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BRIAN T. SINSABAUGH
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November 5, 2019

VIA FEDEX

Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7020

Re: 60-Day Advance Notification of Site Change of Use
Site Name/No.: Jameco Industries Inc. (DEC Site ID No. 152006)
248 Wyandanch Avenue, West Babylon, Suffolk County, NY
Our File No.: 52071.0001

To Whom It May Concern:

In connection with the above-referenced NYSDEC Site, please find enclosed a 60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion and/or Ownership, as required by 6 NYCRR Part 375-1.11(d) and 375-1.9(f).

Linzer Products Corp., the current owner of the property located at 248 Wyandanch Avenue, West Babylon, currently has an application before the Town of Babylon for the expansion of the existing industrial building. The 35,000 square foot expansion will provide additional warehouse and office space for the existing use. No new uses are being proposed.

As shown on the enclosed plans, the proposed expansion is not located upon or otherwise within the Areas of Concern (AOC), as identified in the enclosed Site Management Plan dated July 27, 2009. Additionally, the existing monitoring wells will not be disturbed or otherwise deemed inaccessible as a result of the proposed expansion.

Should you require digital copies of the enclosed documents, or otherwise require additional information, please contact the undersigned.

Very truly yours,

Brian T. Sinsabaugh

Enclosures

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership
Required by 6NYCRR Part 375-1.11(d) and 375-1.9(f)

To be submitted at least 60 days prior to change of use to:

Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation, 625 Broadway
Albany NY 12233-7020

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BUR. OF TECH. SUPPORT

I. Site Name: JAMECO INDUSTRIES, INC. **DEC Site ID No.** 152006

II. Contact Information of Person Submitting Notification:

Name: LINZER PRODUCTS CORP. (LEONARD ZICHLIN, EXECUTIVE VICE PRESIDENT)
Address1: 248 WYANDANCH AVENUE
Address2: WEST BABYLON, NEW YORK 11704
Phone: 800.221.0787 E-mail: LENZ@LINZERPRODUCTS.COM

III. Type of Change and Date: Indicate the Type of Change(s) (check all that apply):

- ☐ Change in Ownership or Change in Remedial Party(ies)
- ☐ Transfer of Certificate of Completion (CoC)
- ☑ Other (e.g., any physical alteration or other change of use)

Proposed Date of Change (mm/dd/yyyy): Jan 1, 2020

IV. Description: Describe proposed change(s) indicated above and attach maps, drawings, and/or parcel information.

THE CURRENT OWNER, LINZER PRODUCTS CORP., HAS FILED AN APPLICATION WITH THE TOWN OF BABYLON PROPOSING A 35,000 SQUARE FOOT ONE STORY ADDITION TO THE EXISTING INDUSTRIAL FACILITY. THE PROPOSED ADDITION HAS A WAREHOUSE USE, WITH ACCESSORY OFFICE. COPIES OF THE PROPOSED PLANS ARE ATTACHED.

If "Other," the description must explain and advise the Department how such change may or may not affect the site's proposed, ongoing, or completed remedial program (attach additional sheets if needed).

REMEDIATION AT THE SITE IS COMPLETE, BUT THE SITE REMAINS IN ACTIVE SITE MANAGEMENT. THE PROPOSED ADDITION IS NOT LOCATED WITHIN THE IDENTIFIED AREAS OF CONCERN (AOC), AND WILL NOT HAVE ANY AFFECT ON THE SITE MANAGEMENT PROGRAM. SEE THE ATTACHED PLANS. A COPY OF THE SITE MANAGEMENT PLAN FOR JAMECO INDUSTRIES SITE NYSDEC SITE# 1-52-006, DATED JULY 27, 2009 IS ATTACHED FOR REFERENCE.

V. **Certification Statement:** Where the change of use results in a change in ownership or in responsibility for the proposed, ongoing, or completed remedial program for the site, the following certification must be completed (by owner or designated representative; see §375-1.11(d)(3)(i)):

I hereby certify that the prospective purchaser and/or remedial party has been provided a copy of any order, agreement, Site Management Plan, or State Assistance Contract regarding the Site's remedial program as well as a copy of all approved remedial work plans and reports.

Name: _____ _____
(Signature) (Date)

_____
(Print Name)

Address1: _____

Address2: _____

Phone: _____ E-mail: _____

VI. **Contact Information for New Owner, Remedial Party, or CoC Holder:** If the site will be sold or there will be a new remedial party, identify the prospective owner(s) or party(ies) along with contact information. If the site is subject to an Environmental Easement, Deed Restriction, or Site Management Plan requiring periodic certification of institutional controls/engineering controls (IC/ECs), indicate who will be the certifying party (attach additional sheets if needed).

☐ Prospective Owner ☐ Prospective Remedial Party ☐ Prospective Owner Representative

Name: _____

Address1: _____

Address2: _____

Phone: _____ E-mail: _____

Certifying Party Name: _____

Address1: _____

Address2: _____

Phone: _____ E-mail: _____

VII. Agreement to Notify DEC after Transfer: If Section VI applies, and all or part of the site will be sold, a letter to notify the DEC of the completion of the transfer must be provided. If the current owner is also the holder of the CoC for the site, the CoC should be transferred to the new owner using DEC's form found at http://www.dec.ny.gov/chemical/54736.html. This form has its own filing requirements (see 6NYCRR Part 375-1.9(f)).

Signing below indicates that these notices will be provided to the DEC within the specified time frames. If the sale of the site also includes the transfer of a CoC, the DEC agrees to accept the notice given in VII.3 below in satisfaction of the notice required by VII.1 below (which normally must be submitted within 15 days of the sale of the site).

Within 30 days of the sale of the site, I agree to submit to the DEC:

1. the name and contact information for the new owner(s) (see §375-1.11(d)(3)(ii));
2. the name and contact information for any owner representative; and
3. a notice of transfer using the DEC's form found at http://www.dec.ny.gov/chemical/54736.html (see §375-1.9(f)).

Name: _____ _____
(Signature) (Date)

_____
(Print Name)

Address1: _____

Address2: _____

Phone: _____ E-mail: _____

Continuation Sheet

☐ Prospective Owner/Holder ☐ Prospective Remedial Party ☐ Prospective Owner Representative
Name: ______________________
Address1: ______________________
Address2: ______________________
Phone: ____________ E-mail: ____________

☐ Prospective Owner/Holder ☐ Prospective Remedial Party ☐ Prospective Owner Representative
Name: ______________________
Address1: ______________________
Address2: ______________________
Phone: ____________ E-mail: ____________

☐ Prospective Owner/Holder ☐ Prospective Remedial Party ☐ Prospective Owner Representative
Name: ______________________
Address1: ______________________
Address2: ______________________
Phone: ____________ E-mail: ____________

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Name: ______________________
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Name: ______________________
Address1: ______________________
Address2: ______________________
Phone: ____________ E-mail: ____________

☐ Prospective Owner/Holder ☐ Prospective Remedial Party ☐ Prospective Owner Representative
Name: ______________________
Address1: ______________________
Address2: ______________________
Phone: ____________ E-mail: ____________

New York State Department of Environmental Conservation

Instructions for Completing the 60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion (CoC), and/or Ownership Form

Submit to: Chief, Site Control Section, New York State Department of Environmental Conservation, Division of Environmental Remediation, 625 Broadway, Albany NY 12233-7020

Section I	**Description**
Site Name	Official DEC site name. (see http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3)
DEC Site ID No.	DEC site identification number.

Section II	**Contact Information of Person Submitting Notification**
Name	Name of person submitting notification of site change of use, transfer of certificate of completion and/or ownership form.
Address1	Street address or P.O. box number of the person submitting notification.
Address2	City, state and zip code of the person submitting notification.
Phone	Phone number of the person submitting notification.
E-mail	E-mail address of the person submitting notification.

Section III	**Type of Change and Date**
Check Boxes	Check the appropriate box(s) for the type(s) of change about which you are notifying the Department. Check all that apply.
Proposed Date of Change	Date on which the change in ownership or remedial party, transfer of CoC, or other change is expected to occur.

Section IV	**Description**
Description	For each change checked in Section III, describe the proposed change. Provide all applicable maps, drawings, and/or parcel information. If "Other" is checked in Section III, explain how the change may affect the site's proposed, ongoing, or completed remedial program at the site. Please attach additional sheets, if needed.

Section V Certification Statement

This section must be filled out if the change of use results in a change of ownership or responsibility for the proposed, ongoing, or completed remedial program for the site. When completed, it provides DEC with a certification that the prospective purchaser has been provided a copy of any order, agreement, or State assistance contract as well as a copy of all approved remedial work plans and reports.

Name	The owner of the site property or their designated representative must sign and date the certification statement. Print owner or designated representative's name on the line provided below the signature.
Address1	Owner or designated representative's street address or P.O. Box number.
Address2	Owner or designated representative's city, state and zip code.
Phone	Owner or designated representative's phone number.
E-Mail	Owner or designated representative's E-mail.

Section VI Contact Information for New Owner, Remedial Party, and CoC Holder (if a CoC was issued)

Fill out this section only if the site is to be sold or there will be a new remedial party. Check the appropriate box to indicate whether the information being provided is for a Prospective Owner, CoC Holder (if site was ever issued a COC), Prospective Remedial Party, or Prospective Owner Representative. Identify the prospective owner or party and include contact information. A Continuation Sheet is provided at the end of this form for additional owner/party information.

Name	Name of Prospective Owner, Prospective Remedial Party or Prospective Owner Representative.
Address1	Street address or P.O. Box number for the Prospective Owner, Prospective Remedial Party, or Prospective Owner Representative.
Address2	City, state and zip code for the Prospective Owner, Prospective Remedial Party, or Prospective Owner Representative.
Phone	Phone number for the Prospective Owner, Prospective Remedial Party or Prospective Owner Representative.
E-Mail	E-mail address of the Prospective Owner, Prospective Remedial Party or Prospective Owner Representative.

If the site is subject to an Environmental Easement, Deed Restriction, or Site Management Plan requiring periodic certification of institutional controls/engineering controls (IC/EC), indicate who will be the certifying party(ies). Attach additional sheets, if needed.

Certifying Party Name	Name of Certifying Party.
Address1	Certifying Party's street address or P.O. Box number.
Address2	Certifying Party's city, state and zip code.
Phone	Certifying Party's Phone number.
E-Mail	Certifying Party's E-mail address.

Section VII Agreement to Notify DEC After Property Transfer/Sale

This section must be filled out for all property transfers of all or part of the site. If the site also has a CoC, then the CoC shall be transferred using DEC's form found at http://www.dec.ny.gov/chemical/54736.html

Filling out and signing this section of the form indicates you will comply with the post transfer notifications within the required timeframes specified on the form. If a CoC has been issued for the site, the DEC will allow 30 days for the post transfer notification so that the "Notice of CoC Transfer Form" and proof of it's filing can be included. Normally the required post transfer notification must be submitted within 15 day (per 375-1.11(d)(3)(ii)) when no CoC is involved.

Name	Current property owner must sign and date the form on the designated lines. Print owner's name on the line provided.
Address1	Current owner's street address.
Address2	Current owner's city, state and zip code.

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Jameco Industries, Inc.
Site Code: 152006
Program: State Superfund Program
Classification: 04
EPA ID Number:

Location

DEC Region: 1
Address: 248 Wyandanch Avenue
City: Wyandanch Zip: 11798
County: Suffolk
Latitude: 40.74199602
Longitude: -73.35706019
Site Type: STRUCTURE POND
Estimated Size: 9.36 Acres

Institutional And Engineering Controls

Control Type:
Environmental Easement

Control Elements:
Ground Water Use Restriction
Soil Management Plan
Cover System
Fencing/Access Control
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

Site Owner(s) and Operator(s)

Current Owner Name: Linzer Products Corp.
Current Owner(s) Address: 248 Wyandanch Avenue
West Babylon,NY, 11704

Hazardous Waste Disposal Period

From: 1964 **To:** 1994

Site Description

Location: The former Jameco Industries site is located at 248 Wyandanch Avenue, Village of Wyandanch, Suffolk County. The site is located in an industrial/commercial setting. Jameco Industries manufactured plumbing fixtures at the site from 1964 until 1998. Site Features: The site is occupied by a single story facility and the property is approximately 9.36 acres in size. The majority of the site is covered with the facility building and parking lots. Current Zoning/Use: The site is currently zoned for industrial use. The site is surrounded by commercial and industrial facilities although there are residential homes to the south. The site is currently owned and occupied by Linzer Products, a company that manufactures and distributes paint rollers and paint brushes. Historic Use: A longtime occupant of the site, Jameco Industries manufactured plumbing fixtures at the facility. The process included metal plating and machining. This process resulted in the discharge of metal plating waste, chlorinated solvents and cutting oil into on-site leaching structures. These disposal activities resulted in contamination of soil and groundwater. Site Geology/Hydrogeology: The site is underlain by glacial outwash deposits that are approximately 110 feet thick (Upper Glacial aquifer). Groundwater occurs approximately 10 feet below grade, depending on seasonal fluctuation.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
TRICHLOROETHYLENE (F001)
copper
tetrachloroethene (PCE)
zinc
chromium
polycyclic aromatic hydrocarbons (PAHS), total

Site Environmental Assessment

Nature and Extent of Contamination: Remediation at the site is completed. Prior to remediation, the primary contaminants were trichloroethylene (TCE), tetrachloroethylene (PCE), copper, chromium, zinc and cutting oil in soil and groundwater. SCG exceedances existed for TCE and PCE in soil at multiple locations in the degreasing area. In 1996, under an interim remedial measure, a soil vapor extraction system (SVES) was constructed to remediate subsurface soil. The SVES operated until 1999. Post remedial soil sampling in the area revealed TCE levels in the range of 0.001 ppm to 0.14 ppm and PCE levels in the range of non-detect (ND) to 0.017 ppm. The SCGs (TAGM #4046) for TCE and PCE that were applied at the time was 0.7 ppm and 1.4 ppm, respectively. TCE levels in groundwater diminished from 5,400 ppb to 12 ppb and PCE levels diminished from 1,500 ppb to ND in groundwater downgradient of the source area. The SCG for TCE and PCE in groundwater is 5 ppb. SCG exceedances existed for copper, chromium and zinc in subsurface soil and groundwater. In the former industrial leaching pool system, 4,063 tons of contaminated soil was excavated and disposed of off-site at a permitted disposal facility. The majority of the post excavation confirmatory soil sample results met the soil cleanup objectives (SCOs) prescribed in TAGM #4046 for copper, chromium and

zinc which are 25 ppm, 50 ppm and 20 ppm, respectively. The area beneath the rear parking lot where the former seepage lagoons existed from 1964-1975 had sporadic exceedances of the SCOs for copper, chromium and zinc. Subsurface soil in this area was solidified and stabilized in-situ. Residual metals contamination that existed in subsurface soil beneath the former plating shop was also subjected to in-situ solidification/stabilization. Groundwater in the vicinity of all three areas is monitored under the approved site management plan to evaluate the effectiveness of source remediation towards reducing contaminant levels in groundwater. Soil and groundwater in the vicinity of the former machine shop have been impacted by the disposal of cutting oils. Approximately 500 cubic yards of contaminated soil was excavated and disposed of off-site at a permitted disposal facility. Affected groundwater was treated via in-situ chemical oxidation and is being monitored under the approved site management plan.

Site Health Assessment

Measures are in place to control the potential for coming in contact with contaminated soil and groundwater remaining on-site. Drinking contaminated groundwater is not expected as the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Measures taken have reduced volatile organic compound levels in soil vapor to non-detect and therefore, soil vapor intrusion is no longer a concern for on or off-site buildings.

GEC Project Number 444-4800

SITE MANAGEMENT PLAN
FOR
JAMECO INDUSTRIES SITE
NYSDEC: Site #1-52-006

248 Wyandanch Avenue
Wyandanch, New York

July 27, 2009

Prepared For:
Watts Water Technologies, Inc.
815 Chestnut Street
North Andover, Massachusetts 01845

GEC *Goldman Environmental Consultants, Inc.*
60 Brooks Drive
Braintree, MA 02184-3839
781-356-9140 FAX 781-356-9147
www.goldmanenvironmental.com

SITE MANAGEMENT PLAN
FOR
WATTS INDUSTRIES, INC.
NYSDEC: SITE # 1-52-006

Table of Contents

Figures

Appendices

1.0 INTRODUCTION

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has been retained by Watts Regulator Company (Watts), to prepare the following Site Management Plan (SMP) for the state superfund site ("Site") located at 248 Wyandanch Avenue, Wyandanch, New York. This SMP is required under the Record of Decision (ROD) issued by the New York State Department of Environmental Conservation (NYSDEC) in March 2003, and amended in March 2006.

The Site (#1-52-006) consists of approximately 7.4 acres and is located in a mixed industrial/commercial/residential area. The Site is improved with a single-story concrete block building surrounded by paved and unpaved parking and storage areas as well as areas overgrown by shrubs and grasses. A Site Locus is included as Figure 1 and a Site Plan is included as Figure 2.

The following presents a site description and history, a summary of previous remedial investigations, and the development and implementation of the site monitoring requirements.

2.0 SITE DESCRIPTION

2.1 History

The Site is located at 248 Wyandanch Avenue in Wyandanch, New York. The longitude and latitude of the Site are 73° 21' 19" (west) and 40° 44' 28" (north) as identified on the Bay Shore West, NY USGS Quadrangle. A Site Locus is included as Figure 1. The 7.4-acre Site is listed at the Babylon Assessor's Office as District 0100, Section 82, Block 2, Lot 37.5. The building at the property consists of a single-story concrete block building surrounded by paved and unpaved parking and storage areas as well as areas that have been overgrown by shrubs and grasses.

The Site is currently occupied by Linzer Products, Inc. (Linzer), a manufacturer of painting industry products. Linzer has occupied the Site since early 1999. Prior to 1999, Jameco Industries (Jameco) occupied the property. Jameco was a manufacturer of plumbing fixtures, which employed approximately 350 people at the facility.

A review of aerial photographs, on file at the Babylon Building and Engineering Departments, indicates that in 1938 the Site consisted of partially undeveloped and entirely vacant land. Wyandanch Avenue had been paved, or covered with oiled stone at this time, but development of this area had not yet taken place. Later photographs taken in 1961 indicate that residential properties had been developed on surrounding lots, but conditions at the Site remained unchanged. Initial development of the Site apparently

occurred in 1963 when a permit was issued for the construction of a manufacturing facility. Records on file indicate that Jamaica Manufacturing Company, Inc. (later Jameco) was granted a permit on March 4, 1964 for the construction of a single-story building. Additions were constructed in 1973 and 1980, enlarging the footprint of the Jameco facility. Jameco Industries, Inc. or its predecessor occupied the Site from approximately 1963 to 1998.

Jameco used the Site to manufacture plumbing fixtures, some of which involved plating parts with chrome and nickel. Prior to 1975, wastewater was treated by adjusting the pH to precipitate metals out of solution and then discharging the effluent containing the precipitate to one of two seepage lagoons in the side yard of the plant currently occupied by the large driveway leading to the loading docks. One lagoon would be used until the sludge accumulated to a point where effluent infiltration was hindered. The second lagoon would then be used and the first lagoon allowed to dry so that sludge could be removed to allow the lagoon to function again as an infiltration bed. An overflow lagoon was also present to prevent off-Site spillage from the active lagoon if it became too full.

In 1975, this method of operation was replaced with a treatment system that separated the sludge from the effluent by the use of clarifiers. The clarified effluent discharged into a set of 48 leaching pools in the rear yard. Discharge to the leaching pools was conducted in accordance with a NYSDEC State Pollutant Discharge Elimination System (SPDES) permit via underground piping between the leaching pools and the plating area. Based on GEC's understanding of the operations, sludge collected in the clarifiers was disposed off-Site.

Sometime after 1975, the original sludge lagoons were closed. The way in which the lagoons were closed has been the subject of several investigations. The wastewater treatment system was removed from the Site when Jameco vacated the property in 1998. The Site is currently occupied by Linzer Products, Inc., (Linzer) a manufacturer of painting industry products, who has occupied the Site since early 1999.

2.2 Hydrogeology

Depth to groundwater across the Site varies seasonally, ranging from approximately 7 feet below grade in the spring to 12 feet below grade in autumn. Groundwater contours were developed using groundwater elevation data from the on-Site monitoring wells. The direction of groundwater flow appears generally to be to the southeast.

Measurements collected by GEC using slug tests indicate that the hydraulic conductivity of the uppermost portion of the glacial aquifer, to a depth of approximately 60 feet, is approximately 10 feet per day. Slug tests conducted in the deeper portion of the upper glacial aquifer indicate that hydraulic conductivity decreases somewhat with depth. Hydraulic conductivity between 90 and 100 feet below grade was calculated to be approximately 0.54 feet per day. The values of hydraulic conductivity obtained during GEC's investigation are well within the range of conductivity expected for clean gravel and sand deposits. This information also correlates well with literature cited by previous investigations indicating that the Pleistocene deposits beneath the Site (0 to 87 feet below grade) have an estimated hydraulic conductivity of 4.445×10^{-3} cm/sec (12.6 ft/day).

Good vertical hydraulic communication exists between the upper glacial aquifer and the Magothy Formation aquifer in most areas across Long Island. However, based on well logs from the nearby water supply well, an interbedded clay unit is present at a depth of 87 feet and extends to a depth of 137 feet. The Magothy Aquifer, which was not encountered during our test boring activities, is most likely unconfined and exists under water table conditions. It is unclear whether the clay unit in the vicinity of the Site is continuous, and therefore, forms an aquiclude, or is discontinuous and does not form an aquiclude.

Well log reports indicate that the nearby public drinking water supply wells are screened in the lower portion of the Magothy Formation, between approximately 590 and 670 feet below grade level. Information regarding the two nearby water supply wells indicated that the maximum discharge is between 1,515 and 1,543 gallons per minute, while maintaining a drawdown of approximately 37 feet. Permeability in the upper 173 feet of the Magothy range from 10^{-4} cm/sec to 10^{-7} cm/sec (approximately 2.8×10^{-1} ft/day to 2.8×10^{-4} ft/day). A clay lens is present in the middle of the Magothy (260 to 288 feet) with permeability in the range of 10^{-8} cm/sec (2.8×10^{-5} ft/day). An incomplete report included in previous investigations indicates that horizontal flow in the Magothy is much greater than vertical flow, due primarily to the presence of clay lenses and stratified deposits.

The groundwater gradient is quite shallow across the Site. Based on data collected on April 8, 1998, the groundwater gradient at the Site ranges between 2.19×10^{-3} to 2.22×10^{-3} feet/foot. Using this information, the calculated groundwater flow rate across the Site ranges from 8.76×10^{-2} to 8.88×10^{-2} feet/day. There is no evidence that groundwater flow in the overburden portion of the aquifer is influenced by the pumping of the nearby municipal water supply well; however, neither GEC nor previous

investigators have conducted gauging coincident with known period of municipal water supply well pumping.

3.0 SITE REMEDIAL ACTION

3.1 Description of Remedial Action

The environmental conditions at the Site are broken down into Areas of Concern (AOC). The following is a summary of the five AOCs identified on Site along with the AOC-specific remedial alternative. The remedial alternatives evaluated for metals contaminated soil and groundwater include no further action with groundwater monitoring, containment via capping, treatment via solidification/stabilization, and excavation and off-site disposal. The remedial alternatives evaluated for semi-VOCs (SVOCs) contaminated soil and groundwater include no further action with monitoring natural attenuation, extraction and treatment of groundwater and excavation of contaminated soil, enhanced bioremediation of groundwater and excavation of contaminated soil, and air sparging of groundwater and excavation of contaminated soil.

The alternatives selected by NYSDEC include the following remedial activities for the Site: excavation and off-Site disposal and in-situ solidification/stabilization of soil contaminated with metals and enhanced bioremediation of soil and groundwater contaminated with SVOCs. In addition, institutional controls will be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without water quality treatment. An environmental easement will also be imposed and a Soil Management Plan will be developed to protect the safety of workers in the event that future subsurface construction activities are conducted. Please review the Amended ROD for a summary of the alternatives identified by the alternatives analysis report, provided as Appendix A.

AOC#1 – Former Seepage Lagoon Area

Metals contaminated soil remains within the former seepage lagoon area. Refer to Figure 2. However, non detectable to very low concentrations of total metals were reported for groundwater samples collected from monitoring wells located throughout this area, indicating very little leaching of metals to the water table. A downward trend in contaminant levels was observed based on several rounds of sampling.

Initially the ROD selected soil excavation and off-site disposal of contaminated soil as the preferred remedy for this area; however, based on additional sampling the residual soil contamination is not currently impacting groundwater quality to any significant degree. As a result, the amended ROD selected in-situ

solidification/stabilization as the preferred alternative; this work was completed in November 2006.

Institutional controls will also be imposed preventing the use of groundwater as a source of potable or process water without appropriate water quality treatment. Environmental easements will be imposed to ensure safety in the event that contaminated soils were to be disturbed. A Soil Management Plan will be developed for any subsurface construction activities. The NYSDEC must be notified in the event that such activities are necessary. Watts will also be required to provide periodic inspections and certification, which would certify that the institutional controls are still in place and effective.

