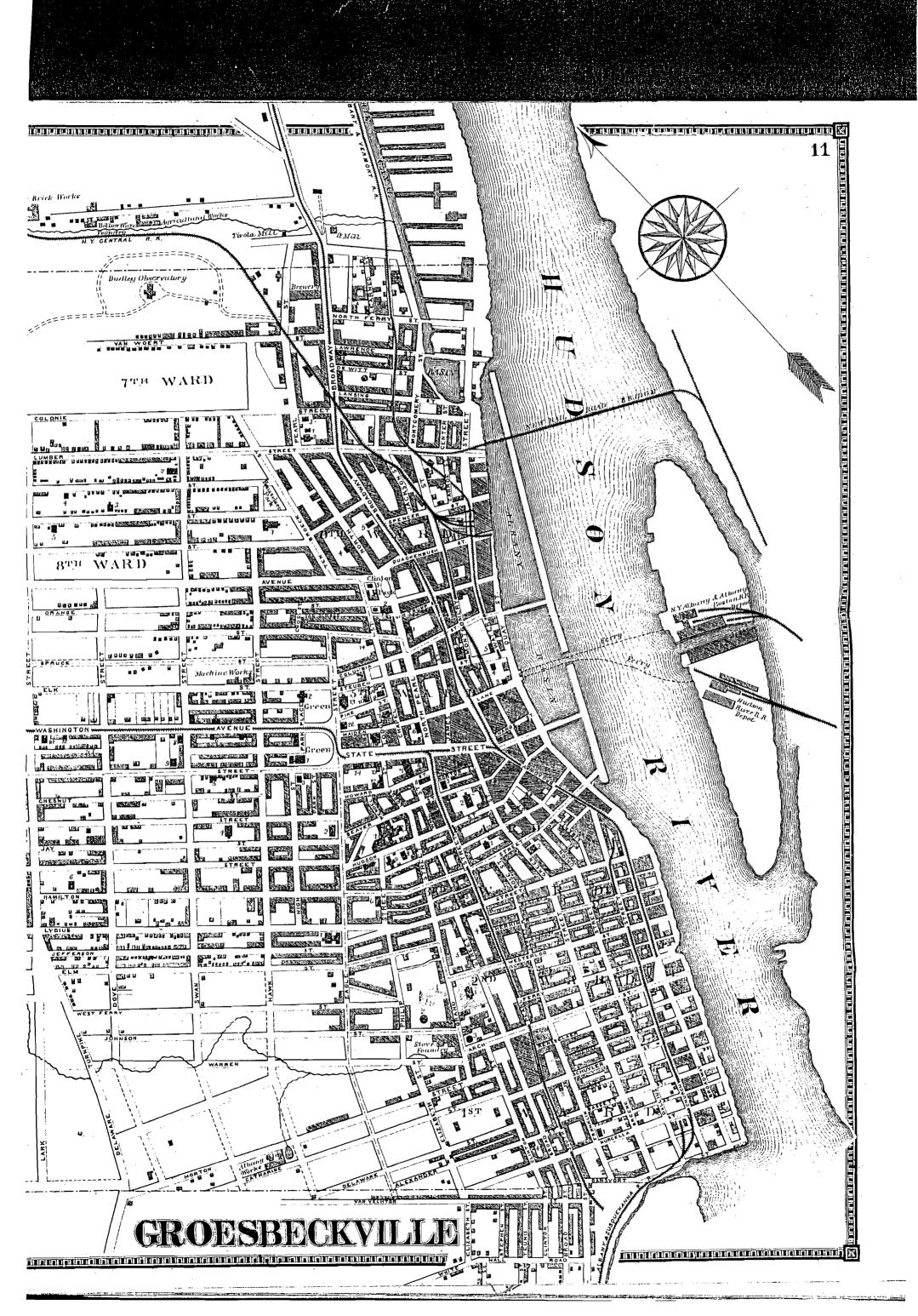


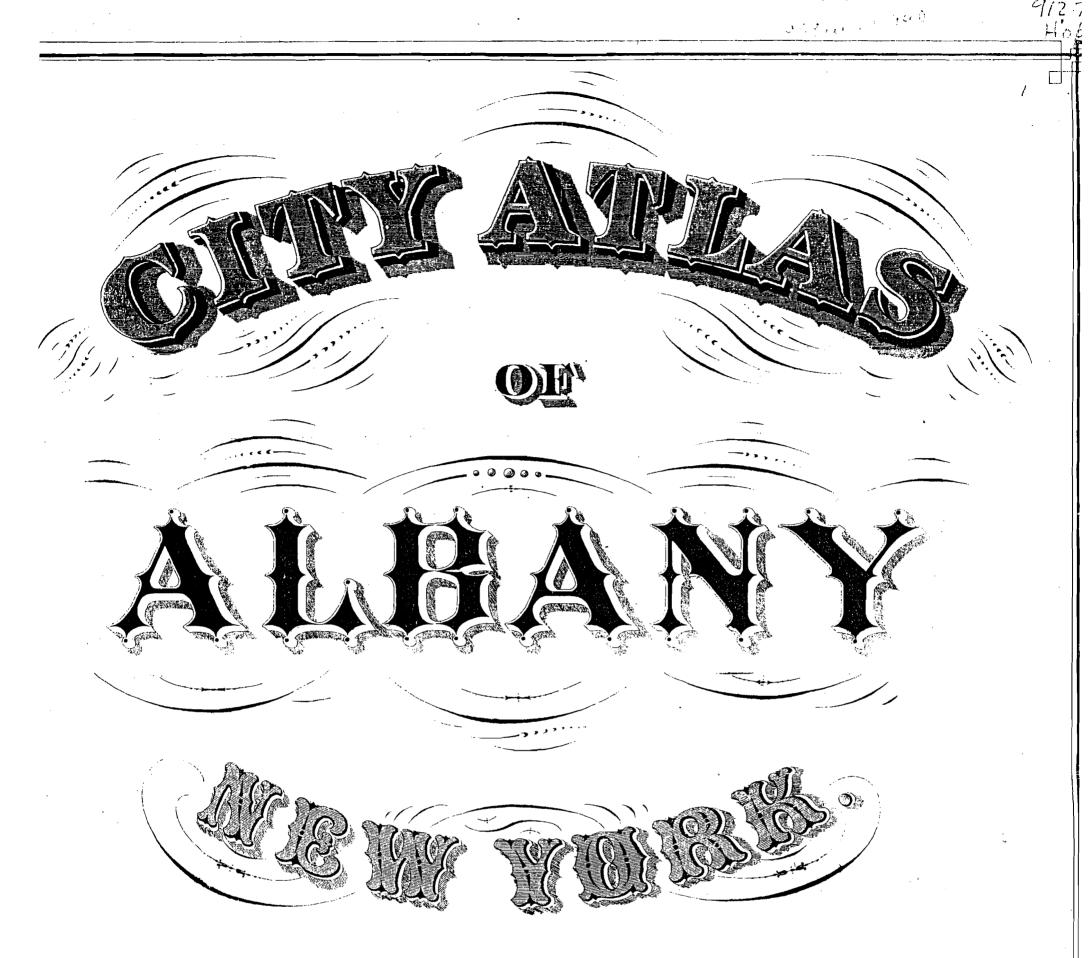




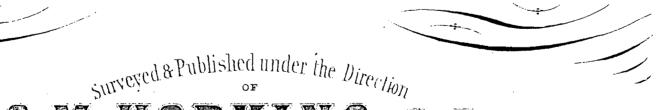


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From official Records Private plans and Actual Surveys, Based upon Plans deposited in the Department of Surveys.



G.M.HOPKINS, C.E.

320 Walnut Street

PULADELPHIA.

EDWARD BUSCH,
320 WALNUT STREET.

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Printed by F. Bourquin.
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