AOC#2 – Degreasing Area

Relatively low concentrations of metals were detected in soil in AOC#2. The concentrations of metals in groundwater do not indicate an ongoing source or significant leaching of metals from soil to the groundwater. The concentration of CVOCs has also decreased significantly.

No specific remedial action is required for this area however; remedial actions are proposed for AOC#5 former metal plating area, located directly adjacent to AOC#2.

AOC#3 – Former Leaching Pool Area

Moderate to elevated concentrations of metals were detected in soil in this area. Low to moderate concentrations of metals were detected in monitoring wells located in the former leaching pool area. The ROD selected excavation of contaminated soil for this area and from two exterior storm drains, stockpiling of the soil, analysis for disposal criteria and off-Site disposal at a permitted disposal facility. Excavation work and post-excavation confirmatory sampling was conducted between November 2007 and January 2008, and the soil has been shipped off-Site for disposal. This work was completed in January 2008.

AOC#4 – Cutting Oil Release Area

Soil samples collected from this area indicate that residual concentrations of SVOCs remain in soil located near the water table and within the smear zone. SVOCs were not detected in on-Site monitoring wells during the most recent sample event, and no measurable product was detected in the on-Site monitoring wells. As previously documented, contaminated soil is present beyond the limits of the soil excavation grave that resulted when approximately 500 cubic yards of soil were removed adjacent to the Site building. The soil excavation project was terminated due to physical constraints

including the presence of the building, roadway, and major utilities. The data do not indicate that soil contamination extends significantly beyond the limits of the former excavation.

Chlorinated VOCs and methyl tert butyl ether (MTBE) were detected in monitoring wells downgradient of this area. However, the concentrations of CVOCs and MTBE decrease quickly toward the southeast (downgradient). The CVOC concentrations have decreased steadily over the last few years, and the plume has decreased in size due to natural attenuation and likely biodegradation. The presence of natural degradation products and reduced contaminant concentrations supports the presence of a shrinking and naturally degrading plume.

The ROD selected excavation of contaminated soil and treatment of contaminated groundwater for this area. Based on more recent sampling results, the amended ROD selected in-situ treatment of residual soil and groundwater contamination via the introduction of oxygen release compounds (ORC) or similar compound to enhance natural degradation, which was completed. In October 2006.

Institutional controls will be put in place once again to prevent the use of groundwater as a source of potable or process water without appropriate water quality treatment. An Environmental easement will restrict and control access to subsurface soil. Notification to the NYSDEC for soil excavation would be required, along with periodic certifications that the institutional controls are still in place and effective. This alternative will also include a Soil Management Plan to insure safe conditions during any future excavation work, and groundwater monitoring to evaluate the effectiveness of the remedy.

AOC#5 – Former Metals Plating Area

Low to moderate concentrations of metals were detected in soil in AOC#5. Low concentrations of metals were also detected in groundwater in this area, indicating no significant impact to groundwater. Metals concentrations in groundwater have also declined steadily over the past several years nearing the Recommended Clean-up Objectives.

Initially the ROD selected soil excavation and off-site disposal of contaminated soil as the preferred remedy for this area (similar to AOC#1); however based on the most recent sampling the residual soil contamination is not significantly impacting groundwater. As a result, the amended ROD has selected in-situ solidification/stabilization as the preferred alternative, which was completed in October 2006.

Institutional controls will also be imposed preventing the use of groundwater as a source of potable or process water without water appropriate quality treatment. Environmental easements will be imposed to ensure safety in the event that contaminated soils were to be disturbed. A Soil Management Plan, attached as Appendix B, was developed for any subsurface construction activities within the limits of the five AOCs. The NYSDEC must be notified in the event that such activities are necessary. Watts will also be required to provide periodic certification, which would demonstrate that the institutional controls are still in place and effective.

3.2 Goals of Remedial Action

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the Site through the proper application of scientific and engineering principles.

The remediation goals for this Site are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to metals and SVOCs in soil and groundwater; and
- The release of contaminants from soil into groundwater that may create exceedances of ambient groundwater quality standards.

Further, the remediation goals for the Site include attaining to the extent practicable:

- Ambient groundwater quality standards; and
- The soil cleanup objectives specified in Technical and Administrative Guidance Memorandum #4046.

4.0 SAMPLING AND ANALYSIS

4.1 Groundwater Monitoring Plan

There are currently 24 existing groundwater-monitoring wells on Site. The existing monitoring well network will be utilized for long term monitoring.

Ten monitoring wells will be sampled quarterly for one year after initiation of the remedy for metals in AOC#1 (initiation date November 2006), AOC#3 (November 2007),

and AOC#5 (October 2006), and thirteen monitoring wells will be sampled quarterly for one year after initiation of the remedy for SVOCs in AOC#4 (October 2006).

Prior to sample collected the groundwater level in each well will be measured and recorded. Groundwater samples will be collected with low-flow method and field parameters such as percent dissolved oxygen, pH, temperature, and specific conductance will be monitored. Once the parameters stabilize within ten percent, then sample collection will begin. Laboratory analysis will include total chromium, copper, nickel, and zinc via EPA Method 60108/7000s and/or SVOCs via EPA Method 8270C. Please refer to table below for a summary of the groundwater-monitoring plan.

Samples will be submitted to a certified New York state laboratory under proper chain-of-custody documentation. The analytical results will be reported to the NYSDEC in accordance with Section 4.2.

Monitoring Well	Metals (1)	Semi-VOCs (2)
MW-2	X	
MW-3	X	X
MW-4	X	
MW-5R	X	X
MW-6R	X	
MW-7	X	X
MW-10	X	X
MW-11	X	X
MW-12	X	X
MW-16		X
MW-17		X
MW-19		X
MW-20		X
MW-21		X
MW-23		X
MW-26R	X	X
Total	**10**	**13**

Notes: (1) Total metals analysis for chromium, copper, nickel, and zinc via EPA Method 60108/7000s
(2) SVOC analysis via EPA Method 8270C

4.2 Reporting

The results of the quarterly and then semi-annual groundwater monitoring will be documented and submitted to the NYSDEC. These data will be submitted to the NYSDEC every six months in reports that will include the following:

- description of monitoring activities and frequency;
- description of any significant modifications since submission of preceding monitoring report;
- description of any conditions or problems noted during monitoring periods that affect the performance of the remedial system;
- description of any measures taken to correct conditions which may affect the performance of the remedial actions;
- results of sampling analyses and screening conducted as part of the monitoring program; and
- the name and signature of the project manager overseeing these activities.

5.0 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) has been developed for Site remedial actions as well as long term groundwater monitoring. In the event that excavation work is required upon completion of the remedial activities the HASP can be modified and included in the Soils Management Plan, Appendix B. Please refer to Appendix C for a copy of the HASP.

6.0 QA/QC PLAN

The compliance groundwater monitoring will be implemented in accordance with GECs QA/QC Plan. Please refer to the Standard Operating Procedures (SOPs) provided in Appendix D.

7.0 EMERGENCY CONTACTS

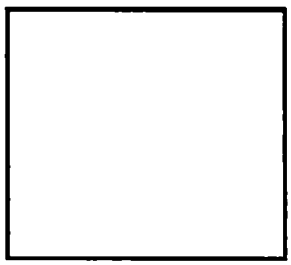
The following table contains the names and phone numbers of the emergency contacts including the local fire and police departments, ambulance, and hospital, and GEC project manager, along with other emergency phone numbers.

FIRE: Wyandanch Fire Station	911 (643-5300 business)
POLICE: Wyandanch Police Station	911 (854-8100 business)
AMBULANCE	911
Good Samaritan Medical Center	(631) 376-3000
Goldman Environmental Consultants	(781) 356-9140
Chemtrec	(800) 262-8200
National Response Center/EPA	(800) 424-8802
ATSDR	DAY: (404) 498-0110
Pesticide Information Service	(800) 858-7378
CMA Chemical Referral Center	(800) 262-8200
National Poison Control Center	(800) 222-1222
U. S. DOT	DAY: (202) 267-2675 or 800-424-8802
LEPC Contact:	Fire Chief

8.0 PROFESSIONAL ENGINEER'S CERTIFICATION

I, Matthew E. Hackman, residing at 97 Asylum Rd Warwick, Rhode Island, as a duly authorized representative of Watts Water Technologies, Inc., the former owner of 248 Wyandanch Avenue, Wyandanch, New York, do certify that this Site Management Plan was submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site including the proper maintenance of any remaining monitoring wells, and that such plan has been approved by the Department of Environmental Conservation.

Approved by:



Matthew E. Hackman
Registered Professional Engineer No. 083778 (NY)

9.0 WARRANTY

The conclusions and recommendations contained in this report are based on the information available to GEC as of the date of this document. The conclusions and recommendations may require revision if future regulatory changes occur. GEC provides no warranties on information provided by third parties and contained herein. Data compiled was in accordance with GEC's existing procedures and consistent with the NYSDEC regulations, and should not be construed beyond its limitations. Any interpretations or use of this report other than those expressed herein are not warranted.

The use, partial use, or duplication of this report without the written consent of Goldman Environmental Consultants, Inc., and the Watts Water Technologies, Inc. is strictly prohibited.

Respectfully submitted,
Goldman Environmental Consultants, Inc.

Prepared By:	Approved By:
Catherine M. Dunning Environmental Scientist	Brian T. Butler, PG Vice President, Waste Site Program

P:\Projects\444-Watts\Environ Use Restriction\Site Management Plan (SMP), rev 070809.doc

FIGURES

USGS 7.5 Minute Topographic

Bay Shore
NewYork, Quadrangle

Goldman Environmental Consultants, Inc.
60 Brooks Drive
Braintree, MA 02184
(781)356-9140 Fax: (781)356-9147
www.goldmanenvironmental.com

SITE LOCUS

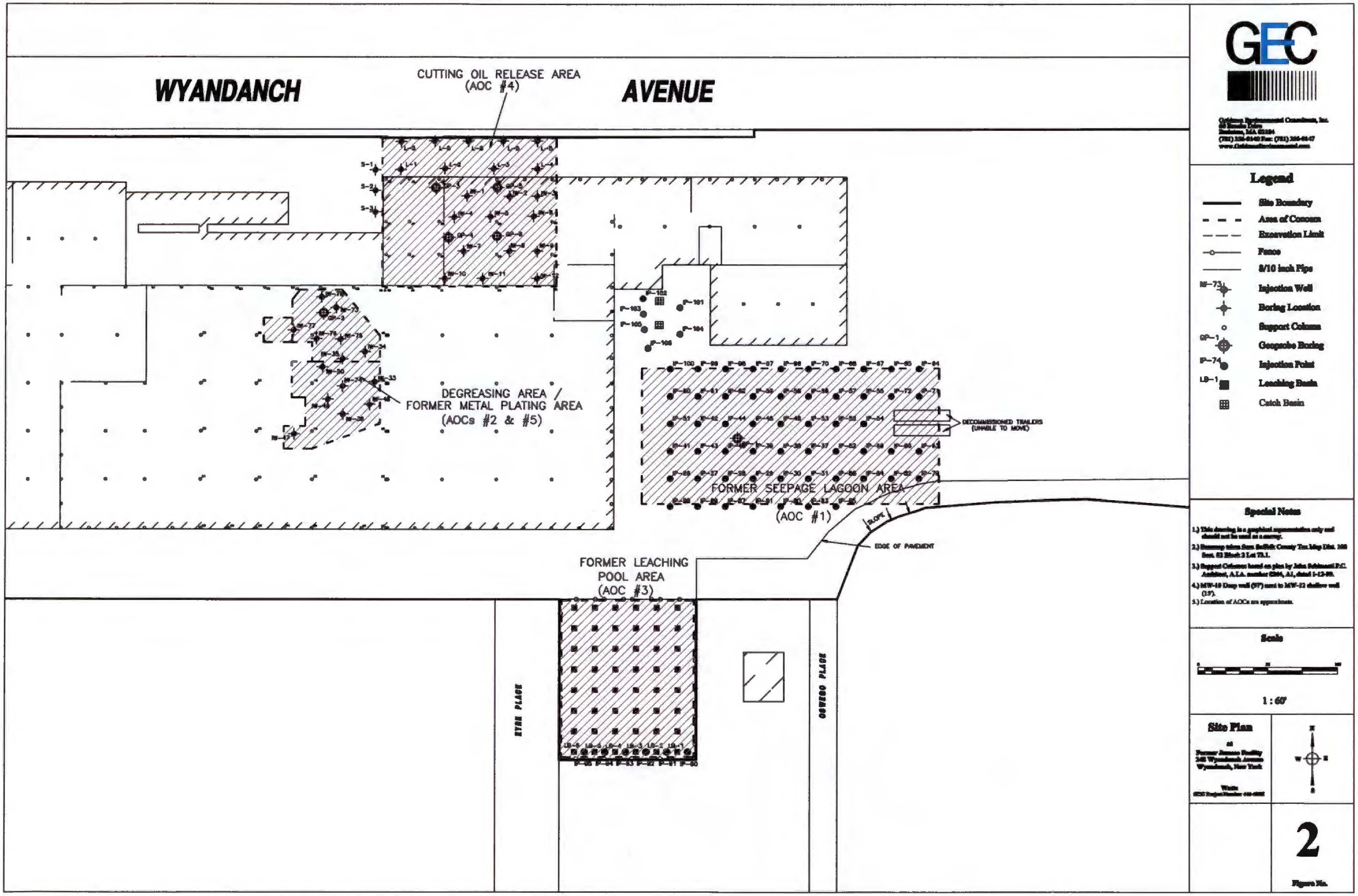
248 Wyandanch Avenue
Wyandanch, New York

GEC Project #: 444-5010

Figure 1

Scale
1 : 25,000

N



WYANDANCH
AVENUE
CUTTING OIL RELEASE AREA (AOC #4)
DEGREASING AREA / FORMER METAL PLATING AREA (AOCs #2 & #5)
FORMER SEEPAGE LAGOON AREA (AOC #1)
FORMER LEACHING POOL AREA (AOC #3)
DECOMMISSIONED TRAILERS (UNABLE TO MOVE)
EDGE OF PAVEMENT
SLOPE
GEC
Legend
Site Boundary
Area of Concern
Excavation Limit
Fence
8/10 inch Pipe
Injection Well
Boring Location
Support Column
Geoprobe Boring
Injection Point
Leaching Basin
Catch Basin
Special Notes
5.) Location of AOCs are approximate.
Scale
1 : 60'
Site Plan
N
W
E
S
2
Figure No.

APPENDIX A

Amended Record of Decision, March 2006

444 - Jameco ROD

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision Amendment

Jameco Industries Site
Wyandanch, Suffolk County New York
Site Number 1-52-006

March 2006

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* DENISE M. SHEEHAN, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION AMENDMENT

Jameco Industries Inactive Hazardous Waste Disposal Site
Wyandanch, Suffolk County, New York
Site No. 1-52-006

Statement of Purpose and Basis

The Record of Decision (ROD) amendment presents the amended remedy for the Jameco Industries site, a Class 2 inactive hazardous waste disposal site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Jameco Industries inactive hazardous waste disposal site, and the public's input to the ROD amendment presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD amendment.

Assessment of the Site

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response actions selected in this ROD amendment, presents a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation and Feasibility Study (RI/FS) and the Pre-Design Investigation/Remedial Action Soil and Groundwater Sampling Report for the Jameco Industries site and the criteria identified for evaluation of alternatives, the NYSDEC has selected excavation and off-site disposal and in-situ solidification/stabilization of soil contaminated with metals and enhanced bioremediation of soil and groundwater contaminated with semi-volatile organic compounds (SVOCs). The components of the remedy are as follows:

- Contaminated soil will be excavated from area of concern (AOC) #3 and from two exterior storm drains (B-27 and B-28) and transported for off-site disposal at a permitted disposal facility. Post excavation confirmatory soil samples will be collected to ensure compliance with the recommended soil cleanup objectives. Excavated areas will be backfilled to original grade with certified clean fill.

- Metals contaminated soil in AOC #1 and AOC #5 will be stabilized and solidified in-situ by injecting a specially formulated mixture of chemical reagents.

- Treatment of SVOC contaminated soil and groundwater will be accomplished through in-situ enhanced bioremediation.

- A groundwater monitoring plan will be implemented to evaluate the effectiveness of source remediation as it relates to restoring groundwater quality to relevant standards, criteria and guidance (SCGs).

- Institutional controls will be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment.

- Environmental easement will be imposed and a soil management plan will be developed to ensure safety in the event that contaminated soils are to be disturbed during any future subsurface construction activities. A periodic certification will be submitted which will certify that the institutional controls and engineering controls put in place, pursuant to the Record of Decision, are still in place, have not been altered, and are still effective.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

MAR 31 2006

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

TABLE OF CONTENTS

RECORD OF DECISION AMENDMENT
Jameco Industries Site
Wyandanch, Suffolk County, New York
Site No. 1-52-006
March 2006

SECTION 1: SUMMARY AND PURPOSE OF THE RECORD OF DECISION AMENDMENT

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has amended the March 2003 Record of Decision (ROD) for the Jameco Industries site. The presence of hazardous waste has created significant threats to human health and the environment that are addressed by the selected remedy. As more fully described in Sections 3 and 5 of this document, the discharge of metal plating solutions and semi-volatile organic compounds (SVOCs) has resulted in the disposal of hazardous wastes. These wastes have contaminated the soil and groundwater at the site and have resulted in:

- A significant threat to human health associated with current and potential exposure to contaminated soil and groundwater.
- A significant environmental threat associated with the impacts of contaminants to groundwater.

To eliminate or mitigate these threats, based on the results of the RI/FS and the Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report, the NYSDEC has amended the March 2003 ROD. The components of the remedy include:

1. Contaminated soil will be excavated from AOC #3 and from two exterior storm drains (B-27 and B-28), stockpiled, analyzed for disposal characteristics and transported off-site to a permitted disposal facility. Post excavation confirmatory endpoint soil samples will be collected to ensure compliance with the recommended soil cleanup objectives specified in TAGM #4046.
2. Excavated areas will be backfilled to original grade with certified clean fill.
3. Contaminated soil in AOC #1 and AOC #5 will be stabilized and solidified in-situ by injecting a specially formulated mixture of chemical reagents.
4. In-situ treatment of SVOC contaminated soil and groundwater would be accomplished through the injection of oxygen release compounds or hydrogen release compounds.
5. A groundwater monitoring plan will be implemented to evaluate the effectiveness of source remediation as it relates to restoring groundwater quality to relevant SCGs. The operation

of the components of the remedy, including groundwater monitoring, will continue until the remedial objectives have been achieved, or until the NYSDEC determines that continued operation is technically impracticable or not feasible.

6. Institutional controls will be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment.

7. Environmental easement will be imposed and a soil management plan will be developed to ensure safety in the event that contaminated soils were to be disturbed during any future subsurface construction activities. A periodic certification, prepared by a professional engineer or environmental professional acceptable to the NYSDEC will be submitted, which will certify that the institutional controls and engineering controls put in place, pursuant to the Record of Decision, are still in place, have not been altered and are still effective.

The selected remedy, discussed in detail in Section 8, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate.

This ROD amendment identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for this preference. The NYSDEC has selected the final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC has issued this ROD amendment as a component of the Citizen Participation Plan developed pursuant to the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375. This document is a summary of the information that can be found in greater detail in the May 2001 Remedial Investigation (RI) Report, the February 2002 Feasibility Study (FS), the March 2003 Record of Decision, the May 2004 Pre-Remedial Design Investigation/Remedial Action Soil and Groundwater Sampling Report and other relevant documents.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Jameco Industries site (Site No.1-52-006) is located at 248 Wyandanch Avenue in the Village of Wyandanch, Suffolk County, New York. The site is 7.4 acres in size and is located in a mixed industrial/commercial/residential setting.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Jameco Industries manufactured plumbing fixtures at the site from 1964 until 1998. One of the major manufacturing processes at the facility involved electroplating fixtures with nickel and chrome.

1964-1975: Effluent wastewater generated during plating operations was pH adjusted to precipitate metals out of solution. The wastewater, including precipitate, was then discharged to one of two seepage lagoons located in the rear yard of the plant. There was also an overflow basin constructed to accommodate discharges to the seepage lagoons. Wastewater would seep through the soil, leaving behind the metal plating sludge which was periodically removed from the lagoons and disposed off-site.

1975-1998: The use of seepage lagoons was discontinued. Effluent wastewater was discharged into a series of 48 subsurface leaching pools. Wastewater was pH adjusted and sludge was separated from liquid through the use of clarifiers. The discharge of treated wastewater into the industrial leaching pool system was regulated by the NYSDEC's Division of Water under a State Pollution Discharge Elimination System (SPDES) permit.

In 1994, groundwater sampling revealed the presence of hydrocarbons in the northern portion of the site. The contamination was determined to be cutting oil which was discharged into a subsurface leaching pool system located outside the north side of the facility. This area of concern was partially remediated as described in Section 3.2.

As part of the manufacturing process, the facility used degreasing machinery to clean metallic plumbing parts. Prior to the Remedial Investigation (RI), volatile organic compounds (VOCs) were detected in soil and groundwater beneath the facility. The source of the contamination was determined to be a leaking solvent storage tank.

3.2: Remedial History

In December 1983, the NYSDEC listed the site as a Class 2a site in the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry). Class 2a is a temporary classification assigned to a site that has inadequate and/or insufficient data for placement in any of the other classifications. In May 1992, the NYSDEC reclassified the site to Class 2. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required. In February 1993, in response to a petition from Jameco Industries Inc., the site was reclassified to Class 4 and additional investigation of the site was undertaken by the responsible party to better define the presence and extent of hazardous waste at the site. Based upon this data, the site was reclassified to Class 2 in February 1996. Details of the Remedial History since year 1975 are summarized in the March 2003 ROD.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers. The NYSDEC and Watts Industries Inc. entered into a Consent Order on October 24, 2003. The Order obligates the responsible party to implement the remedial program.

SECTION 5: SITE CONTAMINATION

A RI/FS and a pre-remedial design/remedial action soil and groundwater investigation has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation and the Supplemental Investigation

The purpose of the RI and the supplemental investigation was to define the nature and extent of contamination resulting from previous activities at the site. Prior to undertaking the RI, the PRP implemented an interim remedial measure (IRM) under NYSDEC oversight (Section 5.2). The RI was conducted in several phases beginning in January 1998 and ending in May 2001. The pre-remedial design/remedial action investigation was conducted in December 2003. A summary of the investigation conducted through May 2001 and the nature and extent of the contamination in soil and groundwater are presented in the March 2003 ROD.

Following the RI, in December 2003, a pre-remedial design/remedial action investigation of on-site soil and groundwater was conducted to provide additional data to support the remedial design. This data is summarized in a report entitled Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report, dated May 2004.

The following activities were conducted during the pre-remedial design/remedial action soil and groundwater investigation:

- Perform 31 soil borings and collect soil samples for the purpose of further defining the areal extent of subsurface soil contamination;
- Construct and sample eight new groundwater monitoring wells and 16 pre-existing monitoring wells to better define groundwater quality on-site.

More complete information can be found in the Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report.

5.1.1: Site Geology and Hydrogeology

The site is underlain by glacial outwash deposits that are approximately 110 feet thick. The aquifer in these deposits is referred to as the Upper Glacial aquifer. Groundwater occurs approximately 10 feet below grade. The site-specific groundwater flow direction is generally southeast. The Upper Glacial aquifer is underlain by the Magothy formation which is deltaic in origin and is comprised of silt and fine to medium grain sands. The Magothy formation is approximately 700 feet thick beneath the site and is the source of the Magothy aquifer. The Magothy aquifer is the primary source of potable water for the area. The upper glacial sands and gravel are separated from the Magothy formation by the Gardiners clay unit. Beneath the Magothy formation exists the clay member of the Raritan formation, which in turn overlies the Lloyd Sand member of the Raritan formation. The Raritan formation overlies crystalline bedrock, which occurs approximately 1,350 feet below grade.

5.1.2: Nature of Contamination

As described in the RI report and the Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report, many soil and groundwater samples were collected to characterize the nature and extent of contamination. The main categories of contaminants that exceed their SCGs are inorganics (metals) and semi-volatile organic compounds (SVOCs).

The inorganic contaminants of concern are chromium, copper, nickel, and zinc. The SVOCs of concern are polycyclic aromatic hydrocarbons (PAHs).

5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium.

Soil and groundwater data collected during the RI have been presented in the May 2001 RI report, the February 2003 PRAP and the March 2003 ROD. Table 1 and Table 2 in this proposed ROD amendment summarizes data presented in the May 2004 Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report. Figure 1 in this ROD amendment shows the areas of concern (AOC) for this site. The following are the media which were investigated and a summary of the findings.

Soil

Area of Concern #1: Former Seepage Lagoons

During the RI, soil samples collected from this area were analyzed for VOCs and metals. Chromium, copper, nickel and zinc were all detected at levels which exceeded SCGs. There were no significant detections of VOCs in any samples collected from this area.

In light of the extensive number of borings and soil samples previously collected during the RI from this AOC, no additional soil samples were collected during the December 2003 pre-remedial design/remedial action investigation. Soil quality data from this AOC reveals that while many soil samples did not exceed the recommended cleanup objectives for metals, sporadic and isolated pockets of elevated metals still exists in subsurface soil.

Area of Concern #2: Degreasing Area

This area within the facility was the subject of an IRM that is discussed in Section 5.2. Soil samples collected during the RI indicates that the IRM conducted in this area was successful in remediating subsurface soil. No additional soil samples were collected during the December 2003 pre-design /remedial action investigation.

Area of Concern #3: Former Industrial Leaching Pool System

The former industrial leaching pool system is comprised of 48 subsurface leaching pools located within a fenced area. Wastewater which was discharged to these pools was regulated by the NYSDEC's Division of Water under State Pollution Discharge Elimination System Permit (SPDES) #0081540. Based upon previous sampling data and the chemistry of the process wastewater which was discharged into the industrial leaching pool system, the metals of concern relative to this area are chromium, copper, nickel and zinc. Samples collected from this area during the RI revealed levels of chromium, copper, nickel and zinc which exceeded SCGs. There were no detections of VOCs. No additional soil samples were collected during the December 2003 pre-design /remedial action investigation.

Area of Concern #4: Cutting Oil Release

During a groundwater sampling effort in 1994, a layer of free phase petroleum product was detected in MW-13. The PRP reported the incident to the NYSDEC on October 4, 1994. Spill #94-08922 was assigned to the incident. The source of the contamination was determined to be a leaching pool system located on the north side of the property which received discharges of machine cutting oil. In July 1995, under the oversight of the NYSDEC, the leaching pools were removed and 750 tons of contaminated soil was excavated and disposed at a permitted facility. The area was backfilled with clean fill material.

In December 2003, during the pre-remedial design/remedial action investigation, 15 soil borings were conducted in the vicinity of the cutting oil release. These borings revealed the presence of non-aqueous phase cutting oil present in soil at and slightly above the water table, generally referred to as the smear zone. Detections of SVOCs in the unsaturated zone were generally below the soil cleanup objectives.

Area of Concern #5: Metal Plating Shop

In January 1998, soil samples collected beneath the former plating shop revealed elevated levels of chromium, copper, nickel and zinc which exceeded SCGs. In February 1998, under the oversight of the Division of Solid and Hazardous Materials, a portion of the facility floor in the metal plating shop was removed and 222 cubic yards of contaminated soil was excavated and disposed of off-site at a permitted disposal facility.

As part of the December 2003 pre-remedial design/remedial action investigation, 12 soil borings were conducted in the vicinity of the former metal plating shop. Chromium, copper, nickel and zinc were detected at levels exceeding SCGs (Table 1).

Despite previous remedial actions in this AOC, soil samples collected in the vicinity of the former plating shop have revealed sporadic pockets of residual metals contamination in subsurface soil which exceeds the recommended soil cleanup objectives.

Miscellaneous Areas of Concern

Soil samples were collected during the RI from the bottom of two storm drains located in the facility parking lot. These samples were analyzed for VOCs and metals. While there were no detections of VOCs, concentrations of chromium, copper, mercury, nickel and zinc exceeded SCGs. No additional soil samples were collected during the December 2003 pre-design /remedial action investigation.

Groundwater

Area of Concern #1: Former Seepage Lagoons

During the RI, groundwater samples downgradient of this area detected, chromium, copper, nickel and zinc. In December 2003, three additional wells (MW-5R, MW-6R and MW-26R) were installed and sampled as part of the pre-remedial design/remedial action investigation. Chromium, copper and zinc were detected, but not at levels exceeding SCGs.

Area of Concern #2: Degreasing Area

As a result of the source remediation described in Section 5.2, TCE 1,2-DCE, and PCE concentrations have diminished to levels at or near SCGs. No additional groundwater samples were collected during the December 2003 pre-design /remedial action investigation.

Area of Concern #3: Former Industrial Leaching Pool System

Groundwater samples collected during the RI revealed levels of chromium, copper, nickel and zinc which exceeded SCGs. Groundwater samples collected from monitoring wells MW-3 and MW-4 during the pre-remedial design/remedial action investigation in December 2003 revealed elevated levels of metals (Table 2).

Area of Concern #4: Cutting Oil Release

Groundwater samples collected during the pre-remedial design/remedial action investigation in December 2003 revealed the presence of nonaqueous phase liquid (NAPL).

Area of Concern #5: Metal Plating Shop

During the pre-remedial design/remedial action investigation in December 2003, eight monitoring wells (GEC-1, 2, 3 and 4, MW-2, 10, 11 and 12) were sampled to assess groundwater quality relevant to the former plating shop (Table 2). Chromium, copper and zinc concentrations all exceeded SCGs in one or more samples.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

A soil vapor extraction (SVE) system to remediate VOC contaminated soil beneath the facility was constructed in 1996 and operated at the site. The SVE system was shut down and dismantled in July 1999.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 6 of the RI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

The site is fenced and access is limited to employees.

Exposure pathways that are known to or may exist at the site include:

- Ingestion of contaminated groundwater: This pathway could potentially occur in the future if private or public drinking water supply wells existed at or near the site. A potable well search was performed and no private wells were found near the site. Residences and businesses in the area are served by public water from the Suffolk County Water Authority supply wells. Water from these wells is routinely monitored and, if necessary, treated to comply with federal and state drinking water standards.

- Dermal contact with contaminated soil on-site: This pathway could occur if soils are disturbed during excavation activities. Appropriate health and safety measures to prevent exposures will be in place during excavation.

- Inhalation of contaminated dust on-site and off-site: It is possible, that during excavation, fugitive dusts containing site related contaminants could be released. An approved Health

and Safety Plan and a Community Air Monitoring Plan will be in place to prevent unacceptable releases which may impact workers or the surrounding community.

5.4: Summary of Environmental Impacts

This section summarizes the existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

As described in the RI report, the nearest surface water body is more than 0.5 miles from the site. Based upon on-site and off-site groundwater quality and the mobility of site related contaminants, it is not expected that contamination would impact the nearest environmental receptor.

Site contamination has impacted the groundwater resource in the upper glacial aquifer. Although there are no private or public water supply wells affected by site related contamination, the United States Environmental Protection Agency has designated the groundwater resources in Suffolk County as a sole source aquifer.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The remediation goals for this site are to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to metals and SVOCs in soil and groundwater; and
- the release of contaminants from soil into groundwater that may create exceedances of ambient groundwater quality standards.

Further, the remediation goals for the site include attaining to the extent practicable:

- ambient groundwater quality standards; and
- the soil cleanup objectives specified in Technical and Administrative Guidance Memorandum #4046.

SECTION 7: EVALUATION OF THE SELECTED REMEDY IN THE MARCH 2003 ROD VERSUS THE AMENDED REMEDY

The amended remedy must also be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable.

7.1: Description of the Selected Remedy in the March 2003 ROD and the Amended Remedy

Alternative A: Selected Remedy in the March 2003 ROD

This alternative includes alternatives for the remediation of metals contaminated soil and groundwater and remediation of SVOC contaminated soil and groundwater.

METALS CONTAMINATED SOIL AND GROUNDWATER- EXCAVATION AND OFF-SITE DISPOSAL

Present Worth: $730,000
Capital Cost: $680,000
Annual OM&M: $10,000

This is Alternative 4 in the March 2003 ROD. Under this alternative, contaminated soil would be excavated from the areas of concern, AOC #1, AOC #3, AOC #5 and storm drains B-27 and B-28, stockpiled, analyzed and then disposed off-site at a permitted facility. Confirmatory end point soil samples would be collected to ensure that the full extent of the contaminated soil was removed. The excavated areas would then be backfilled to original grade with certified clean fill.

SVOC CONTAMINATED SOIL AND GROUNDWATER- EXTRACTION & TREATMENT OF GROUNDWATER AND EXCAVATION AND OFF-SITE DISPOSAL OF CONTAMINATED SOIL

Present Worth: $593,000
Capital Cost: $163,000
Annual OM&M: $86,000

This is Alternative 2 in the March 2003 ROD. Under this alternative, residual soil contamination would be addressed by additional excavation of soil in the area of the former abandoned leaching pool system on the north side of the site. Excavated soil would be stockpiled, analyzed and disposed of at a permitted facility, thereby removing the source of future groundwater contamination.

Contaminated groundwater would be pumped by extraction wells and passed through granular activated carbon to remove free phase product. Treated groundwater would then be recharged into the aquifer through diffusion wells or recharge basins. Free phase product that is collected would be stored in above ground storage tanks prior to off-site disposal at a permitted facility.

Alternative B: Amendment to the Selected Remedy in the March 2003 ROD

TREATMENT OF CONTAMINATED SOIL VIA SOLIDIFICATION/STABILIZATION AND ENHANCED BIOREMEDIATION OF CONTAMINATED GROUNDWATER & SOIL

This remedy addresses soil and groundwater that are contaminated with metals and SVOCs.

Present Worth: $1,479,000

Capital Cost: $1,138,000
Annual OM&M: $56,600

Under this alternative, soil contaminated with metals in AOC #1 and AOC #5 will be stabilized and solidified in-situ by solidification/stabilization (S/S). In situ S/S is a treatment technology whereby chemical reagents are injected into the contaminated media in order to immobilize contaminants within a crystalline structure of the solidified material.

Contaminated soil in AOC #3 and drains B-27 and B-28 will be excavated from the areas of concern, stockpiled, analyzed and then disposed off-site at a permitted disposal facility. Confirmatory end point soil samples will be collected to ensure that the full extent of the contaminated soil was removed. The excavated areas will then be backfilled to original grade with certified clean fill.

Under this alternative, soil and groundwater contaminated with SVOCs will be treated by enhanced bioremediation. This is the same as Alternative 3 under SVOC Contaminated Soil and Groundwater in the March 2003 ROD. Oxygen release compounds (ORC) or hydrogen release compounds (HRC) will be introduced into the groundwater to increase the rate of aerobic breakdown of contaminants. This alternative has been demonstrated to be effective when utilized for the remediation of petroleum-related contaminants.

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York State. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the NYSDEC has determined to be applicable on a case-specific basis.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or

implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectivness. Capital costs and operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in Table 3.

This final criterion is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the amendment to the selected remedy in the March 2003 ROD would be evaluated. Public comments received during the comment period would be addressed in the responsiveness summary.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected treatment via solidification/stabilization of contaminated soil in AOC #1 and AOC #5 rather than excavation and off-site disposal as described in the March 2003 ROD. Excavation and off-site will still be implemented for contaminated soil in AOC #3 and storm drains B-27 and B-28. The NYSDEC has also selected Alternative #3 (Enhanced Bioremediation of Groundwater) for AOC #4, without the excavation component, rather than Alternative 2 (Extraction and Treatment of Groundwater and Excavation of Contaminated Soil) in the March 2003 ROD. The elements of this remedy are described at the end of this section. The selected remedy for the entire site is also protective of public health and environment and complies with the SCGs. The estimated present worth cost to implement the selected remedy is

$1,479,000 which is higher than the selected remedy in the March 2003 ROD. The cost to construct the remedy is estimated to be $1,138,000 which would be $295,000 more than the construction cost of the selected remedy in the March 2003 ROD. The estimated average annual operation, maintenance and monitoring cost for five years is $56,600, about $40,000 less than the selected remedy in the March 2003 ROD.

The basis for the selected remedy is as follows;

- Prior remedial actions conducted at AOC #1 and AOC #5 in the form of source removal have significantly reduced the volume of contaminated soil at both areas of concern. Additional soil sampling conducted during the pre-design investigation at both areas indicates that the areal extent of residual contamination in subsurface soil is not as widespread as believed. Residual contamination exists in sporadic and isolated pockets.

- Solidification/stabilization has been successfully implemented at sites with metals contamination similar to the Jameco Industries site.

- The physical constraints of the site complicate additional excavation activities at AOC #1 and AOC #5.

- In-situ solidification/stabilization complies with the threshold criteria and the primary balancing criteria and would be implemented in conjunction with a soil management plan and a groundwater monitoring plan.

- Recent groundwater sampling indicates levels of metals in groundwater are less than previously observed, due, in part to source remediation.

- Prior remedial actions conducted at AOC #4 in the form of source removal have significantly reduced the volume of contaminated soil in the area. Additional soil sampling conducted during the remedial design phase revealed minimal residual soil contamination in the unsaturated zone.

- The presence of underground utilities and the facility's foundation and footings renders the location nearly inaccessible for further excavation. Given these physical constraints, in-situ treatment can be more readily implemented and will effectively remediate contaminated soil in the vadose zone as well as in groundwater.

- In-situ treatment complies with the threshold criteria and the primary balancing criteria and would be implemented in conjunction with a soil management plan and a groundwater monitoring plan.

- In-situ treatment, via enhanced bioremediation, of SVOC contaminated soil and groundwater has been successfully implemented at similar sites.

The elements of the selected remedy for the entire site are as follows:

1. Contaminated soil will be excavated from AOC #3 and from two exterior storm drains (B-27 and B-28), stockpiled, analyzed for disposal characteristics and transported off-site to a permitted disposal facility. Post excavation confirmatory endpoint soil samples will be collected to ensure compliance with the recommended soil cleanup objectives specified in TAGM #4046.

2. Excavated areas will be backfilled to original grade with certified clean fill.

3. Contaminated soil in AOC #1 and AOC #5 will be stabilized and solidified in-situ by injecting a specially formulated mixture of chemical reagents. Bench scale laboratory testing utilizing soil samples collected from the site will ensure the optimum mixture and aid in the determination of the number of injection points.

4. In-situ treatment of SVOC contaminated soil and groundwater would be accomplished through the injection of ORC or HRC. Prior to field implementation, laboratory bench scale tests will aid in the determination of the appropriate amount of compounds and total oxidant demand.

5. A groundwater monitoring plan will be implemented to evaluate the effectiveness of source remediation as it relates to restoring groundwater quality to relevant SCGs. The operation of the components of the remedy, including groundwater monitoring, will continue until the remedial objectives have been achieved, or until the NYSDEC determines that continued operation is technically impracticable or not feasible.

6. Institutional controls will be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment.

7. Environmental easement will be imposed and a soil management plan will be developed to ensure safety in the event that contaminated soils were to be disturbed during any future subsurface construction activities. The NYSDEC must be notified in the event that such activities become necessary. A periodic certification, prepared by a professional engineer or environmental professional acceptable to the NYSDEC will be submitted, which will certify that the institutional controls and engineering controls put in place, pursuant to the Record of Decision, are still in place, have not been altered and are still effective. Periodic certification will be provided until the NYSDEC notifies in writing that this certification is no longer needed.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Documents were placed in the document repositories.

- A meeting/invitation fact sheet was distributed per the public contact list.
- A public meeting was held on March 6, 2006 to present and receive comments on the ROD amendment.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the ROD amendment.

In general, the public comments received were supportive of the selected remedy.

Table 1
December 2003 Pre-Design Investigation Results
Area of Concern #5: Metal Plating Shop
Soil Sampling Results

Sample Location	Sample Depth (feet)	Sample Date	Analyte (ug/kg) Chromium (III)	Chromium (VI)	Copper	Nickel	Zinc
TAGM #4046 Soil Cleanup Objectives			50	50	25	13	20
L-2	0-4	11/30	3.4	ND	4.23	2.43	7.57
L-2	8-12	11/30	58.1	ND	66.8	10.9	12.3
L-3	4-8	12/01	238	16.4	233	17.4	7.86
L-3	8-12	12/01	137	5	390	98.2	57.5
L-4	0-4	12/01	20.9	ND	174	26.1	198
L-4	8-12	12/01	3.06	ND	ND	53.1	4.47
L-5	0-4	12/02	3.1	ND	21.3	9.63	3.52
L-5	4-8	12/02	186	ND	178	2,040	45.1
L-5	8-12	12/02	8.7	ND	30.2	30.2	6.84
O-2	0-4	11/30	13.5	ND	24	5.51	8.57
O-2	8-12	11/30	4.9	ND	4.5	2.43	4.29
O-3	4-8	12/01	5.81	ND	2.94	2.56	7.24
O-3	8-12	12/01	2.33	ND	ND	0.96	2.29
O-4	4-8	12/02	5.16	ND	4.25	3	10.2
O-4	8-12	12/02	5.03	ND	4.48	3.91	7.19
O-5	0-4	12/02	4.46	ND	4.43	1.37	8.66
O-5	4-8	12/02	3.43	ND	2.61	1.46	4.81
O-5	8-12	12/02	2.27	ND	3.07	1.28	3.32
Q-2	0-4	11/30	3.46	ND	3.25	1.74	5.17
Q-2	8-12	11/30	1.77	ND	3.12	1	5.35
Q-3	4-8	12/01	4.2	ND	2.76	2.43	7.11
Q-3	8-12	12/01	2.28	ND	ND	1.22	2.94
Q-4	0-4	12/01	4.37	ND	5.46	2.52	8.8
Q-4	4-8	12/02	3.74	ND	5.92	1.75	11.4
Q-4	8-12	12/01	5.13	ND	3.78	2.5	3.93
Q-5	4-8	12/02	4.45	ND	4.37	2.32	6.92
Q-5	8-12	12/02	2.71	ND	3.2	1.1	2.5

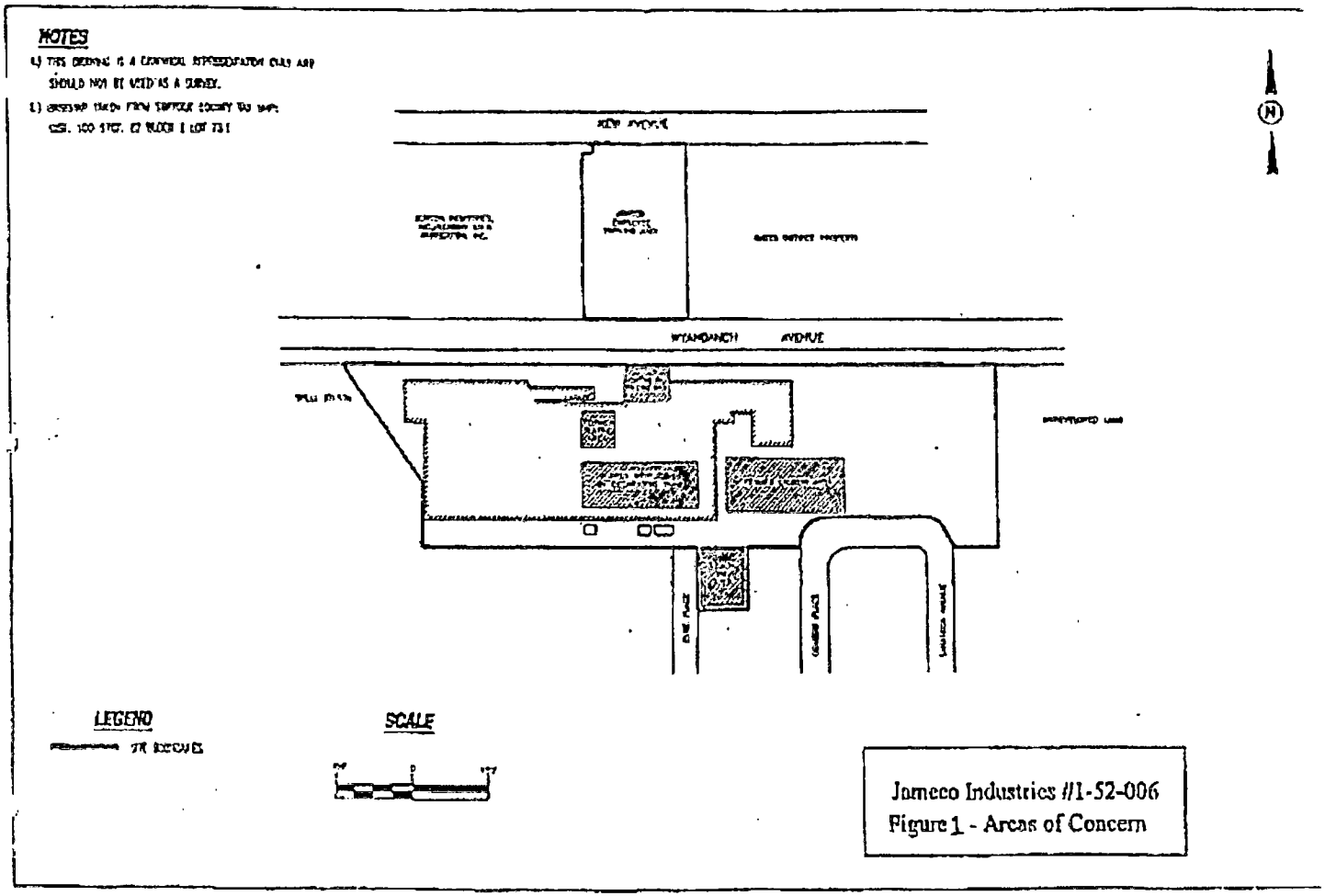
Table 2
December 2003 Pre-Design Investigation Results
Groundwater Sampling Results

Sample Identification Date Taken	Total Chromium (ppb)	Copper (ppb)	Zinc (ppb)
SCG	50	200	300
MW-2 12/03	ND	20	15
MW-3 12/03	56	84	71
MW-4 12/03	10	77	151
MW-5R 12/03	ND	42	90
MW-6R 12/03	ND	8	106
MW-7 12/03	ND	10	30
MW-10 12/03	11	10	29
MW-11 12/03	15	7	14
MW-12 12/03	7	530	289
MW-16 12/03	ND	10	17
MW-17 12/03	ND	2	11
MW-26R 12/03	ND	2	2
GEC-1 12/03	ND	1	15
GEC-2 12/03	ND	1	10
GEC-3 12/03	ND	1	23
GEC-4 12/03	ND	4	16

Note: ND = non-detect

Table 3
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Alternative A	**$843,000**	**$96,000**	**$1,298,000**
Alt #4: Excavation and Off-Site Disposal of metals contaminated soil	$680,000	$10,000	$705,000
Alt #2: Groundwater Extraction & Treatment and Excavation and disposal of contaminated soil - SVOC contaminated soil	$163,000	$86,000	$593,000
Alternative B: In-situ solidification/stabilization, excavation and off-site disposal and enhanced bioremediation	**$1,138,000**	**$56,600**	**$1,479,000**



Jameco Industries #1-52-006
Figure 1 - Areas of Concern

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Jameco Industries
Wyandanch, Suffolk County, New York
Site No. 1-52-006

The Record of Decision (ROD) Amendment for the Jameco Industries site was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 21, 2006. The ROD Amendment outlined the remedial measures proposed for the contaminated soil and groundwater at the Jameco Industries site.

The release of the ROD Amendment was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedies.

A public meeting was held on March 6, 2006, which included a presentation on the Remedial Investigation and Feasibility Study and the Pre-Design Investigation/Remedial Action Report as well as a discussion of the proposed remedies. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedies. These comments have become part of the Administrative Record for this site. The public comment period for the ROD Amendment ended on March 21, 2006. This responsiveness summary responds to all questions and comments raised during the public comment period.

Part 1: The following questions were raised during the public meeting on March 6, 2006:

COMMENT 1: Were both Jameco Industries and Linzer Products using cutting oil?
RESPONSE 1: Only Jameco Industries used cutting oil.

COMMENT 2: In which cesspools was cutting oil found?
RESPONSE 2: Cutting oil was discovered in the sanitary cesspools on the north side of the facility.

COMMENT 3: Will excavation extend beyond the site's boundaries?
RESPONSE 3: Excavation activities will not extend beyond the site's physical boundaries.

COMMENT 4: What metals are we dealing with in the former seepage lagoons?
RESPONSE 4: Chromium, copper, nickel and zinc are the predominant inorganic contaminants associated with the former seepage lagoons.

COMMENT 5: How deep will the excavation be in the former industrial leaching pool system?
RESPONSE 5: The excavation is expected to extend to approximately six or eight feet below grade.

COMMENT 6: Are there any leaching pools still in place in area of concern (AOC) #3?
RESPONSE 6: Yes, the pools will be removed and disposed of during the excavation activities.

COMMENT 7: What is the status of the Burton Industries site?
RESPONSE 7: The Burton Industries site is being investigated and remediated under the NYSDEC's Voluntary Cleanup Program.

COMMENT 8: How will excavation activities be accomplished adjacent to residential properties?
RESPONSE 8: Particulate monitoring and, if necessary, dust abatement procedures will be implemented to ensure that excavation activities do not impact the surrounding community.

COMMENT 9: How long will groundwater be sampled for?
RESPONSE 9: Groundwater monitoring is anticipated to be conducted on a semi-annual basis for a period of two years. After the conclusion of the program, the NYSDEC, in consultation with the NYSDOH, may choose to extend, modify or terminate the program.

COMMENT 10: Will heavy rains wash the contamination out of the covered soil?
RESPONSE 10: Rainwater does not affect the contaminated soil in AOC #1 and AOC #5 as these areas are located beneath an asphalt parking lot and beneath the site building, respectively.

COMMENT 11: When was the last round of groundwater sampling conducted?
RESPONSE 11: Groundwater samples were last collected in December 2003 and are on schedule to be collected in Spring 2006.

COMMENT 12: Have the remedial technologies proposed for the site been tested and proven?
RESPONSE 12: In-situ solidification/stabilization and in-situ bioremediation are proven remedial technologies utilized by the NYSDEC and USEPA at similar sites.

COMMENT 13: Will the parking lot be kept as a cap over AOC #1?
RESPONSE 13: Yes, the parking lot will cover the area. Additionally, this AOC will be subjected to in-situ solification/stabilization.

COMMENT 14: Are the chemicals to be used in the remediation approved by the NYSDEC?
RESPONSE 14: The NYSDEC will approve the remedial design plans, including the types of chemicals utilized in the remediation.

COMMENT 15: Will hydrogen release compounds (HRC) or oxygen release compounds (ORC) be utilized in the remediation of the cutting oil?
RESPONSE 15: Bench testing and pilot testing will aid in the choice of HRC or ORC for the remediation of cutting oil.

COMMENT 16: How wide is the dispersion of each injection point?
RESPONSE 16: Soil analysis and bench testing will aid in determining the radius of influence of the dispersion points.

COMMENT 17: Why were disposal permits renewed by the NYSDEC in this area of high cancer risk?
RESPONSE 17: State Pollution Discharge Elimination System permits are issued and renewed by the NYSDEC. These permits contain effluent limitations that are protective of human health and the environment. The NYSDEC monitors the permitee's compliance with the permit requirements. There is currently no permit nor any industrial discharges at the site.

COMMENT 18: Is chromium a cancer causing metal?
RESPONSE 18: Hexavalent Chromium has been identified as a cancer-causing agent and has the potential to negatively affect human health. The site-related chromium contamination is not

accessible to either workers or visitors since it is subsurface, therefore, no exposures or compound-related health effects are expected.

COMMENT 19: Can the environmental easement and the deed restriction be filed with the Town of Babylon?
RESPONSE 19: Environmental easements and deed restrictions are filed with the county clerk's office. Notice of this filing can be provided to the Town.

COMMENT 20: Are there any officers from Jameco Industries employed by Watts Industries?
RESPONSE 20: At the public meeting, an officer of Watts Industries indicated that there are no officers from Jameco Industries employed by Watts Industries.

COMMENT 21: Can the public contact list for the area be expanded for notification of future meetings?
RESPONSE 21: The NYSDEC will endeavor to add any new or additional civic groups, elected officials or citizens to the existing public contact list.

COMMENT 22: What is the scope of this meeting?
RESPONSE 22: The purpose of this meeting was to discuss the rationale for the amendment of remedial alternatives that were prescribed in the March 2003 ROD.

COMMENT 23: Are there any additional meetings scheduled at this time?
RESPONSE 23: Currently, there are no additional meetings scheduled.

Part 2: The following comments were raised by Mr. Brian Zitani, Assistant Waterways Management Supervisor, on behalf of the Town of Babylon in a letter dated March 21, 2006.

COMMENT 1: We are concerned the State is considering the in-situ stabilizing of metals contaminated soil in AOC #1 and AOC #5 where this alternative was previously rejected in the original 2003 ROD. Although land use controls and site monitoring may provide the necessary oversight to prevent the future disturbance of this area, no oversight program is foolproof. A change in ownership or human error by a contractor could lead to the unintentional disturbance of this area. The Town recommends the State reconsider this issue and find for the original remediation alternative to excavate and dispose of soils off-site as discussed in the 2003 ROD.
RESPONSE 1: Prior remedial actions conducted at AOC #1 and AOC #5 have significantly reduced the volume of contaminated soil at both locations. Soil sampling conducted during the pre-design investigation further revealed that subsurface soil contamination is not as widespread as previously believed. In addition to the physical constraints of the site, excavation of these isolated, sporadic pockets of contamination would require the excavation of a large quantity of soil which already meets the recommended soil cleanup objectives. In-situ solidification/stabilization complies with the threshold criteria and the primary balancing criteria and will be implemented in conjunction with a site management plan and a groundwater monitoring plan. Additionally, periodic certification will be submitted to the NYSDEC which will certify that the engineering and institutional controls put in place have not been altered and are still effective.

COMMENT 2: Some of the remediation measures recommended fall within local permit jurisdiction. Prior to the commencement of any physical site disturbance, all departmental review and building permit approvals must be obtained.
RESPONSE 2: The NYSDEC will inform the PRP that the Town of Babylon should be notified of any anticipated construction activities so that the appropriate permit process is adhered to.

COMMENT 3: As a courtesy, the Town requests a copy of the Proposed Land Use Convenants and Restrictions.
RESPONSE 3: The NYSDEC will facilitate notification of the Town regarding the filing of any environmental easements with the Suffolk County Tax Assessor's office.

APPENDIX B

Administrative Record

Administrative Record

Jameco Industries
Wyandanch, Suffolk County, New York
Site No. 1-52-006

1. "Site Investigation Report", November 1991, AKRF, Inc.
2. "Facility Maintenance Plan", January 1993, AKRF, Inc.
3. "Facility Maintenance Plan Report", August 1994, AKRF, Inc.
4. "Initial Submittal Report", May 1995, Goldman Environmental Consultants (GEC), Inc.
5. "Interim Remedial Measure Work Plan", July 1996, GEC, Inc.
6. "Proposed Design Plan for Soil Vapor Extraction", February 1997, GEC, Inc.
7. "Remedial Investigation/Feasibility Study Work Plan", May 1998, GEC, Inc.
8. "Interim Remedial Measure Closure Report", February 1999, GEC, Inc.
9. "Remedial Investigation Report", May 2001, GEC, Inc.
10. "Feasibility Study Report", February 2002, GEC, Inc.
11. "Proposed Remedial Action Plan", March 2003, NYSDEC
12. "Record of Decision", March 2003, NYSDEC
13. "Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Report", May 2004, GEC, Inc.
14. "Remedial Design Plan", August 2005, GEC, Inc.

APPENDIX B

Soils Management Plan

GEC Project Number 444-4800

SOILS MANAGEMENT PLAN
FOR
JAMECO INDUSTRIES SITE
NYSDEC: Site #1-52-006

248 Wyandanch Avenue
Wyandanch, New York

January 22, 2009

Prepared For:
Watts Water Technologies, Inc.
815 Chestnut Street
North Andover, Massachusetts 01845

GEC *Goldman Environmental Consultants, Inc.*
60 Brooks Drive
Braintree, MA 02184-3839
781-356-9140 FAX 781-356-9147
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SOILS MANAGEMENT PLAN
FOR
WATTS WATER TECHNOLOGIES, INC.
NYSDEC: SITE # 1-52-006

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Figures

1.0 OVERVIEW AND OBJECTIVES

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has been retained by Watts Water Technologies, Inc. (Watts), to prepare the following Soils Management Plan (SMP) for the state superfund site ("Site") located at 248 Wyandanch Avenue, Wyandanch, New York. At the Site there are five areas of concern (AOCs) AOC-1, AOC-2, AOC-3, AOC-4 and AOC-5; which are the subject of this SMP. This SMP is required under the Record of Decision (ROD) issued by the New York State Department of Environmental Conservation (NYSDEC) in March 2003, and amended in March 2006.

The Site (#1-52-006) consists of approximately 7.4 acres, is currently owned by Linzer Products Corporation and is located in a mixed industrial/commercial/residential area. The Site is improved with a single-story concrete block building surrounded by paved and unpaved parking and storage areas. A Site Locus is included as Figure 1 and a Site Plan is included as Figure 2. Figure 2 shows the location of each of the five individual AOCs.

The user should refer to the following previous investigation reports for more detail, as needed:

- "*Site Investigation Report*", November 1991, AKRF, Inc.
- "*Initial Submittal Report*", May 1994, Goldman Environmental Consultants, Inc. (GEC),
- "*Interim Remedial Measure Work Plan*", July 1996, GEC, Inc.
- "*Remedial Investigation/Feasibility Study Work Plan*, May 1998, GEC, Inc.
- "*Interim Remedial Measure Closure Report*", February 1999, GEC, Inc.
- "*Feasibility Study Report*", February 2001, GEC Inc.
- "*Remedial Investigation Report*", May 2001, GEC, Inc.
- "*Site Management Plan*", April 2008, GEC, Inc.
- "*Final Engineering Report*", Former Jameco Industries Site NYSDEC: Site #1-52-006, 248 Wyandanch Avenue, Wyandanch, NY, GEC Inc.

The objective of this SMP is to set guidelines for the management of soil material during future activities which might breach the cover system at any of the five AOCs located at the Site. Those portions of the Site beyond the limits of the five AOCs are not subject to this SMP. This SMP addresses environmental concerns relating to soil management and has been reviewed and approved by the New York State Department of Environmental Conservation (NYSDEC).

2.0 NATURE AND EXTENT OF CONTAMINATION

Based on data obtained from previous investigation and the remediation done at the Site, GEC developed a *Final Engineering Report*, which will be issued in April 2009, for the Former Jameco Industries Site (NYSDEC Site #1-52-006, 248 Wyandanch Avenue, Wyandanch, NY). The following paragraphs briefly describe the nature and extent of soil contamination and the remedial actions taken to mitigate the contamination.

AOC #1 – AOC #1 is located on the east side of the former Jameco facility, was formerly a seepage lagoon where four heavy metals; including chromium, nickel, copper and zinc; came to be deposited during the processing of waste material. This portion of the Site is currently used as a truck parking area for trailer trucks brining in raw materials and shipping finished products. In October 2006 GEC injected 375 gallons of calcium polysulfide (CaS) into fifty-seven chemical injection points located across the area in a grid pattern. The CaS was pumped into each injection point to stabilize/solidify the above metals. Six additional points were placed around two catch basins proximate to AOC #1 with each receiving similar quantities of CaS solution.

AOC #2 / #5 – AOCs #2 and #5 are located inside the former Jameco facility near the center of the building. In January 1998, Watts excavated approximately 222 cubic yards of contaminated soil from these areas. The excavation extended to four feet below grade and the excavation was lined with plastic sheeting prior to backfilling with clean fill. Confirmatory samples from the bottom of the excavation indicated that contaminated soil remained at depth, requiring further remedial action.

AOC #2 is a former degreasing area. After completing the original remedial efforts, relatively low concentrations of metals were detected in soil in AOC#2 but the concentrations of metals in groundwater did not indicate an ongoing source or significant leaching of metals from soil to the groundwater. The concentration of chlorinated volatile organic compounds (CVOCs) had decreased significantly. Remedial actions for this area were conducted in conjunction with AOC#5 a former metal plating area located directly adjacent to AOC#2.

Low to moderate concentrations of metals were detected in soils in AOC#5. Low concentrations of metals were also detected in groundwater in this area, indicating no significant impact to groundwater. Metals concentrations in groundwater from monitoring wells in and downgradient of AOC#5 also decreased over time and were approaching Recommended Clean-up Objectives.

The ROD selected additional soil excavation and off-Site disposal of contaminated soil as the preferred remedy for this area; however, based on groundwater

sampling subsequent to the issuance of the 2003 ROD, residual soil contamination did not appear to significantly impact groundwater. As a result, the ROD was amended and selected in-situ solidification/stabilization as the preferred alternative (similar to AOC#1).

During the week of October 16, 2006, GEC supervised the installation of fourteen injection points in AOCs #2 and #5 for the purpose of remediating elevated levels of metals. Upon the completion of each injection point, Redox Technologies injected a total of 350 gallons of CaS solution at three foot intervals for metals stabilization. Because of the closer spacing of the injection points, the volume of the CaS solution was reduced by 25 gallons per injection point compared to the injections in AOC #1. The array of injection points was not a uniform grid due to the presence of manufacturing equipment and occasional drilling obstructions.

AOC #3 – AOC #3 is an 11,350 square foot area that juts southward from the south property line. It was the location of forty-eight leaching chambers where treated process water was discharged. Four heavy metals; including chromium, nickel, copper and zinc; came to be deposited during the leaching process.

Moderate to elevated concentrations of metals were detected in soils in this area. Low to moderate concentrations of metals were detected in monitoring wells also located in the former leaching pool area. Based on concentrations of metals in groundwater samples from monitoring wells located in AOC#3, the ROD selected soil excavation and off-Site reuse for this area. Contaminated soil was excavated from AOC #3 and from two exterior storm drains (B-27 and B-28), stockpiled, analyzed for disposal characteristics and transported off-Site to a permitted disposal facility. Post excavation confirmatory endpoint soil samples were collected to ensure compliance with the recommended soil cleanup objectives specified in TAGM #4046. The excavated area was backfilled to original grade with certified clean fill. In order to save a line of mature pine tress on the southern property line of AOC #3, in-situ metals stabilization was conducted by injecting CaS into six injection points installed in and adjacent to the final line of leaching chambers. Redox-Tech injected approximately 375 gallons of CaS into each injection point in this area. The total injection volume at this location was approximately 2,275 gallons of CaS.

AOC #4 – This area is located in front of the facility building and is the location of a release of cutting oil. The release was discovered in the fall of 1994 during quarterly gauging and sampling of monitoring wells including monitoring well MW-13. Subsequent delineation investigations included the performance of several test pits and the installation of ten groundwater observations wells. In 1995 GEC supervised the

excavation and disposal of approximately 750 cubic yards of soil grossly contaminated with cutting oil. Laboratory analysis of confirmatory soil samples from the excavation walls indicated that petroleum hydrocarbons remained in the soil surrounding the excavation. In 1996 non-aqueous phase liquid (NAPL), ranging in thickness from 0.1 to 6.4 inches, was measured in downgradient monitoring wells MW-15, MW-19 and MW-20. As of April 2008, no free phase NAPL was detected in monitoring wells MW-15 or MW-20. A slight sheen or a NAPL coating on the well interior may still be detected in MW-19.

Between October 10 and 13, 2006, a solution of magnesium sulfate, sodium hydroxide and water was injected into twenty-four injection points to oxidize and reduce the remaining levels of polycyclic aromatic hydrocarbons (PAHs) to acceptable levels, such that they were not a continuing source to groundwater. The solution was injected with only enough pressure to maintain a flow rate of approximately ten gallons per minute.

The following paragraph briefly describes the nature and extent of groundwater contamination and the remedial actions taken to mitigate the contamination.

Low concentrations of chrysene, total chromium, and nickel are present in groundwater across the site. As a result, the ROD concluded that the groundwater beneath the property is not suitable for potable use. Groundwater beneath the property must not be used as a source of drinking water, and must be treated to acceptable levels prior to being used in any manufacturing process. Institutional controls will be imposed in the form of existing use and development restrictions preventing the use of groundwater as a source of potable or process water without necessary water quality treatment.

3.0 CONTEMPLATED SITE USE

According to the Town of Babylon Department of Planning and Development, the Site is currently designated by zoning code *Ga*, which represents land use designated for Light Industrial activities. According to the planning and development department this zoning applies to both current and foreseeable future use of the property.

4.0 PURPOSE AND DESCRIPTION OF SURFACE COVER SYSTEM

The purpose of the surface cover system is to eliminate the potential for human contact with fill material and eliminate the potential for contaminated runoff from the property. The cover system at each location of each AOC depends on the activity within each AOC location. The following surface cover systems are currently in use:

- AOC #1; area is used primarily by large trailer trucks during both delivery of materials and the shipment of finished products. Asphalt is currently used and will be maintained with a minimum of six inches of material (a combination of asphalt and subbase material).
- AOCs #2 and #5; areas abut each other and are located within the structure of the plant and have been used to support both plant equipment and manufacturing processes. Concrete is currently used and will be maintained with a minimum of six inches of material (a combination of concrete and subbase material). No vapor barrier is required with the absence of VOC contamination.
- AOC #3: impacted soil was removed from this AOC, or stabilized with chemical injections, and the AOC was backfilled with certified clean material. This remediation was undertaken from November 2007 to January 2008. Certified clean material was placed to an average depth of eight feet and the six remaining leaching chambers were filled with clean material. The top six inches of material across AOC #3 is compacted reprocessed concrete. To prevent erosion, drainage structures were installed. Abutting properties are soil covered with a cover of mixed vegetation.
- AOC #4; area is located on the north central part of the plant with approximately 30 percent of the AOC located outdoors and approximately 70 percent within the building footprint. Contaminated soil in the outer 30 percent was excavated and backfilled with certified clean material and is covered with a well maintained lawn. The 70 percent within the building foot print is used for storage of materials used to manufacture Linzer Products. Concrete is currently used and will be maintained with a minimum of six inches of material (a combination of concrete and subbase material). No vapor barrier is required with the absence of VOC contamination.

NYDEC will be notified if there is any substantial change in any of the above cover systems.

5.0 MANAGEMENT OF SOIL AND LONG TERM MAINTENANCE OF COVER SYSTEM

This section of the SMP provides environmental guidelines for management of subsurface soils/fill and long-term maintenance of the cover system during future

subsurface work which might occur during future construction, utility upgrade or maintenance or plant expansion.

- Prior to any subsurface work in any of the AOCs for construction, utility work or other purposes; workers are to be notified of potential subsurface conditions with clear instructions regarding how the work is to proceed. Subsurface work in the AOCs will be performed in accordance with all applicable local, state and federal regulations to protect worker health and safety. During all subsurface work within an AOC, dust monitoring will be conducted in accordance with the New York State Department of Health (NYSDOH) approved Air Monitoring Plan.
- Any breach of the cover system for the purposes of construction, utility work or other subsurface activities must be replaced or repaired using acceptable borrow material free of potential sources of chemical or petroleum contamination. The repaired area must be revegetated or covered with impervious materials such as concrete, processed concrete or asphalt.
- Soil excavated from AOCs and intended to be removed from the property must be managed, characterized and if necessary properly disposed of in accordance with NYSDEC regulations and directives. Refer to Section 5.1, below, for soil management details.
- Soil excavated from an AOC is presumed contaminated and must be reused as backfill within the same AOC and placed beneath a cover system component as described in Section 4 or must be tested for approved off-site disposal as described in Section 5.1 below.
- The Owner shall complete and submit to NYSDEC an annual report by January 15th of each year. The annual report shall contain certification that the institutional controls put in place, pursuant to Site Management Plan for Former Jameco Industries Site, NYSDEC Site #1-52-006, are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintain; and that the conditions at the AOCs are fully protective of public health and the environment.
- If the cover system is breached during the year covered by that Annual Report, the owner of the property shall include in that year's annual report a certification that all work was performed in conformance with the Soil Management Plan.
- The Record of Decision for the Site restricts at the property the use of groundwater as a source of potable or process water without necessary

treatment as determined by the Suffolk County Department of Health Services.

5.1 Excavated and Stockpiled Soil/Fill Disposal

Soil/fill that is excavated from an AOC and will not be reused as fill below the cover system will be further characterized prior to transportation off site for disposal at a permitted facility:

- Excess soil/fill which is excavated from an AOC and will not be reused in that AOC is presumed contaminated and shall be characterized for disposal in accordance with the following schedule and for the following parameters.
- Collect one composite and one duplicate sample for each 100 cubic yards (cy) of stockpiled soil/fill. A minimum of one soil sample must be characterized prior to transportation off-site for disposal at a permitted facility.
- For excavated soil/fill not exhibiting evidence of contamination but which must be sent off site for disposal, collect one composite and one duplicate sample for each 2,000 cy stockpile. A minimum of one soil sample must be characterized prior to transportation off-site for disposal at a permitted facility.
- The composite and duplicate composite samples will be collected from five individual sample locations within each stockpile. PID measurements will be recorded for each individual sample location. The composite and duplicate samples will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), Target Compound List (TCL) SVOCs, pesticides and PCBs, TAL metals and cyanide.
- Soil samples will be composited by homogenizing equal portions of fill/soil from each of the five individual sample locations in a pre-cleaned stainless steel or Pyrex mixing bowl. The homogenized sample will be transferred to pre-cleaned, laboratory prepared jars with correct labeling and chain-of-custody documentation.
- A grab sample will be collected from the individual sample location displaying the highest PID measurement. If none of the five sample locations exhibit a PID reading, then an individual sample will be randomly chosen for the grab sample. The grab sample will be analyzed for TCL VOCs.
- Stockpiled soil cannot be transported on or off site until laboratory analytical results are received. Additional characterization sampling and analysis for off-site disposal may be required by the disposal facility.

5.2 Subgrade Material

Subgrade material used to backfill excavations or to increase Site grades in any of the AOCs shall meet the following criteria:

- Excavated AOC soil/fill displaying visual, olfactory or other impact evidence shall be samples and analyzed. Analytical results indicating the presence of contaminants below relevant standards, criteria and guidance (SCGs) may be reused as AOC backfill.
- Off-site fill material brought to the AOCs for filling and/or grading shall be from an acceptable borrow source free of industrial and/or other potential chemical or petroleum contamination.
- Off-site soil intended for AOC backfill cannot otherwise be defined as solid waste in accordance with 6 NYCRR Part 360-1.2(a).
- Sources designated as "virgin" soil shall be further documented in writing to be native soil material from areas not having supported any know industrial, commercial or agricultural use.
- Virgin soil shall be subject to the collection of one representative composite sample per source. The sample shall be analyzed for TCL VOCs and SVOCs, pesticides and PCBs, RCRA-8 metals and cyanide. Acceptable soil will meet all relevant SCGs.
- Non-virgin soils meeting all relevant SCGs will be sampled at the following rate;
    - one composite sample per 500 cy up to 1,000cy,
    - one composite per 2,500 cy up to 5,000cy and
    - one composite per 5,000cy beyond the above volumes.

6.0 WARRANTY

The conclusions and recommendations contained in this report are based on the information available to GEC as of the date of this document. The conclusions and recommendations may require revision if future regulatory changes occur. GEC provides no warranties on information provided by third parties and contained herein. Data compiled was in accordance with GEC's existing procedures and consistent with the NYSDEC regulations, and should not be construed beyond its limitations. Any interpretations or use of this report other than those expressed herein are not warranted.

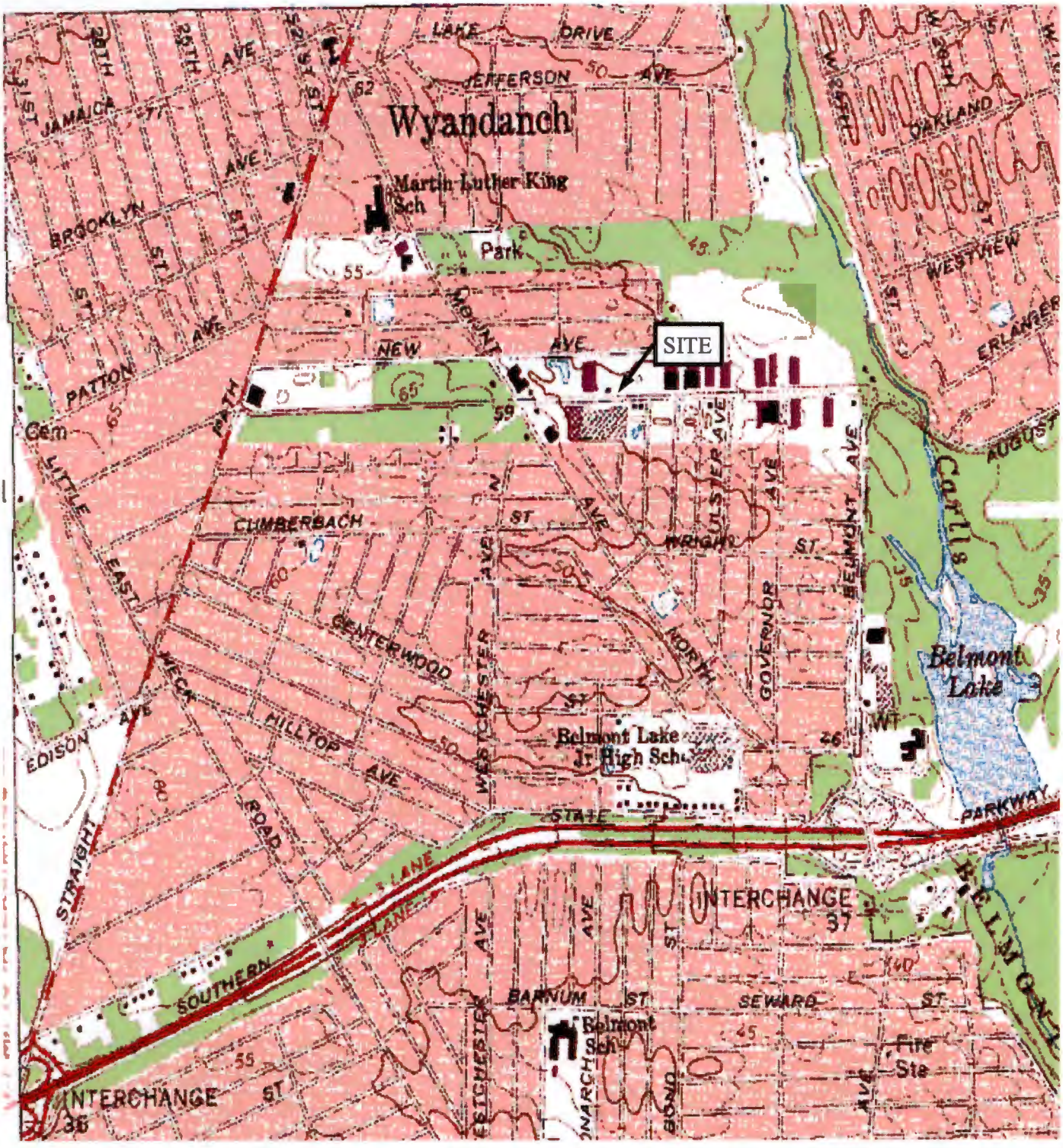
The use, partial use, or duplication of this report without the written consent of Goldman Environmental Consultants, Inc., and the Watts Water Technologies, Inc. is strictly prohibited.

Respectfully submitted,
Goldman Environmental Consultants, Inc.

Prepared By:	Approved By:
Richard Kranes, PG Senior Geologist	Brian T. Butler, PG Vice President, Waste Site Program

P:\Projects\444-Watts\Environ Use Restriction\SOIL Management Plan (SMP)

FIGURES



USGS 7.5 Minute Topographic

Bay Shore
NewYork, Quadrangle

Goldman Environmental Consultants, Inc.
60 Brooks Drive
Braintree, MA 02184
(781)356-9140 Fax: (781)356-9147
www.goldmanenvironmental.com

SITE LOCUS

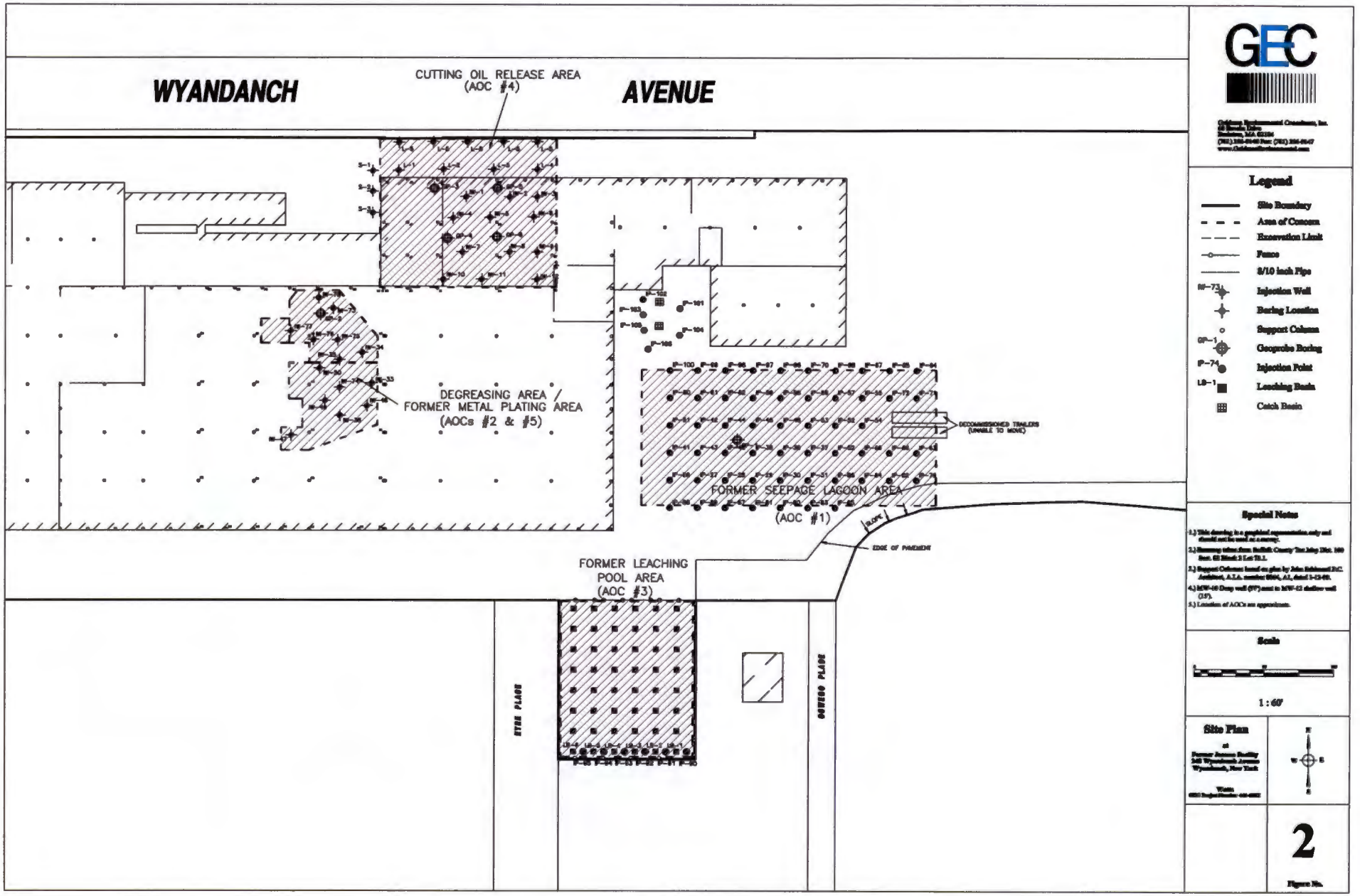
248 Wyandanch Avenue
Wyandanch, New York

GEC Project #: 444-5010

Figure 1

Scale
1 : 25,000

N


WYANDANCH
AVENUE
CUTTING OIL RELEASE AREA
(AOC #4)
DEGREASING AREA /
FORMER METAL PLATING AREA
(AOCs #2 & #5)
DECOMMISSIONED TRAILERS
(UNABLE TO MOVE)
FORMER SEEPAGE LAGOON AREA
(AOC #1)
SLOPE
EDGE OF PAVEMENT
FORMER LEACHING
POOL AREA
(AOC #3)
STEEL PLATE
CONCRETE PLATE
GEC
Legend
Site Boundary
Area of Concern
Excavation Limit
Fence
8/10 inch Pipe
Injection Well
Boring Location
Support Column
Geoprobe Boring
Injection Point
Leaching Basin
Catch Basin
Special Notes
Scale
1 : 60'
Site Plan
2
Figure No.

APPENDIX C

Health and Safety Plan

HEALTH AND SAFETY PLAN
GOLDMAN ENVIRONMENTAL CONSULTANTS

SITE DESCRIPTION

Date of Original Plan: 7/1/05 Project Number: 444-5010
Proposed Date of Work Ongoing

Site Name: Jameco Industries
Site Address: 248 Wyandanch Avenue
Wyandanch, NY

Site Conditions: Industrial facility with unpaved an paved areas.
Surrounding land use:

Entry Objectives: Site remediation and groundwater monitoring, also soil boring. Installation and soil sampling. Soil excavation, stockpiling and off-site disposal, injection, well installation and chemical injections.

Topography: Topography flat across site.

Site Sketch Attached: Yes [ ] No [X]

Is this a disposal site as defined by the Massachusetts DEP as an uncontrolled hazardous waste site under Superfund? Yes [X] No [ ]
NYSDEC controlled waste site

EMERGENCY INFORMATION

Nearest Phone & Location: Inside building, 516-643-3500
GEC Cell Phone: GEC staff cell phone
Nearest two-way radio: None

	Number	Location
Fire:	516-643-5300	Wyandanch Voluntary FD
Police:	516-854-8100	1st Precinct, Babylon
Ambulance:	911	Wyandanch FD
Hospital:	516-376-3000, 1000	Good Samaritan Hospital 1000 Montauk Highway West Islip, NY

Does hospital have chemical trauma capability? Yes [X] No [ ]

Directions to Hospital:

SEE ATTACHED DIRECTIONS AND MAP
(Last page of HASP)

ADDITIONAL IMPORTANT PHONE NUMBERS

Goldman Environmental Consultants	(781) 356-9140
DIGSAFE	(888) 344-7233
MADEP Emergency Spill Reporting	(617) 556-1133 or (888) 304-1133
National Response Center	(800) 424-8802
ATSDR	(404) 498-0110
Pesticide Information Service	(800) 858-7378
National Poison Control Center	(800) 222-1222
U. S. DOT	DAY: (202) 267-2675 or 800-424-8802

LEPC Contact: *Title:* _____

Phone Number:

Special Local Emergency Planning Committee Requirements (if any): _____

DIGSAFE INFORMATION

DIGSAFE CLEARS (day/date/time)	
DIGSAFE Ticket #	
Agencies Contacted	

PERSONAL PROTECTIVE EQUIPMENT

(The following level of personal protection will be used)

Tasks to be Performed	Level of Protection	Coverall	Gloves	Air Purification Cartridge
1. Sample collection, drilling, surveying	D	Cotton/ Tyvek	Latex/Viton	None
2. Upgrade provision as indicated by ambient air monitoring.	C	Cotton/ Tyvek	Latex/Viton	Organic

Additional Equipment	
Hard Hat	X**
Face Shield	
Safety Glasses	X*
Ear Protection	X**
Steel Toe Boots	X
Rubber Boots	
Safety Vest and Cones	X

Anticipated Monitoring	
Radiation Meter (A.3)	
Gas Chromatograph (A.4)	
TIP/HNU HW-101(10.2eV)(A.5)	
Mini RAE 2000 (10.6eV)(A.5)	X
Draegger Tubes	
Oxygen Meter	
OVA/FID	

Other: Steel-toe boots required during all site activities.

* = Face shield or safety glasses should be worn when applying decontaminants during windy conditions.

** = Hardhat and ear protection should be worn around heavy overhead equipment.

HAZARD DESCRIPTION

Heat (A.8)	X	Cold (A.9)		Noise (A.10)	X
Explosive (A.11)		Radiation (A.12)		Physical Hazard (A.13)	X
Oxygen Deficiency (A.14)		Underground Utilities	X	Overhead Utilities	X

Heavy Equipment	X	Ladders or Scaffolds		Traffic	X
Unguarded Floor/Ground Openings		Liquids in Open Containers, Ponds or Lagoons		Pressurized Air Lines	
Other					

HAZARD EVALUATION

Suspected Sources of Contamination:
Groundwater has been shown to contain volatile and metals compounds typical of foundry use. Liquid phase contaminants are not present on-site.

Respiratory Hazards:
The chemical contaminants detected on-site can represent an exposure hazard in concentrated form. Inhalation of petroleum vapors emitted from soils or groundwater is the primary respiratory hazard. During soil boring and well installation, air in the breathing zone will be monitored using PID calibrated to a benzene equivalent. Readings consistently above 5 ppm TIC threshold limit in the breathing zone will require an upgrade to level C protection. Soil samples collected during soil boring will also be screened with the PID for TICs. During sample collection, the PID will be used to monitor the breathing zone for TICs. Readings **consistently** above the 5 ppm TIC threshold limit will require an upgrade to Level C protection. If such a situation exists, personnel who have not been fit tested for work at Level C will remain upwind of the area, where TIC threshold cannot be exceeded. Transient exceedances above the 5 ppm TICs in the breathing zone will require Level D work stoppage until levels return to sub-threshold levels, after which work in Level D may resume.

Dermal Hazards:
Contact to skin during sample collection will be minimized as protective clothing (Cotton coveralls/Tyvek suits) will be worn by workers. Latex and nitrile gloves should provide sufficient protection from the dermal hazards. Good personal hygiene practices will be used.

Ingestion Hazards:
Ingestion of contaminated soil is considered unlikely as hand to mouth contact will be avoided during excavation and sampling activities. Good personal hygiene should be sufficient to prevent ingestion of contaminants.

Physical Hazards:
No site-specific physical hazards, other than those inherent with working near heavy equipment. No overhead utilities have been identified relating to work on this site.

DECONTAMINATION
(Step-by-Step Decontamination Procedures and Solutions)

Personal Protective Equipment (PPE):
Tyvek suits will be disposed as solid waste. All other PPE will be decontaminated according to procedures described below.

Sampling Equipment:
Scrubbed with soapy water, and then rinsed with tap water. If petroleum residues are evident on sampling equipment, scrub with soapy water followed by a methanol rinse followed by a DI rinse should be employed.

Other Equipment:
Do not anticipate the use of additional equipment

Disposal of waste clothing, decontamination solution, etc.:
Decon solutions will be allowed to evaporate; clothing will be discarded into the dumpster.

MSDS(s):
Methanol is attached.

WORK LIMITATIONS OR PRECAUTIONS

Describe limitations due to time of day, weather situations, if any:
All work is planned to take place outdoors. Work will continue despite inclimate weather (i.e. Rain), however, work will cease if lighting is present in the area. Site work will be stopped if any condition exists which makes work exceedingly difficult or dangerous.

Sample Preservatives:
Soil samples are to be placed in preserved or unpreserved containers, as appropriate, and immediately be placed in a cooler upon collection. Preserved samples are provided by the laboratory when necessary.

SIGNATURES

All undersigned personnel have read the above plan and are familiar with its provisions:

Name:	Signature:

Written by: _____ Date: _____

Revised by: _____ Date: _____

Approved by: _____ Date: _____

A.10
NOISE

Exposure Route or Cause

Compressors, machinery, and large equipment.

Suspected Site Specific Sources

_____

_____

Symptoms and Effects

Temporary or permanent hearing loss, aural pain, nausea, reduced muscular control (when exposures are severe), distraction, and interference with communication.

Measurement or Measure Devices

Sound level meter and octave band analyzer.

Prevention

a. Shielding or enclosure of source.
b. Distance/ isolation.
c. Substitution of equipment/machines generating less noise.

Personal Protection

Ear muffs, ear plugs, or noise-insulating earphone

Additional Comments

a. Use of earphones with communication built-in can improve coordination and warnings.
b. Use of earplugs must include consideration of potential indirect chemical exposures if the earplugs become contaminated.

Reference:

Martin, W. F., Lippit, J. M., Prothero, T. G., *Hazardous Waste Handbook for Health and Safety.* Butterworth Publishers, pp. 10-11, 1987. Last Revised: 6/29/89

A.13
PHYSICAL SAFETY HAZARDS

Exposure Route or Cause

Electrical hazards, sharp objects, slippery surfaces, steep grades, uneven terrain, fogged eyewear, bulky protective clothing.

Suspected Site Specific Sources

_____

_____

Symptoms and Effects

Electrical shock; slip, trip, fall resulting in cuts, broken bones, bruises, concussions, torn protective clothing.

Measurement or Measure Devices

a. Electricity meters – Ohm meter.
b. Visual inspection and monitoring.

Prevention

Identify physical hazards. Correct those which can be and rope or fence off others.

Personal Protection

a. Lighter protective clothing, better fitting clothing, hard hats, boots with good gripping soles.
b. Rubber or other non-conducting gloves, handgrips, etc.

Additional Comments

a. Particular care must be taken when using large equipment where overhead electrical wires are present.
b. Need to check and mark underground utilities if excavation is involved.
c. Stay clear of powerful heavy equipment.
d. Stay clear of excavated areas that are not shored up or properly graded.

APPENDIX D

GEC's QA/QC & SOPs

Standard Operating Procedure
Field Sampling Protocols
Quality Assurance/Quality Control

The purpose of the GEC QA/QC program is to generate analytical data that is of known and defensible quality. These procedures apply to all projects in which sampling is involved. QA/QC from one project is not transferable to another.

Decontamination

1) Decontamination should be performed on all reusable field sampling equipment and protective gear. Sampling equipment should be decontaminated before the collection of a sample and after sampling has been completed. Protective gear should be decontaminated after the collection of a sample.

2) It is necessary to use the following decontamination solutions in the field:

- Non-phosphate detergent plus tap water wash.
- Distilled/ deionized water rinse.
- 10% Nitric Acid rinse.*
- Methanol rinse, when sampling volatiles only.
- Acetone then hexane rinse.**
- Second distilled/ deionized water rinse. **

* Only if sample is to be analyzed for metals.
** Only if sample is to be analyzed for semi-volatile organics, PCBs or pesticides.

3) Sample bottles and sampling equipment should not be stored near gasoline, solvents, or other potential sources of contamination. If storage near gasoline, etc. is unavoidable, bottles and equipment should be sealed in containers or plastic.

4) Heavy equipment, including hand tools, should be cleaned by steam cleaning or manual scrubbing prior and subsequent to use in hazardous waste investigations.

Measures or Quality Control/Quality Assurance

1) Trip Blanks

- Trip blanks are used in order to detect additional sources of contamination that might affect analytical results. The following are potential sources of additional contamination:

  a. Sample containers,
  b. Contamination during shipment to and from the site,
  c. Ambient air contact with analytical instrumentation at the laboratory during analysis, or
  d. Laboratory reagent used in analytical procedures.

- One trip blank is required for every set of samples sent to the lab regardless of job size. Generally, the trip blank should be for VOCs. If, however, VOCs are not a parameter of the sampling round, consult the laboratory as to which parameter should have an associated trip blank.

- Trip blanks are to be kept with containers used in the sampling round at all times. More specifically, they should accompany the site-specific sampling containers from the time the containers leave the laboratory until they are returned for analysis.

- Obtain containers and trip blanks prepared specifically for each job from the laboratory. Return unused containers to the laboratory upon completion of a project.

2) Field Blanks

- Field blanks are used to indicate potential contamination contracted from ambient air or from sampling equipment. It also serves as a QA/QC for decontamination procedures.

- Collect one set of field blanks for every 20 samples per project. It is not necessary to take a field blank for jobs in which less than 10 samples are collected.

- Procedure

  a. Collect two sets of sample containers to cover all sampling parameters. One set will be full of analyte free water (obtain extra analyte free water to fill two VOA vials). The other set is empty.
  b. Go to the most contaminated area and run the water from the full containers, through the decontaminated sampling equipment and into the associated empty containers.
  c. Send to the lab for analysis.

- Use containers and field blanks prepared specifically for job.

3) Duplicate Samples

- Duplicate samples are collected in order to serve as a laboratory check. Therefore, it is important that the lab does not know which samples are to serve for this purpose.

- Frequency

  a. Obtain one (1) duplicate sample for every 10 samples of each matrix. If less than ten samples are collected of a given matrix, a duplicate must be collected anyway.
  b. If a total of less than 10 samples are collected, collect one (1) duplicate of the majority medium.
  c. If a total of less than five (5) samples are collected, it is not necessary to collect a duplicate sample.

* Note that the frequency as outlined here pertains to the number of samples collected per project, not per location of a given project.

- Procedures

The idea behind the duplicate sample is to collect two samples as close to identical as possible.

a. For Water:

Alternately fill containers for the same parameter with equal amounts of liquid per bailer. Fill duplicate VOC vials from the same bailer of liquid.

b. For Soil:

- VOC samples must be taken from the discreet sampling locations.
- For all other samples, mix the applicable soil in a decontaminated stainless steel or polyethylene bowl or tray. Then fill sample containers with the soil mix.
- When confronted with the option of collecting a water sample or a soil sample, choose the water sample.

- Labeling for the laboratory

  a. Label the containers normally and give the duplicate samples different reference numbers.
  b. Indicate the quantity of duplicates in the "special instructions" or "remarks" portion of the chain of custody and laboratory services sheet, however, do not indicate the reference numbers of the duplicates.
  c. Upon receipt of analytical results, contact the laboratory and convey all data pertaining to the duplicates for their QA/QC.

4) Background samples

- Background samples are taken only if it is required for comparison of site conditions to the surrounding environment. This is to be dictated by client needs on a site to site basis.

5) Performance Evaluation Samples

- The project manger should consider the use of the following performance evaluation samples on a periodic basis. Typically, these will be reserved for larger jobs:

  a. Laboratory performance evaluation samples

  - Collect duplicate samples and send to two different laboratories for comparison. Avoid using soil samples for this procedure.
  - Send a sample of known quantity and quality to the laboratory in order to determine laboratory performance. Such samples can be prepared by any laboratory.

  b. Gas chromatograph (GC) performance evaluation samples

  - Acquire a sample of known quantity and quality from a laboratory. Analyze the sample with the gas chromatograph in order to determine the integrity of GC results.

Field Sampling QA/QC

1) When sampling a well, collect VOA samples first and samples for other analytes last.

2) Start sampling at the presumed least contaminated areas, proceeding to the more contaminated areas.

3) Preservatives

- Consult the laboratory in order to determine which sampling parameters require preservatives. The laboratory will provide sampling containers specific for each job.
- It is necessary to fill the sample container when using preserved bottles; preservative is added with this assumption
- If samples are not collected correctly, they will not pass GEC QA/QC.

4) A chain-of-custody must accompany each set of samples from the job site to the laboratory. Be sure to identify the presence of trip blanks on the chain-of-custody sheets.

5) If possible, use the numbering system outlined on the attached sheet for identifying samples.

Ordering Sample Containers

1) Pre-plan sampling strategy to determine the sample parameters, the number of sample points including QA/QC samples, and the matrix of the given sample points.

2) Call laboratory and tell them:

   - Sample parameters,
   - Number of samples to be collected,
   - The number of container sets needed for trip blanks, field blanks, and duplicates, and
   - The matrix of each sample to be collected.

3) Sample containers should be ordered specifically for each job. Any sample containers unused at the end of the job should be sent back to the laboratory.

Conclusions

1) Pre-planning is crucial.

2) Keep open communication with the laboratory on all matters.

3) If you make a mistake in sampling collection, accept it, and retake the necessary samples.

Standard Operating Procedure
Completion of Field Notes

This protocol is designed to ensure that proper techniques are used during the collection and preparation of field notes. Field notes are collected in field notebooks, which are often the only source of "first hand" information regarding activities that were conducted at a site. Field notes may be called into a court of law. Therefore, it is imperative that field notes be maintained in a thorough and proper manner.

All field notes should be completed in a waterproof notebook and should **not** be completed on loose sheets of paper that might get lost or misplaced. All field notes should be completed in permanent ink, rather than pencil and should be neat and orderly. Use of a pencil for collection of field notes is acceptable only in extremely poor weather conditions. All field notes taken during the field activities should be photocopied immediately after completion of the activities and placed in the project file to preserve a permanent record of the activities. In addition, when conducting field activities, the following information should also be collected:

- date and time of the field activities (both the start and the finish time) including the time that certain "milestones" are achieved;
- weather conditions on the day of the field activities (in some cases it may also be appropriate to include the weather conditions for the previous day, such as when a heavy snow fall has occurred);
- names and affiliations of all personnel involved in the field activities;
- purpose of the field activities (e.g., groundwater sampling, site inspection, UST removal);

The field notes should accurately reflect a chronology of the activities that were conducted at the site. The following are examples of information that should be included in the field notes, but might not be applicable in all situations:

- the time that subcontractors, clients, police details, consultants or other persons arrived and left the site;
- a general site sketch indicating the approximate location of groundwater observation wells to be sampled, borings to be installed, test pits to be performed, utilities to be located or suspected underground storage tanks, abutters (Note: site sketches should be included even when a site plan has been provided. If a site sketch is not feasible, the site plan that is being used to locate structures should be referenced);
- reference to any other documents that are completed during the course of the site activities that may include additional information not included in the field book, including: Chain of Custody forms; Test Boring Reports; Test Pit Reports; Manifests and calibration log books;
- specific site sketch indicating areas where snow cover, vehicles, debris or other obstructions may have limited site inspection, sampling or otherwise prohibited the completion of activities;
- where and when field instruments (e.g., PID, OVA) are being used, all calibration and sampling/screening conditions should be logged;
- any unsafe conditions observed by GEC personnel and presented to on-site personnel or subcontractors;
- observations made during site inspections or field activities including, but not limited to: the locations of stained soils or stressed vegetation; noticeable odors; the presence of nonaqueous-phase liquid.

It is the responsibility of each GEC employee to maintain his/her own field book. All field books are the property of GEC and in the event that the employee terminates employment with GEC the field books are to remain at GEC.

Standard Operating Procedure
Decontamination Procedures for Field Equipment

All field equipment (bailers, well sounder, gloves, etc.) must be decontaminated before each use, between samples and before it is returned to the equipment room. Decontamination procedures vary for the type of analyses to be performed. The following basic procedures should always be used to decontaminate equipment regardless of the type of analysis:

1) Scrub equipment with soapy water (Liquinox, Alconox, trisodiumphosphate or equivalent).

2) Rinse with tap water, if available.

3) Rinse with deionized water from green spray bottle.

For Metals, perform the following additional procedures:

4) Rinse with 10% nitric acid (HNO_3).

5) Final rinse with deionized water.

For base/neutral/acid extractables, PCB's and pesticides perform the following, additional procedures:

4) Rinse with acetone and let dry.

5) Rinse with hexane and let dry.

6) Final rinse with deionized water.

For Volatile Organics and all other analyses, perform the following additional procedures:

4) Rinse with methanol.

5) Final rinse with deionized water

NOTE: When sampling for more than one of the above types of analyses, use the protocol for volatile organics last.
Solvent use should be gauged carefully so that a minimal amount of solvent is left after use. Allow any remaining solvent to evaporate.

Standard Operating Procedure
Soil Classification & Boring Log Preparation

This protocol is designed to ensure that proper techniques are used during the classification of soil samples and preparation of boring logs. Because the boring log is the closest thing to field notes and probably the only reference to the subsurface condition, which will be read, it is important to make them very complete and organized. To do this, boring logs must utilize understandable abbreviations and uniform presentation. The most important elements of each soil sample description are color, dominant and secondary particle size(s), grain size gradation/sorting, sample density, sample moisture content and special conditions. The following steps are used to describe soil samples. Note: When sampling with a split-spoon, if a sample is not obtained from a given interval, auger cuttings may be used for that interval, but only after the auger penetration has stopped and the auger has turned for at least 30 seconds. Use of auger cuttings must be *noted* and must be done with care. Augering characteristics, such as the following, should also be noted; smooth, rough or bumpy augering, rate of penetration, etc.

This boring log protocol should be used in conjunction with the attached classification aids sheet and the following soil classification steps.

1. When sampling with a split-spoon, determine and record the length of split-spoon penetration; normally 24 inches, but might be less in very dense soils, bouldery soils or at the base of the boring just above bedrock. During penetration, count and record the number of blows for each six inches of penetration. Also note the weight of the drive hammer, 140 or 300 pounds. Sampling for a given interval may be stopped when 100 blows have occurred and penetration is less than six inches.
2. When sampling with GeoProbe equipment, determine and record the length of the sampler; it may be 24" to 60" in length. During penetration, note penetration characteristics such as rapid, slow, smooth, variable, etc.
3. When the sampler is opened collect a sample for headspace screening. Measure and record the total amount of sample recovery or the interval of sample material starting from the top of the sample. Note: Any material that may not be part of the representative sample (i.e., such as loose material that may have fallen into the borehole during augering or sample extraction) should noted in the sample description as debris or fall-in. The first section of material in each split-spoon sample should start with "0". The final number in a sample description should equal the length of the recovered sample. Open a fresh surface by scraping away a little soil along the length of the sample. This is needed to accurately determine sample characteristics.
4. From the fresh sample surface, determine sample *color*. This needs to be done while the sample still has its natural moisture content. Color descriptions may vary from person to person. Hyphenated color descriptions are very acceptable, but the dominant color follows the hyphen (e.g., red-brown, reddish-brown, blue-gray, etc.). Color will be the first descriptor.
5. Determine the *principal material* (silt, sand, gravel, etc) and size of that material (fine, medium, etc) comprising the sample. The principal material comprises approximately 50% of the sample. When writing a sample description, CAPITALIZE the principal material. (Refer to the attached classification aid sheet as guide.)

    - For fine-grained samples, it may be difficulty to state only one principal component. Join component materials with the word 'and'.
    - Most components will need a size modifier. When sample descriptions are complex and lengthy, use of appropriate abbreviations throughout the description are recommended (e.g.; f, m or c for fine, medium or coarse).

6. Determine the *secondary material*. There are usually three main materials comprising a sample. The volume of secondary materials is indicated by a modifying word such as trace (tr), little (ltl), etc. Refer to the classification aid sheet for a full list and the volume percent range each modifying descriptor indicates.

7. The following determinations are important primarily when they represent extreme ends of the scale especially when permeability is being estimated.

   - *Gradation* or *Sorting*; these terms describe the variation in grain size within the sample. Most samples of New England soils are poorly to extremely poorly sorted and contain a wide variety of grain sizes mixed together. Notable differences like beach sand contain primarily one grain size.
   - Particle *angularity* is difficult to evaluate with small particle size, but should be evaluated and noted if particles primarily lie at the extremes such as very angular or well rounded.
   - *Plasticity* and/or *consistency* of fines are determined by touching, feeling or molding. The implications of these attributes relate primarily to the strength of the material, but also indicate the clay content of the sample.

8. *Relative density* is another factor in estimating the permeability of a sample. Blow counts per foot or penetration rate are used to estimate density. For split-spoon sampling, ASTM 1586-84 calls for using blow from 6 to 18 inches as the one-foot interval. The blow count number relates to terms ranging from 'very loose' to 'very dense'. Refer to the classification aid sheet for a full list of relative densities. For GeoProbe samples, the relative rate of penetration should be noted, but does not relate directly to relative density.

9. Determining *moisture content* is important in estimating where the current seasonal water table is below grade and where to place the mid-point of the well screen. Moisture terms such as dry, damp and moist are typical descriptors with a full list and their meanings listed on the classification aid sheet. Dry but rust stained soils above the current water table are notable in estimating the upper range of the water table fluctuation, especially in how it relates to the top of the screen.

10. Special Conditions are an important determination to make and include olfactory and visual descriptors such as gasoline or petroleum odor, solvent odor, oily sheen, blue stuff, etc. You may not be able to pin point the exact material, but something un-natural or extreme in appearance or smell should be noted. When investigating for a specific substance such as petroleum, a special condition might be a lack of the telltale odor (no petroleum odor). This should be noted in your field book, but should not be recorded in the boring log.

11. Sample descriptions should be ordered as a uniform list with descriptors separated by commas as follows: Color, PRINCIPAL MATERIAL, some secondary material, trace tertiary material, (gradation/sorting, angularity, plasticity, etc as needed), relative density, moisture content, special conditions

The following are examples of sample descriptions:

- 0-4" Drk brown, TOP SOIL
  4-11" Tan, m-c. SAND, trace f gravel, trace silt, poorly sorted, med. dense, damp.
  11-23" Drk. Tan, c SAND and f GRAVEL, trace f sand, well sorted, loose, wet, slight sheen, no petroleum odor (this combination might signify an old spill)

- 0-18" Gray-tan, SILT, little-some f sand, tr-little gravel, very angular sand, poor sorting, dense, damp to 0-14", wet from 14-18".

Standard Operating Procedure
Boring/Well Installation

This protocol is designed to insure that proper techniques are used, safety is considered, and quality assurance maintained during soil boring and well installation.

- DIGSAFE, municipalities and the owner are contacted prior to any soil boring or well installation to minimize chances of damaging underground utilities (DIGSAFE contacts utility companies to mark the location of utilities to the site). The Geologist or Inspector surveys the site visually for markings delineating the location of underground utilities. If warranted, the inspector modifies the drilling program to compensate for field conditions.

- The Geologist or Inspector continuously monitors all drilling activities and is responsible for maintaining independent field notes, well logs and ensuring that proper procedures are followed.

- Drilling equipment is steam cleaned prior to use in any boring and between borings (if necessary), to minimize potential cross contamination. At a minimum the following pieces of equipment are steam cleaned: augers, cutting heads, samplers, drill rods, and forks. The working end of the drill rig is also cleaned and inspected for evidence of hydraulic fluid or diesel fuel leaks.

- Subsurface soil samples are collected at a minimum of five foot intervals in accordance with standard ASTM methods for split spoon sampling. After logging soil characteristics, samples are collected. Two samples are placed in clean jars with an aluminum bladder below the lid for head space screening. Soil sample screening is performed in accordance with the GEC Jar Headspace Screening procedure. Samples with elevated readings (< 10 ppm) soil are quickly transferred into two clean VOA vials with Teflon liners. The vial is half filled and soil particles are removed from the lip of the vial to assure a proper seal with the lid. All samples are labeled in accordance with the GEC standard labeling identification system and handled/stored in compliance with USEPA protocols.

- The split spoon sampler is decontaminated in accordance with GEC's Decontamination Protocol after sample retrieval and it is steam cleaned between borings. The Geologist may increase the frequency of steam cleaning as necessary.

- All cuttings from drilling remain on the subject property. If cuttings are designated as uncontaminated fill, via headspace screening, and the boring is not completed as a monitoring well the cuttings are used as backfill.

- Monitoring well screens are set to depths adequate for the required sampling. Monitoring wells are typically constructed with a silica sand filter surrounding and extending a few feet above the screen. The screen extends at least one to two feet above groundwater. The riser extends from the top of the screen to ground level, has a bentonite pellet seal above the screened interval, a cement seal and protective cover at the surface. No glues or solvents are employed in the well construction.

- Soil Logs are to be maintained by the Geologist and should contain the following:
  - Date and Location of boring/well
  - Drilling contractor
  - Job number
  - Depth of sampling
  - Boring number
  - Depth to well point.
  - Soil description includes; soil colors, grain size from greatest percentage to lowest, rock fragments, obvious fill constituents, staining, and odor if obvious.
  - Changes in soil strata and elevation of the water table are also noted.

Standard Operating Procedure
Soil Sampling via Test Boring

Soil samples collected during the performance of test borings will, in most cases, either involve collection of "grab" samples directly from the auger flights, or "undisturbed" samples with an appropriate sampler. Clearly, soil samples can be most easily recovered directly from the auger flights as the soil cuttings are brought to the surface, however, it should be understood that this technique does not provide an undisturbed sample and the actual depth from which the sample is collected is not known. The preferable method of sample collection for most purposes utilizes a split barrel core (or split spoon) sampler, which can be used to obtain samples of unconsolidated material from discrete depths with reasonable accuracy.

Note: The top few inches of the split spoon sample may include displaced cuttings, which managed to get inside the hollow auger. Field personnel should be aware of this and exclude this portion of the spoon contents from the collected sample.

Auger Samples:

1. Samples are collected off the auger flight using the actual sample container or a clean instrument such as a spoon or spatula. Care must be taken when collecting the sample from the augers to avoid material, which is obviously not from the sampling horizon of interest (i.e. pavement in soil zones which are definitely not fill). Standard Operating Procedures which may be specific to the sample containers and the intended purpose of the sample (i.e. chemical analyses, PID screening) should be followed. Collect at least one sample in a clean 8 oz. glass jar (half filled) for PID screening and should be sealed and treated in an appropriate manner. Collect a second sample off the auger insuring that both samples are as close to identical in content samples as possible. This second sample should be used in describing the sediment characteristics.

2. Make a note of the appropriate depth of the augers in order to approximate depth of sample. With a sharp writing instrument, or permanent marker record the project number, boring number, sample number, estimated depth of sample and sample method (e.g. AUG for auger samples) on the top of the jar first jar. This jar should then be stored in a safe container (cooler or cardboard box) for later transport or set aside for PID screening.

3. Carefully examine the contents of the second jar to determine the lithology, i.e. the mineralogy, texture, sorting, moisture and color characteristics of the sediment sample. A complete and accurate description of the sediment sample should be recorded on the Test Boring Report, including the sediment characteristics, depth from which sample was recovered, collection method, and any notable features associated with the sample. Include the results of PID screening on the Test Boring Report.

4. Once a complete and accurate record of the sediment characteristics has been recorded on the Test Boring Report, the second soil sample may be discarded and the glass jar rinsed with water and dried. This glass jar may be reused to contain subsequent samples for sample characterization. Glass jars used for any purpose other than sediment description should not be reused.

Split-Spoon Samples:

1. Upon retrieving the split spoon, examine the tip of the sampler; ensuring that any material collected in the tip of the sampler is not discarded. Examine the spoon to determine if any well cuttings were inadvertently collected in the sampler and remove these cuttings if possible. Using a clean spoon or spatula, prepare a head-space sample by half filling a clean 8 oz. glass jar with three to five sub-samples which represent the spoon contents. Quickly cover the top of the jar with one or two sheets of clean aluminum foil and subsequently apply the screw cap to tightly seal the jar.

2. After opening the sampler and prepareing a head-space sample, examine the spoon contents for visually notable features (i.e. lithology, mineralogy, texture, sorting, packing, stratigraphic horizons, color changes, staining). Make note of visually notable features in field notes along with the boring number and sample depth.

2. With a sharp writing instrument, or permanent marker record the project number, boring number, sample number, estimated depth of sample, estimated recovery, and sample method (e.g. SS for split spoon) on the top of the jar first jar. This same information, as well as the depth of penetration, sample recovery and blow counts per six inches, should be recorded on the Test Boring Report. Collect a second sample from the sampler insuring that both samples are as close to identical samples as possible. This second sample should be used in classifying the sediment characteristics of the sample. In the event that two or stratigraphic horizons are observed, it may be desirable to collect additional samples from each of these horizons. The sampler should be thoroughly examined and rinsed to ensure that potential contaminants do not remain on the spoon prior to being reassembled and returned to the driller.

3. Carefully examine the contents of the second jar to determine the lithology, mineralogy, texture, sorting, and packing (if possible) characteristics of the sediment sample. A complete and accurate description of the sediment sample should be recorded on the Test Boring Report, including the sediment characteristics, depth from which sample was recovered, collection method, and any notable features associated with the sample.

4. Once a complete and accurate record of the sediment characteristics has been recorded on the Test Boring Report, the second soil may be discarded and the glass jar rinsed with water and dried. This glass jar may be reused to contain subsequent samples for sample characterization. Glass jars used for any purpose other than sediment description should not be reused.

Upon completion of test boring, samples should be packed in a cooler or cardboard box, or other appropriate container, for transport. Prior to transportation, care should be taken to insure that the glass jars are tightly sealed, to prevent spillage of contents, and that the jars will not be broken during the transportation. The box should be labeled on either of the end with the project number, location, date, boring numbers, and the name of the inspector. .

Standard Operating Procedure
Head Space Screening of Soil Samples
with a Thermo-Environmental 580 EZ

Volatile organic compounds (VOCs) adsorbed to soil volatilize from the soil particles into the static headspace created within a container and the soil in direct proportion to the concentration of VOCs adsorbed to the soil. The concentration of VOCs in the headspace can be determined with the 580 EZ, thus providing a relative indication of the concentration of VOCs in the soil.

Screening of soil samples for VOCs via the static headspace method involves seven steps, outlined below.

1) Collect two soil samples and place each in a separate, 8 ounce jar. One jar will be used as a duplicate for quality assurance purposes.

2) Place a layer of aluminum foil over the jar openings to form a seal. Screw the lids onto the jars, covering the aluminum foil.

3) Shake the jars for approximately 15 seconds and then allow the jar to equilibrate to room temperature (60^{o}C to 70^{o}C).

4) Prepare the 580 EZ for operation in accordance with the applicable standard operating procedure.

5) Remove the metal lid from the jar, puncture the aluminum foil and record the highest reading recorded by the 580 EZ.

6) Compare the results of the screening for the sample and the duplicate. A difference of up to 20% between the sample and duplicate is acceptable.

Depending on the situation and applicable criteria, the screening procedure outlined above may indicate that further analysis is warranted for a given sample. If so, collect soil samples in accordance with the applicable standard operating procedures.

Standard Operating Procedure
Observation Well Development

Subsequent to well installation, and prior to sampling or surveying, an observation well must be thoroughly developed. Well development is critical to the success and integrity of later sampling activities and to the life span of the well. Primarily, two techniques are appropriate for the needs of site investigation and groundwater monitoring. Both methods involve reversals, or surges, in flow to prevent clogging of the filter pack which is common where flow is continuous in one direction. Either a decontaminated pump or bailer or both may be used to surge the well and to remove water which may have been in contact with the drilling apparatus. If a pump is used, a source of clean water is necessary to pump down the well. Water should be alternately pumped out of and into the well until water removed is essentially clear, or of constant minimal turbidity. If the well is to be developed with a bailer the following steps will be performed.

1) Gauge the depth to water/product and the depth to the bottom of the well

2) Based on these measurements calculate the volume of water equal to one well volume.

3) Using a precleaned bailer and clean string, repeatedly plunge the filled bailer up and down within the well and periodically remove the water from the well. Water removed from the well should be discarded in a manner consistent with environmentally sound practices.

4) Periodically (approximately once every five bails) dispense the contents of the bailer into a clean one-liter glass container. Using the electronic TLC probe, determine the temperature and conductivity of the water being removed from the well. Once the temperature and conductivity have been determined discard the contents of the jar appropriately.

5) Steps 3 and 4 should be repeated until the following three conditions have been met: 1) three well volumes of water have been removed from the well; 2) temperature and conductivity levels do not vary more than approximately 10% between measurements, and 3) groundwater being removed from the well has a consistent minimal turbidity.

Standard Operating Procedure
Observation Well Sampling
Using a Low Flow Sampler

This protocol is designed to ensure that proper techniques are used, safety is considered, and quality assurance maintained during the performance of observation well sampling using low-flow techniques. A GEC representative is assigned to oversee and/or perform all observation well sampling for the project. The duties of the representative are to ensure that the scope of work is followed.

Sampling of groundwater observation wells using low-flow techniques is the primary means by which the chemical characteristics of groundwater can be determined in an accurate, representative, and repeatable manner. Therefore, it is imperative that care be taken in the development and subsequent sampling of observation wells. Low-flow sampling is considered an improvement over other techniques (e.g., bailers) that may unnecessarily agitate the sediment, enhance colloidal transport, and otherwise misrepresent contaminant levels.

Procedures for performance of groundwater observation well evacuation and sampling using low-flow techniques are outlined in the following paragraphs:

Well Evacuation and Sampling:

1) Prior to initiating any work the Health and Safety Plan, developed for the specific site activities, should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of the sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the sampling will dress with protective equipment appropriate for the anticipated conditions.

2) Decontaminate all equipment to be used in the performance of the activities in accordance with the protocol for decontamination. Decontamination should at least be performed by alternately rinsing all equipment with methanol and distilled water and vigorously scrubbing the equipment with a clean brush.

3) To the extent that contamination may be known at a given site, observation wells should be sampled in an order from "least contaminated" to "most contaminated".

4) Screen the well headspace with a photoionization detector (PID) or other appropriate instrumentation to confirm that concentrations of potential contaminants are within acceptable limits.

5) Test the well for accumulation of non-aqueous phase product (NAPL) using a pre-cleaned interface probe or transparent disposable bailer. If present, collect a sample of the NAPL and place in an appropriate sample container. This sample should be kept away from other samples.

6) Measure and record the depth to NAPL(if present) and depth to water. If NAPL is present, sampling for dissolved-phase contaminants should generally not be performed. In addition, if sampling is to be performed, appropriate measures should be taken to assure that any water removed from a contaminated well is disposed appropriately.

7) Historic measurements should be utilized to determine the total depths of wells. If a historic measurement is not available, total depth of the well should be gauged to determine the appropriate placement of the variable-speed low-flow sampling pump (pump). Gently lower the pump into the well to a point approximately half way between the top of the measured water elevation and the bottom of the well. If the water level in the well is situated above the top of the screened interval then the pump should be located half way between the top and the bottom of the screened interval. Tie the pump off at the appropriate depth to eliminate further disturbance of the water column.

8) Begin pumping the well at a rate no greater than 0.5 liters per minute (roughly 0.13 gallons or approximately two cups per minute). Provided there is ample room to measure depth to water after placement of the pump down the well, water levels should be monitored on a continuous basis. Drawdown of the water column should not exceed 0.1 meters. The pumping rate should be adjusted accordingly, based on water column drawdown.

If the water level drops more than 0.1 meters, the pumping rate should be decreased.

9) Continuously monitor groundwater parameters including pH, temperature, specific conductance and dissolved oxygen (DO). In some situations it may also be appropriate to monitor turbidity. Record geochemical parameters at the onset of purging, five minutes into purging, and at roughly one-minute intervals thereafter. In some cases longer intervals may be appropriate.

10) Purging should continue until geochemical parameters have stabilized. Stabilization shall be considered to have occurred when three consecutive measurements do not vary more than approximately 20% and visual and olfactory characteristics of the purged water do not change appreciably.

11) Record final geochemical parameters.

Well Sampling:

1) Samples at any given well will be collected in order of decreasing order of sensitivity to volatilization (i.e. VOC, total organic carbon, semi-volatile organics (BNA), ammonia, PCBs, pesticides, oil and grease, phenols, cyanide, sulfate and chloride, nitrate and ammonia, metals, and radionuclides)

2) Carefully fill sample containers directly from the pump discharge to the appropriately preserved, pre-labeled containers. Check that the sample containers seal properly and that the cap is sealed tightly. Record applicable information in the field logbook and complete all chain-of-custody documents.

Following Well Sampling

1) Gauge depth to bottom of well.

2) Decontaminate all equipment utilized during well purging and sampling, prior to gauging/sampling next well.

Standard Operating Procedure
Survey of Observation Wells and
Significant Features

The primary purpose of surveying is to provide a permanent record of the location of significant features and to develop plans, including those of the groundwater surface. All observation wells and water table elevations must be surveyed in the field. Surveying includes the measurement of both location and elevation of groundwater and other important features. Accurate measurements are important in all cases, but are paramount in areas where wells may be difficult to locate in the future, or where the groundwater gradient may be particularly shallow. It is recognized that the survey of observation wells by GEC personnel will not, and should neither be represented nor construed to be, as accurate as a survey, which would be prepared by a Registered Land Surveyor.

NOTE: A field book, denoting the approximate locations of major features, is important for the purpose of detailing the survey measurements made in the field. In the absence of sophisticated surveying equipment, the horizontal location of wells and other major features is most effectively accomplished through either taping the distance from wells to major features of known location, or by using stadia.

Surveying should be accomplished through the following steps.

1) Choose one or two benchmark, which are, and will remain, stationary for a reasonable period of time (years) and mark the spot with paint. Do not use road or gate boxes as a benchmark. Good benchmarks include such things as concrete pads for transformers, foundation corners, hydrants, street light bases, or other "permanent" unique non-movable objects or locations. Field notes should include a benchmark description which should be transferred to site diagrams and boring logs.
   (**Note**: In the event that a survey point, such as a monitoring well) needs to be relocated due to over-paving or vegetal growth) establishing two easily accessible benchmarks is very helpful.)

2) Set up the leveling instrument and the tripod at a location higher than the benchmark and with a direct line of sight to the benchmark, as well as several of the features to be surveyed. Ideally the leveling instrument should be set up in an area where the chance of the instrument being disturbed by pedestrian or vehicular traffic is minimal. Once set-up, the leveling instrument should not be left unattended.

3) The leveling instrument should be accurately leveled by first extending and firmly tightening the stand's legs. The legs should then be maneuvered such that the leveling instrument is roughly level.

4) Once roughly leveled, precise leveling should be accomplished using the leveling features on the survey instrument itself. Accuracy of the leveling instrument should be confirmed by viewing the "leveling bubble" as the survey instrument is rotated in at least three different azimuth directions.

5) If the instrument is moved after leveling, no matter how slightly and no matter when in the surveying process, the instrument will need to be releveled and the survey redone.

6) The leveling instrument cross hairs should be focused, using the rear focusing ring, such that they form thin and well defined lines when observed through the viewfinder.

7) Using the rod tripod or a rodman, place the base of the stadia rod on the benchmark and extend the rod vertically as needed. It is often helpful to use a pocket transit (Brunton Compass) and assistance from a distant observer (the person manning the leveling instrument) to ensure that the stadia is vertical.

8) Sight with the instrument to the rod, focus the rod using the front focusing knob and record the height of the instrument (Height), i.e. footage mark as viewed at the cross hairs to the nearest 0.01-foot. Note: some leveling instruments are also equipped with distance measuring cross hairs. These usually appear as smaller cross hairs equidistant above and below the primary cross hairs. If these secondary cross hairs are present on the instrument being used, the height, as viewed through these secondary cross hairs should also be recorded as a means of a) determining the instrument to rod-location distance ((High – Low) x 100) and b) double checking or confirming primary measurements i.e. the primary measurement should be the mean of the two secondary measurements. Also, record the azimuth of the instrument.

9) At each well location, choose **and** mark a point on the well, preferably the highest point on the PVC riser, to place the stadia rod. If the stadia rod will not fit in the road box, choose **and** mark a point on the road box to place the rod. The point that is marked for the elevation survey MUST also be used for well gauging. Place the base of the rod on the designated point and extend the rod vertically. Measuring point location must also be recorded in boring/monitoring well logs.

10) Sight with the instrument to the rod and record the footage in the same manner as listed in Step 8.

11) Repeat Steps 8 and 9 for all of the wells and significant features, which can be viewed from one fixed location. Note: for larger sites it may be necessary to "link" several sightings in series in order to collect information for all features.

12) At site where "linkage" is necessary, the second or more set-ups will require sighting back at one or preferably two features surveyed during the initial instrument set-up. Accurate instrument leveling is required for each set-up.

13) If the true elevation of the benchmark is not known, the benchmark should be assigned an arbitrary elevation of 100.00 feet. All other elevations should be calculated relative to the true or arbitrary benchmark elevation.

14) If several locations are linked the survey should be completed such that new measuring points are measured from multiple previous locations. The results of the survey should then be calculated and elevation measurements from duplicate sampling points compared. If comparison of duplicate measuring points indicates measurement error the site should be resurveyed.

15) For all sites with multiple instrument set-ups, GEC field personal should "close the loop" on the survey. To 'close the loop', the final instrument set-up should include a resurvey of the original benchmark. Before leaving the site the survey team should calculate the elevations of all "turning points" or temporary bench marks (each survey point used to carry the survey forward) and the elevation of the original benchmark as determined by the instrument survey. If the elevation of the original bench mark is different from the true or assumed elevation by more than $1/100^{th}$ of a foot, the elevation calculations should be checked and/or the full survey be re-done.

Standard Operating Procedure
Sample Preservation and Chain of Custody

This protocol is designed to ensure that proper techniques are employed in the preservation and chain-of custody of samples collected for laboratory analyses or for screening. This Protocol is intended to be consistent with Massachusetts Publication #WSC-310-91 (Standard References for Monitoring Wells), and 40 CFR 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

The results of screening and/or laboratory analysis of solid, liquid or gaseous media constitute the basis of evaluation of the majority of the disposal sites under investigation. It is therefore imperative that the preservation of the samples be appropriate to the media being analyzed as well as the analysis which is being performed. In addition, the integrity of the sample is dependent upon the premise that a clear chain of responsibility for the sample integrity has been maintained. Without this "Chain-of-Custody", the integrity of the laboratory results may inevitably come into question.

The preservation and Chain-of-Custody (COC) protocols outlined in the following paragraphs are not intended to be all inclusive, and this protocol is written with the understanding that the sampling of certain media or analyses may require specific sample preservation. This protocol is, however, intended to cover the majority of the media and analyses performed as well as the COC procedures employed at the majority of waste disposal sites.

A COC program must be followed during sampling and handling activities from the field through laboratory operations. This program is designed to assure that each sample is accounted for at all times. Field data sheets, COC records, and sample labels must also be completed by the appropriate sampling and laboratory personnel for each sample. The objective of the sample custody identification and control system is to assure, to the extent practical, that:

- all samples are uniquely identified;
- the correct samples are analyzed for the correct parameters and are traceable through their records;
- important sample characteristics are preserved;
- samples are protected from damage or loss;
- any processing of samples (e.g., filtration, preservation) is documented; and
- client confidentially is maintained.

A sample is considered under a COC if it meets all of the following criteria:

- the sample is in your custody,
- the sample is in your view, after being in your possession,
- the sample is in your possession and then you locked it up to prevent tampering, and
- the sample is in a designated, secured area.

The following paragraphs outline GEC's preservation and COC protocol.

1) Prior to initiating any work, the Health and Safety Plan developed for the specific site activities, should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of any sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the excavations will dress with protective equipment appropriate for the anticipated conditions.

2) Sample integrity is assured by use of containers appropriate to both the matrix to be sampled and the analytes of interest. Sample containers must be prepared in the laboratory in a manner consistent with USEPA protocols. Unless the proper sample bottle preparation and sample preservation measures are taken in the field, sample composition can be altered by contamination, degradation, biological transformation, chemical interaction, and other factors during the time between sample collection and analysis. Prior to sampling GEC personnel will ensure that the sample containers obtained from either a laboratory or a commercial supplier have been prepared in accordance with DEP and EPA protocols. Sample containers are to be used once and discarded. Under no circumstance should a soil, water or

gaseous media which has been collected for analysis be placed in a previously used sample container unless that container has been recleaned and preserved by a certified laboratory.

As part of the COC protocol, sample containers should have prepared labels for each sample. The label should include sample identification, date and time of collection, sample parameters to be analyzed, any preservatives used, and the name of the sample collector.

Upon collection of the sample(s), documentation of chain of custody (i.e. COC form) should be initiated and should include at least the following:

- date and time of sampling;
- sampling locations;
- sample bottle identification;
- and specific sample acquisition measures.

The COC and sample description requires:

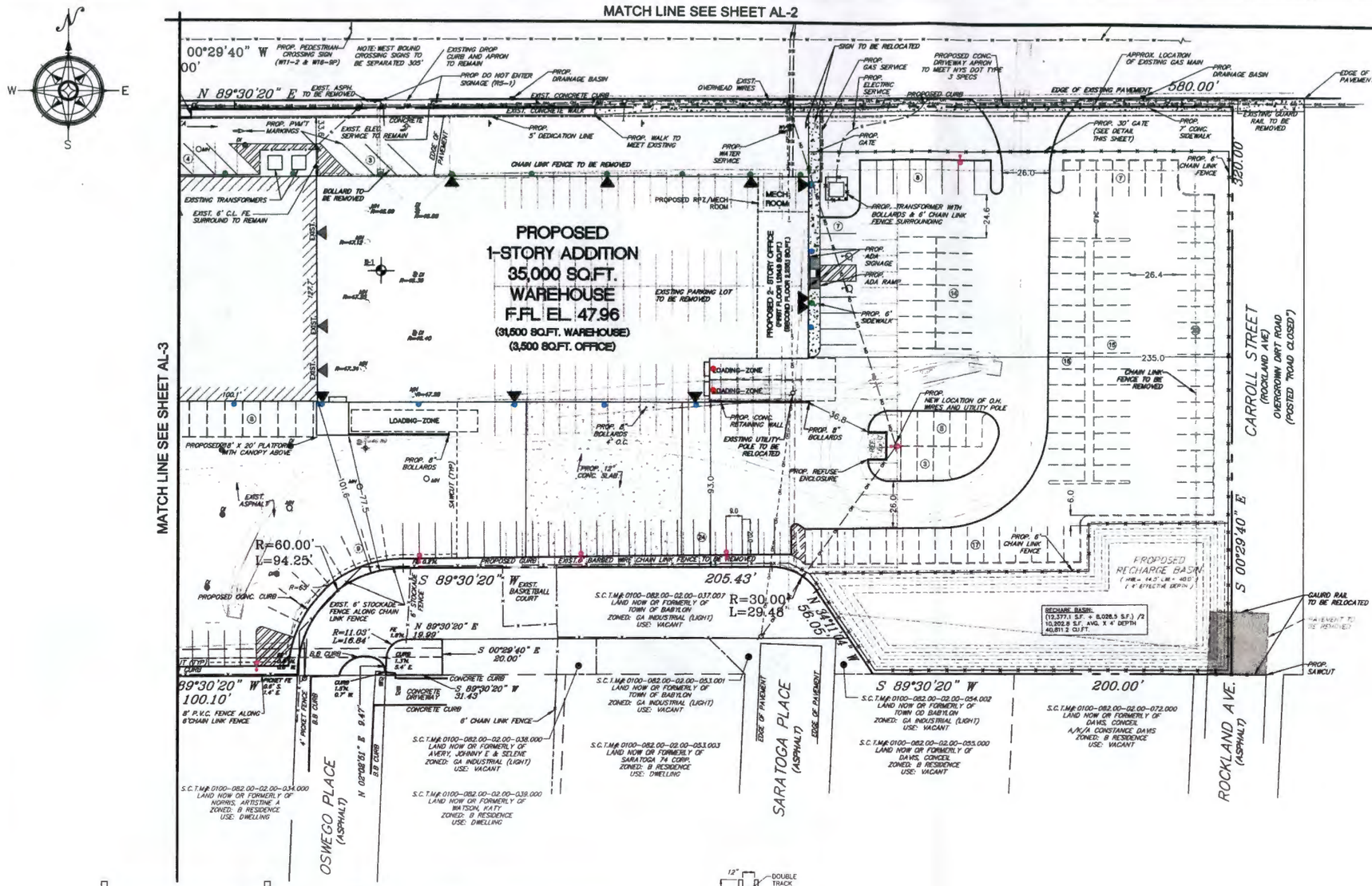
- a unique identification of each sample;
- the name(s), address(es) and telephone number(s) of the sampler(s) and the person(s) shipping the samples and all subsequent transfers of custody;
- the type and method of analyses requested;
- the date and time of sample collection and transfer of custody; and the name(s) of those responsible for receiving the samples at the laboratory.

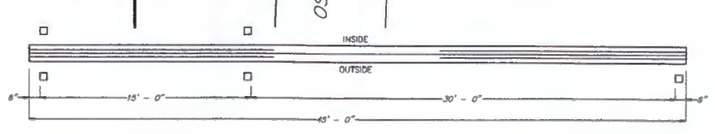
3) In some cases, field filtration of samples may be required. Information regarding the method of filtration should be determined in advance and communicated to the laboratory. Filtering of any sample collected for organic analysis should be avoided. Decanting of a liquid media is a preferred method for the removal of particulate matter. When field filtering is required, an appropriate filter medium must be selected to avoid potential sample contamination during the filtering process.

4) Sample holding times are specified for the initiation of chemical analyses, usually beginning at the time of sample collection but occasionally beginning at the time of sample receipt at the laboratory. This determination must be made prior to sampling to allow proper logistical planning for sample shipments. Holding times also vary with the regulatory basis under sampling take place in order to properly schedule work.

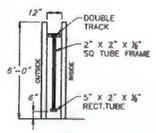
5) Sample containers are most often packed in plastic, insulated "coolers" for shipment. Bottles are to be packed tightly so that only minimal motion of the sample containers is possible. Materials which are considered to be highly hazardous may require special handling and packing for shipment. Ice, or a similar heat transfer fluid, should be placed over the top of the sample containers and should be placed within a water tight plastic bag to assure that the samples are kept as dry as possible. In addition, all applicable paper work should also be enclosed within a second water-tight bag and included in the cooler. The sample cooler should then be taped shut.

6) Upon receipt of the samples at the laboratory, any laboratory identification numbers should also be included on the COC form. Finally, those responsible for receipt of the samples should be indicated on the COC form as well as the date and time of the sample drop-off.

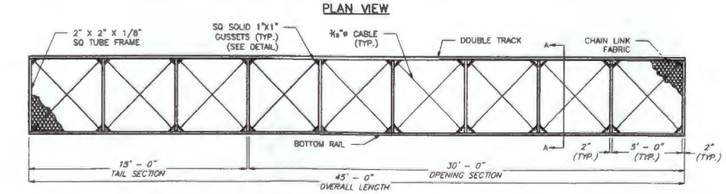




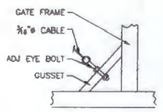
PLAN VIEW



SECTION A



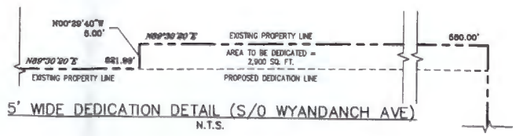
ELEVATION VIEW



GUSSETS DETAIL

CHAINLINK FENCE GATE DETAIL

OR APPROVED EQUAL BY TOWN OF BABYLON



5' WIDE DEDICATION DETAIL (S/O WYANDANCH AVE)
N.T.S.

SYMBOL KEY N.T.S.

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- SPARE
- PIPE
- DRILL HOLE
- HYDRANT
- WATER METER
- BOLLARD
- PROP. PAVEMENT ELEV
- EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. DROP INLET
- DROP INLET
- ELECTRIC BOX
- CABLE BOX
- TELEPHONE BOX
- TRAFFIC SIGNAL BOX
- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES N.T.S.

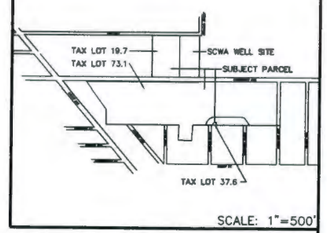
- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDER GROUND ELECTRIC
- GAS — GAS LINE
- X — FENCE
- X — FENCE TO BE REMOVED

OWNER: LINZER PRODUCT CORPORATION, 248 Wyandanch Avenue, West Babylon, NY 11704

APPLICANT: LINZER PRODUCT CORPORATION, 248 Wyandanch Avenue, West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY: BAYFRONT ENGINEERING, PLLC, Consulting Civil Engineers, 26 Railroad Ave, #179 Babylon, NY 11702-2204, Office Ph: 631-539-7830, www.bayfrontengineering.com

KEY MAP



SCALE: 1"=500'

LABCREW ENGINEERING, P.C.
SITE DESIGN/PLANNERS/CIVIL ENGINEERING
273 HAWKINS AVENUE
RONKONKOMA, NEW YORK 11779
PHONE (631)-676-6901
FAX (631)-676-6905
LABCREW@OPTONLINE.NET

SEAL

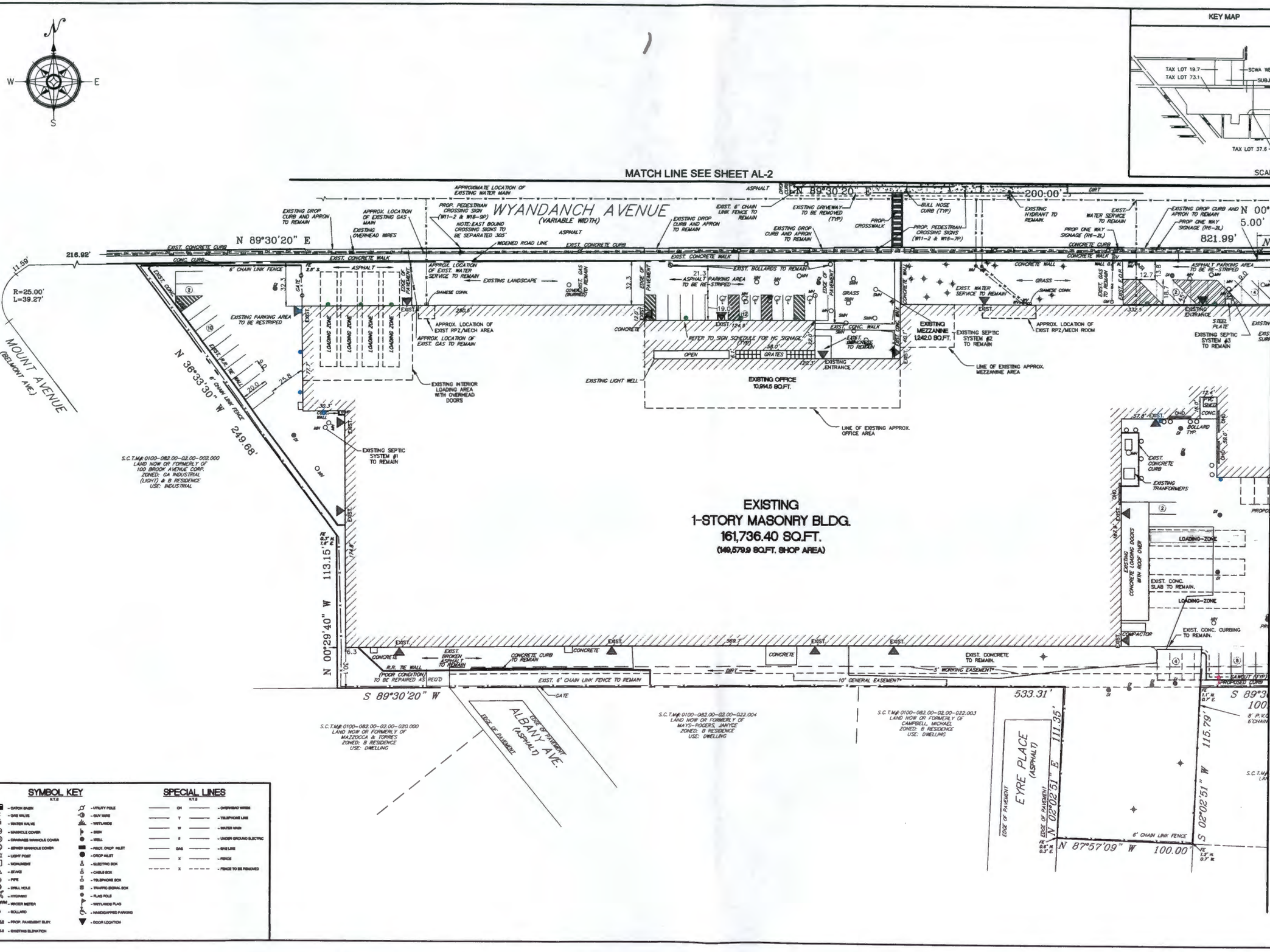
PROJECT	TITLE
LINZER PRODUCTS CORP. 248 WYANDANCH AVENUE WYANDANCH, NY 11704 TOWN OF BABYLON	ALIGNMENT PLAN #2

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1" = 30'

AL-4



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SEAL

LABCREW ENGINEERING, P.C.

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PROJECT
LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE
ALIGNMENT PLAN #2

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
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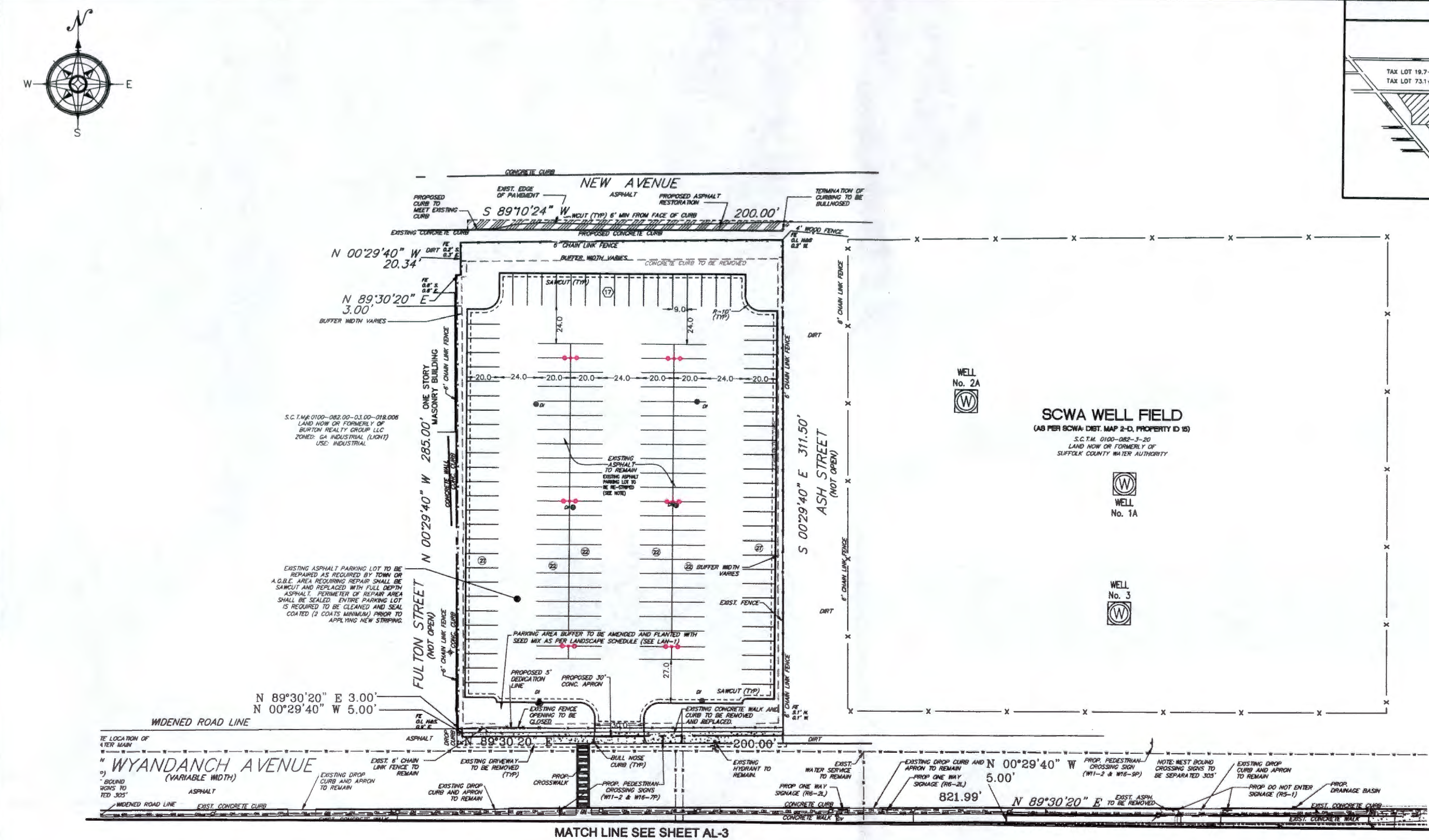
AL-3

SHEET NO. 3 OF 15



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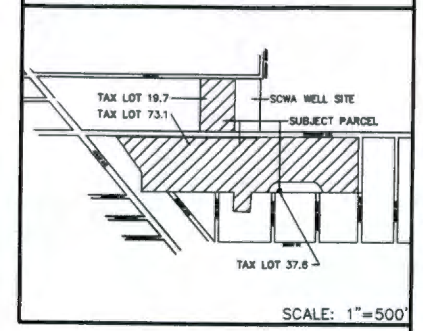

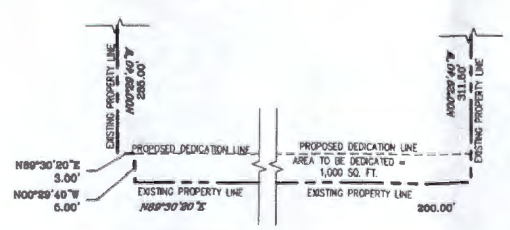

5' WIDE DEDICATION DETAIL (N/O WYANDANCH AVE)
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West Babylon, NY 11704

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SEAL

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248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE: ALIGNMENT PLAN #2

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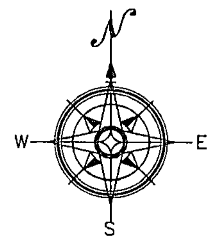
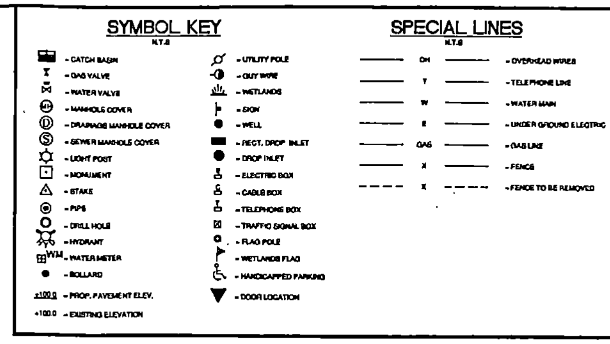
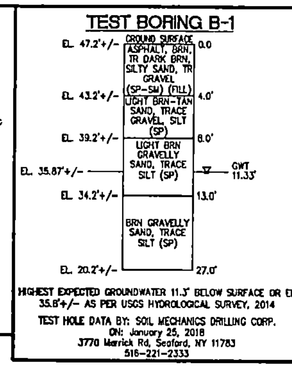
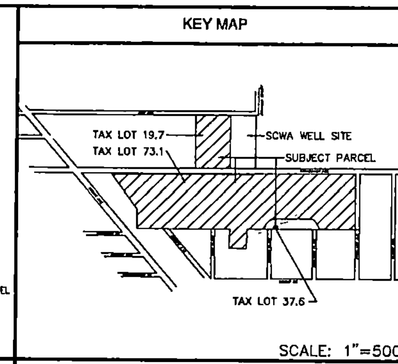
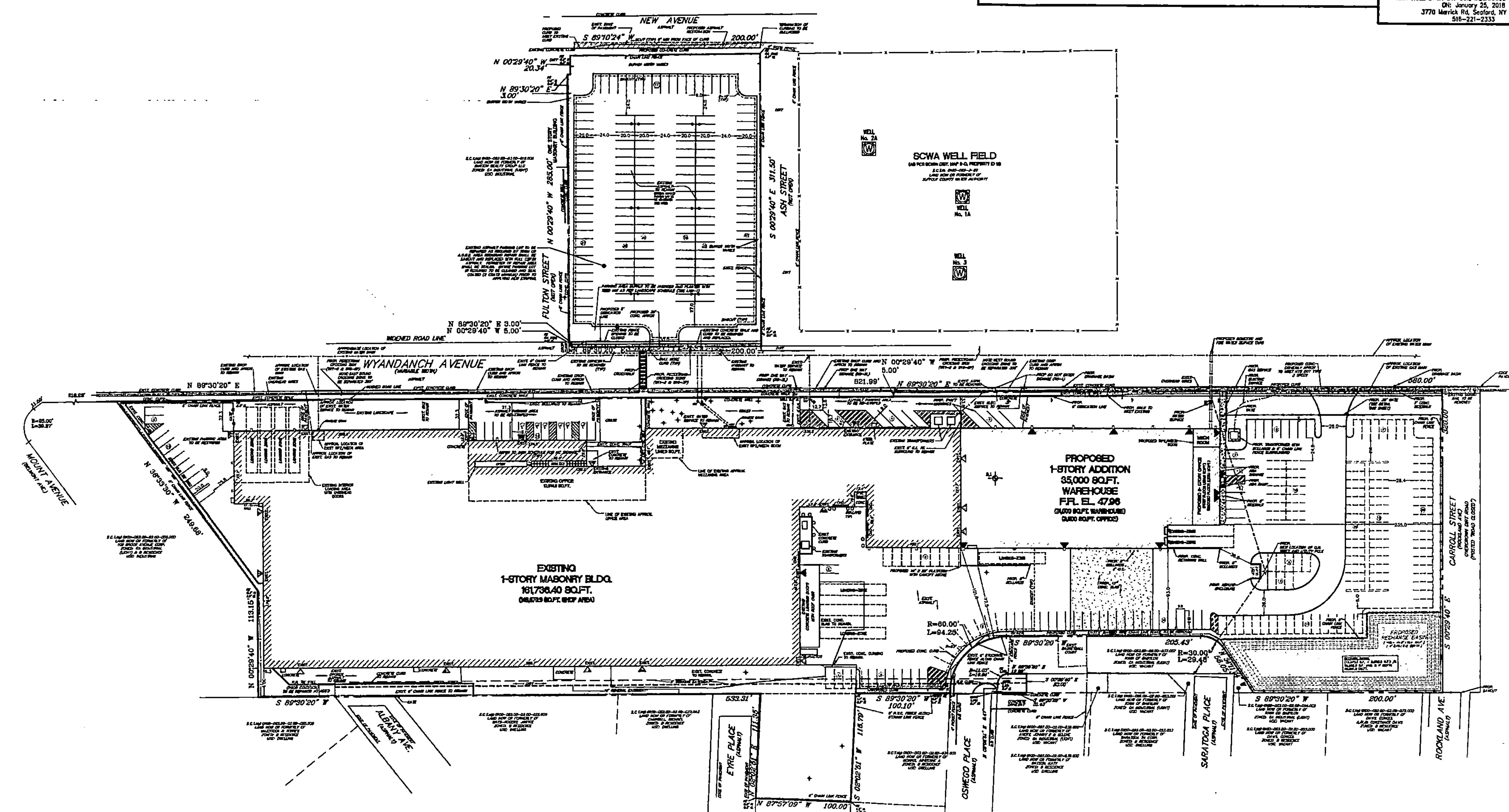
AL-2











SITE CRITERIA

SITE DATA:

SITE AREA: (TAX LOT 73.1)	9.34 ACRES	406,934	SQ. FT.
SITE AREA: (TAX LOT 19.7)	1.44 ACRES	63,053	SQ. FT.
TOTAL SITE AREA:	10.78 ACRES	469,987	SQ. FT.
EXISTING BUILDING AREA:		161,736.4	SQ. FT.
EXISTING BUILDING FOOTPRINT:		160,494.4	SQ. FT.
PROPOSED BUILDING AREA:		35,000.0	SQ. FT.
PROPOSED BUILDING FOOTPRINT:		33,500.0	SQ. FT.
TOTAL BUILDING AREA:		196,736.4	SQ. FT.
TOTAL BUILDING FOOTPRINT:		193,994.4	SQ. FT.
PROPOSED F.A.R.:		41.28	%
PARKING REQUIRED:		358	STALLS
PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

ZONING REQUIREMENTS - GA INDUSTRIAL:

SETBACK	REQUIRED	PROPOSED	
LOT AREA	40,000	469,987 (10.78AC)	SQ. FT.
FRONT YARD SETBACK (WYANDANCH AVE) FRONT YARD SETBACK (ROCKLAND AVE)	30.0 30.0	32.3* 235.0	FEET
MIN. SIDE YARD SETBACK	19.0	6.3**	FEET
TOTAL SIDE YARD SETBACK	N/A	N/A	FEET
REAR YARD SETBACK	30.0	30.1*	FEET
MIN. WIDTH OF LOT	100	N/A	FEET
MAX BUILDING HEIGHT	35	1 STORY	FT/STORIES
FAR RATIO	45	41.28	% MAX

*EXISTING **EXISTING NON-CONFORMING

LANDSCAPE AREA:

TOTAL NATURAL AREA/ LANDSCAPE	72,375.2	SQ.FT.
FRONT YARD NATURAL AREA/ LANDSCAPE	25,917.2	SQ.FT.

PARKING CALCULATIONS:

OFFICE: 10,914.5 SQ.FT./150 SQ.FT./STALL =	72.7	STALL(S)
SHOP AREA: 149,579.9 SQ.FT./700 SQ.FT./STALL =	213.6	STALL(S)
MEZZANINE: 1,242.0 SQ.FT./700 SQ.FT./STALL =	1.7	STALL(S)
PROP. ADDITION: 35,000 SQ.FT. TOTAL PROP. WAREHOUSE: 31,500 SQ.FT. @ 700 SQ.FT./STALL = PROP. OFFICE: 3,500 SQ.FT. @ 150 SQ.FT./STALL =	45.0 24.3	STALL(S)
TOTAL REQUIRED	358	STALL(S)
PROVIDED (INCLUDING H.C. STALLS)	241	STALL(S)
LAND BANKED (41% OF TOTAL STALLS)	117	STALL(S)
TOTAL STALL(S) PROVIDED	358	STALL(S)
LOADING ZONES PROVIDED	10	STALL(S)
HANDICAPPED STALLS PROVIDED	8	STALL(S)

NOTES:
TYPICAL PARKING STALL 9' x 20' MIN.
HANDICAPPED PARKING STALLS AND ACCESS ISLES 8' x 20' MIN.

GENERAL SITE NOTES:

- ALL CONCRETE CURBING, SIDEWALKS AND DRAINAGE STRUCTURES ARE TO CONFORM TO PLANNING BOARD STANDARD DETAILS AND SPECIFICATIONS.
- TOWN OF BABYLON ENGINEERING DIVISION SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ALL CONSTRUCTION.
- LOCATION AND GRADES FOR CURBS AND WALKS TO BE VERIFIED WITH THE TOWN OF BABYLON HIGHWAY DEPT., S.C.D.P.W. OR N.Y.S.D.O.T. PRIOR TO CONSTRUCTION.
- ALL TRAFFIC CONTROL DEVICES, I.E. SIGNALS, SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN CONFORMANCE WITH THE GUIDELINES OF THE N.Y. STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND AS DIRECTED BY THE TOWN OF BABYLON, DIVISION OF TRAFFIC SAFETY.
- THE CONTRACTORS PERFORMING ANY AND ALL TRAFFIC CONTROL DEVICES LAYOUT AND INSTALLATION WORK SHALL NOTIFY THE TOWN OF BABYLON DIVISION OF TRAFFIC SAFETY, 48 HOURS IN ADVANCE OF BEGINNING SUCH WORK ALONG A TOWN ROAD.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (SUFFOLK COUNTY SPECIFICATIONS) UNLESS OTHERWISE NOTED ON PLAN.
- STOP LINE SIGHT DISTANCE SHALL BE MAINTAINED AT ALL INTERSECTION IN ACCORDANCE WITH A.A.S.H.T.O. REQUIREMENTS.
- ALL UTILITY LOCATIONS TO BE VERIFIED IN FIELD BY CONTRACTOR.
- ALL CONCRETE USED FOR OFFSITE CONSTRUCTION SHALL BE A MINIMUM 4000 PSI AFTER 28 DAYS.
- THE DEVELOPER MUST NOTIFY THE HIGHWAY ENGINEERING DEPT. 24 HOURS IN ADVANCE OF THE COMMENCEMENT OF ANY OFFSITE DRAINAGE, CURB, SIDEWALK DRIVEWAY APRON OR PAVING WORK.
- EXISTING CURBS, SIDEWALKS AND DRIVEWAY APRONS ARE TO BE REMOVED AND REPLACED FROM EXPANSION JOINT TO EXPANSION JOINT TO ITS FULL DEPTH FOR INSTALLATION AND/OR REMOVAL OF CURB OUTS AND FOR THE REPLACEMENT OF DAMAGES WHETHER INCURRED PRIOR TO OR DURING CONSTRUCTION.

CONDITIONS AND COVENANT AND RESTRICTIONS AS REQUESTED BY THE TOWN OF BABYLON:

CONDITIONS:

1) SUBJECT TO SCPC REFERRAL.
2) SUBJECT TO ZBA APPROVAL FOR ANY ASSOCIATED VARIANCES.
3) SUBJECT TO SCDHS APPROVAL.
4) SUBJECT TO SWPPP REVIEW AND APPROVAL.
5) OWNER/APPLICANT SHALL COMPLY WITH THE TOWN OF BABYLON STORMWATER CODE (CHAPTER 189).
   a) AN INDUSTRIAL AGREEMENT MUST BE SIGNED.
   b) STORMWATER APPLICATION FEE MUST BE SUBMITTED.
   c) CONTAIN ALL STORMWATER RUNOFF ON-SITE TO ENGINEERING REQUIREMENTS.
6) A RODENT CONTROL PLAN WILL BE IMPLEMENTED PRIOR TO CONSTRUCTION IN ORDER TO REMOVE THE RODENT POPULATION FROM THE SITE. ADDITIONALLY, THE ADJACENT LANDOWNERS WILL NE NOTIFIED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7) FUGITIVE DUST GENERATION SHALL BE CONTROLLED BY APPROPRIATE MEANS SUCH AS WATERING.
8) FIRE AND SMOKE DETECTION SYSTEMS AND CARBON MONOXIDE DETECTORS SHOULD BE INSTALLED IN ACCORDANCE WITH NFPA 72.
9) ADDRESS NUMBER, BUILDING NUMBER, OR APPROVED BUILDING IDENTIFICATION TO BE PLACED IN A POSITION VISIBLE FROM THE STREET.
10) AS A MINIMUM MEASURE TO REDUCE NOISE LEVELS, APPLICANT/OWNER TO INSTALL SOUND INSULATION PANELS AROUND ALL AIR-CONDITIONING UNITS, CHILLERS, REFRIGERATION UNITS AND SOUND INSULATION BLANKETS AROUND ALL AIR-HANDLING UNITS IF REQUIRED BY THE TOWN.'
11) DURING CONSTRUCTION, OWNER/APPLICANT IS RESPONSIBLE TO SWEEP ACCESS STREETS AND KEEP THE ROADWAYS FREE OF DIRT AND MUD.
12) THE LOCATION OF NEW TRANSFORMERS AND WATER SERVICE DEVICES SHALL BE APPROVED BY THE TOWN OF BABYLON PLANNING DEPARTMENT PRIOR TO INSTALLATION AND SHALL NOT BE LOCATED ADJACENT TO ANY ROADWAYS.
13) WATER SAVING PLUMBING FIXTURES TO BE UTILIZED.
14) ALL REGULATORY WARNING SIGNS ARE TO ADHERE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVISES FOR STREETS AND HIGHWAYS SPECIFICATIONS. ALL SIGNS MUST ALSO BE FABRICATED USING HIGH-INTENSITY RETRO REFLECTIVE SHEETING.
15) OWNER TO CONTRIBUTE TO THE FUND FOR THE INSTALLATION AND MAINTENANCE OF EMERGENCY VEHICLE OPTICAL PRE-EMPTION EQUIPMENT ON TRAFFIC SIGNALS IN THE AREA. ESTIMATED COST TO BE $1,000.00.
16) CONSTRUCTION WILL BE CONDUCTED BETWEEN THE HOURS OF 7AM AND 6PM ON WEEKDAYS AND BETWEEN THE HOURS OF 9AM AND 4PM ON SATURDAYS. NO EXTERIOR CONSTRUCTION WILL BE PERMITTED ON SUNDAYS, ONLY INTERIOR CONSTRUCTION. CONSTRUCTION ACTIVITIES ON SITE SHALL BE IN STRICT CONFORMANCE WITH CHAPTER 156-9D OF THE NOISE CODE OF THE TOWN OF BABYLON.
17) SUBJECT TO THE REQUIREMENTS OF HIGHWAY, ENGINEERING, AND THE FIRE MARSHALL.

COVENANTS AND RESTRICTIONS:

1) NO EXTERIOR-MOUNTED STEEL SECURITY GATES OR SHUTTERS PERMITTED. ONLY INTERIOR-MOUNTED MESH TYPE SECURITY GATES PERMITTED.
2) NO OUTDOOR SPEAKERS OR PAGING SYSTEMS.
3) ALL SITE LIGHTING TO BE CONTAINED ON SITE AND MUST CONFORM TO DARK-SKY LIGHTING REGULATIONS.
4) THE OWNER/DEVELOPER IS RESPONSIBLE FOR MAINTAINING ALL APPLICABLE SITE DEVELOPMENT IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: FIRE AND SMOKE DETECTION SYSTEM, AUTOMATIC FIRE SPRINKLER SYSTEM, BUILDING, DRAINAGE, CURBS, SIDEWALKS, FENCING, ASPHALT, LANDSCAPING, ETC.
5) OWNER/APPLICANT SHALL COMPLY WITH ALL NYS REGULATIONS FOR HANDICAPPED ACCESSIBILITY INCLUDING, BUT NOT LIMITED TO, HANDICAPPED RAMPS AND HANDICAPPED PARKING SPACES.
6) ALL NOISE GENERATING EQUIPMENT ON-SITE INCLUDING, BUT NOT LIMITED TO, HEATING VENTILATION AND AIR CONDITIONING (HVAC), CHILLERS, REFRIGERATION UNITS, AND COMPRESSORS SHALL OPERATE IN CONFORMANCE WITH CHAPTER 156 TOWN OF BABYLON NOISE CODE. IN THE EVENT THAT ANY SUCH EQUIPMENT EXCEEDS CHAPTER 156 STANDARDS IMMEDIATE STEPS SHALL BE TAKEN TO MITIGATE THOSE NOISE LEVELS.
7) ALL BUILDINGS, STRUCTURES, SIGNS, FENCES, AND LANDSCAPING SHALL BE MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES OF THE TOWN OF BABYLON, AND VIOLATIONS THEREOF MAY BE PROSECUTED AND ENFORCED IN THE SAME MANNER AS PROVIDED THEREIN.
8) NO FURTHER DEVELOPMENT OF THE SITE WITHOUT PLANNING BOARD APPROVAL.
9) NO TRUCK IDLING IS PERMITTED AT ANY TIME. OWNER TO POST SIGNS "NO IDLING OF ENGINES - NO EXCEPTIONS"
10) ALL REFUSE SHALL BE CONTAINED WITHIN THE PERIMETER AND HEIGHT OF THE REFUSE ENCLOSURE AS APPROVED BY THE SITE PLAN.
11) MAINTENANCE ACCESS SHALL BE IN ACCORDANCE WITH SECTION 189-9 OF THE CODE OF THE TOWN OF BABYLON. THE TOWN OF BABYLON SHALL BE PROVIDED WITH ACCESS TO THE STORMWATER INFRASTRUCTURE AT REASONABLE TIMES FOR PERIODIC INSPECTION BY THE TOWN OF BABYLON AND ITS OFFICERS TO ENSURE THAT THE INFRASTRUCTURE IS MAINTAINED IN PROPER WORKING CONDITION TO MEET DESIGN STANDARDS AND ANY OTHER PROVISIONS ESTABLISHED BY CHAPTER 189. THIS AGREEMENT SHALL BE BINDING ON ALL SUBSEQUENT LANDOWNERS.
12) MAINTENANCE AFTER CONSTRUCTION SHALL BE IN ACCORDANCE SECTION 189-9 OF THE CODE OF THE TOWN OF BABYLON. STORMWATER MANAGEMENT PRACTICES INSTALLED IN ACCORDANCE WITH CHAPTER 189 SHALL BE OPERATED AND MAINTAINED TO ENSURE THAT THE GOALS OF CHAPTER 189 ARE FULLY ACHIEVED. PROPER OPERATION AND MAINTENANCE INCLUDES, AT MINIMUM, THE FOLLOWING:
   a) A PREVENTIVE/CORRECTIVE MAINTENANCE PROGRAM FOR ALL CRITICAL FACILITIES AND SYSTEMS OF TREATMENT AND CONTROL (OR RELATED APPURTENANCES) WHICH ARE INSTALLED OR USED BY THE OWNER OR OPERATOR TO ACHIEVE THE GOALS OF CHAPTER 189. A WRITTEN RECORD OF STORMWATER MANAGEMENT SYSTEM MAINTENANCE ACTIVITIES SHALL BE ESTABLISHED AND MAINTAINED ON SITE AND BE AVAILABLE FOR REVIEW BY THE TOWN OF BABYLON UPON REQUEST.
   b) WRITTEN PROCEDURES FOR OPERATION AND MAINTENANCE AND TRAINING NEW MAINTENANCE PERSONNEL SHALL BE PREPARED AND MAINTAINED ON SITE AND WILL BE AVAILABLE FOR REVIEW BY THE TOWN OF BABYLON UPON REQUEST.
   c) DISCHARGES FROM BMPS SHALL NOT EXCEED DESIGN CRITERIA OR CONTRIBUTE TO WATER QUALITY STANDARD VIOLATIONS IN ACCORDANCE WITH §189-8B OF THE CODE OF THE TOWN OF BABYLON.
13) UPON COMPLETION OF CONSTRUCTION, ANY STORMWATER CONTROL STRUCTURES IMPACTED DURING CONSTRUCTION SHALL BE CLEANED BY THE OWNER OR OPERATOR. ROUTINE MAINTENANCE OF STORMWATER INFRASTRUCTURE ON THE SITE WILL INCLUDE THE FOLLOWING:
   a) MONITORING OF DRAINAGE INLETS (CATCH BASINS) WILL BE COMPLETED ROUTINELY, PARTICULARLY AFTER LARGER STORM EVENTS AND MUST BE KEPT FREE FROM OBSTRUCTION BY LEAVES, TRASH, AND OTHER DEBRIS.
   b) DRAINAGE GRATES MUST BE KEPT FREE FROM OBSTRUCTION BY LEAVES, TRASH, AND OTHER DEBRIS.
   c) DRAINAGE STRUCTURES SHALL BE INSPECTED ANNUALLY TO DETERMINE IF SEDIMENT REMOVAL IS NECESSARY TO ENSURE THAT THE DRAINAGE STRUCTURES ARE PROPERLY FUNCTIONING AND THAT THEY PERMIT ADEQUATE CONVEYANCE THROUGHOUT THE SYSTEM. IF APPLICABLE, THE MANUFACTURER'S SPECIFICATIONS FOR MAINTENANCE PROCEDURES AND FREQUENCY MUST BE STRICTLY FOLLOWED.
   d) THE DRAINAGE STRUCTURES MUST BE ROUTINELY MONITORED FOR THE REMOVAL OF SURFACE SEDIMENT AND TRASH.
   e) STREET SWEEPING OF THE PARKING AREAS SHALL BE CONDUCT AT LEAST FOUR TIMES ANNUALLY TO REMOVE SEDIMENT THAT MAY IMPACT THE DRAINAGE INFRASTRUCTURE AND ADDITIONALLY, AS NECESSARY DUE TO STORM EVENTS.
   f) THE GROUNDS AND PARKING AREA SHALL BE INSPECTED FOR LITTER MONTHLY AND ANY LITTER SHALL BE REMOVED AS NECESSARY.
14) THE ENTIRE BUILDING IS TO HAVE A FULLY AUTOMATIC FIRE SPRINKLER SYSTEM INSTALLED PURSUANT TO NFPA 13 AND SECTION 213-235 OF THE TOWN ZONING CODE AND AS REQUIRED BY THE FIRE MARSHAL.
15) THE TOWN OF BABYLON IS NOT RESPONSIBLE FOR ANY DAMAGE TO THE CURBS OR LIGHT POLES ON SITE IN CONNECTION WITH SOLID WASTE PICK UP.

FENCING NOTE:
ALL EXISTING BARBED WIRE IS TO BE REMOVED

TABLE OF CONTENTS:

OWNER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY:
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Consulting Civil Engineers
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SEAL

PROJECT: LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE: ALIGNMENT PLAN

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
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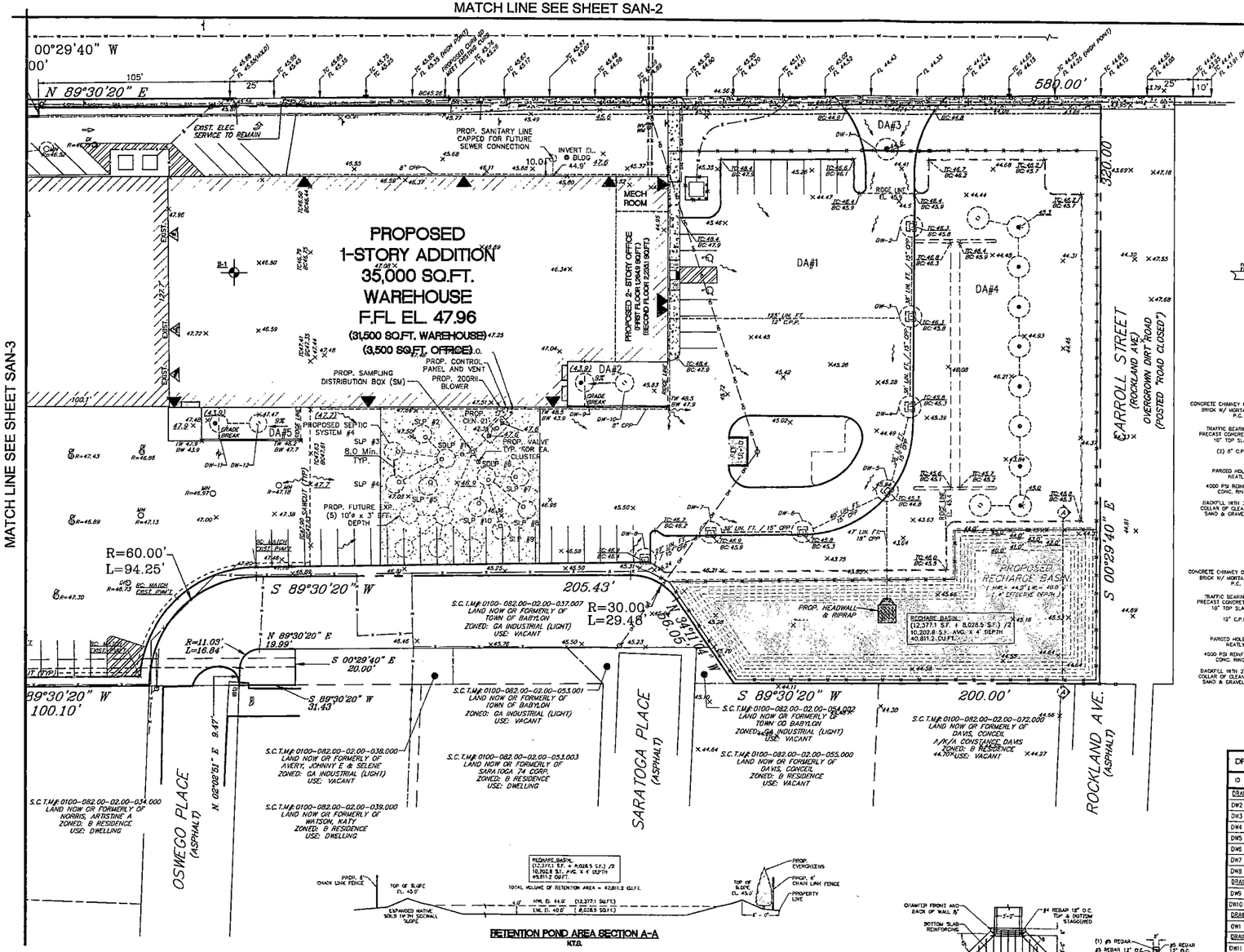
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=60'

AL-1

MATCH LINE SEE SHEET SAN-2

MATCH LINE SEE SHEET SAN-3



SYMBOL KEY

N.T.S.

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- STAKE
- PIPE
- DRILL HOLE
- HYDRANT
- WM — WATER METER
- BOLLARD
- +100.0 — PROP. PAVEMENT ELEV.
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- UTILITY POLE
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- FLAG POLE
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- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES

N.T.S.

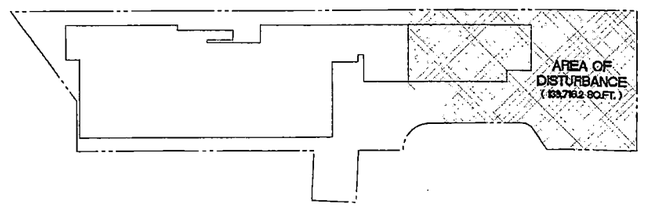
- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDER GROUND ELECTRIC
- GAS — GAS LINE
- X — FENCES
- X — FENCE TO BE REMOVED

RETENTION POND AREA SECTION A-A

N.T.S.

AREA OF DISTURBANCE

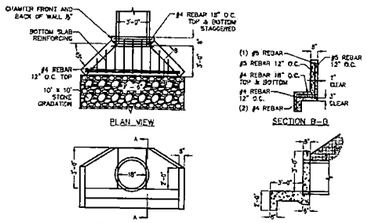
SCALE: 1" = 150'



HEADWALL DETAIL

N.T.S.

NOTE: EXPOSED EDGES TO BE CHAMFERED 1" x 1"



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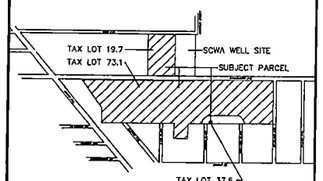

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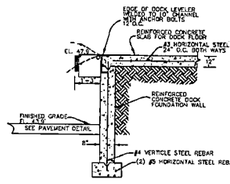
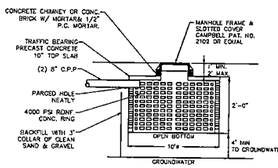
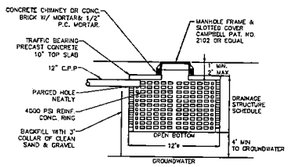


LOADING DOCK DETAIL



STORM POOL "TYPE A" DETAIL

N.T.S.



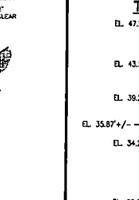
STORM POOL "TYPE B" DETAIL

N.T.S.

DRAINAGE STRUCTURE SCHEDULE

ID	COVER TYPE	RIM ELV.	TOP OF RING	BOT OF RING	Ø	EFF. DEPTH	INVERT ELV.
DRAINAGE AREA #1:							
DW2	INLET	45.8	43.8	39.8	12"	4'	43.5
DW3	INLET	45.8	43.8	39.8	12"	4'	43.0
DW4	INLET	45.3	43.3	40.3	12"	3'	42.5
DW5	INLET	44.8	42.8	39.8	12"	3'	42.0
DW6	INLET	45.3	43.3	40.3	12"	3'	42.5
DW7	INLET	45.9	43.9	39.9	12"	4'	43.0
DW8	INLET	46.4	44.4	40.4	12"	4'	43.2
DRAINAGE AREA #2:							
DW9	INLET	43.9	42.1	40.1	10"	2'	42.0
DW10	INLET	46.4	42.4	40.4	10"	2'	42.0
DRAINAGE AREA #3:							
DW11	INLET	44.3	42.1	39.9	12"	3'	–
DRAINAGE AREA #5:							
DW11	INLET	43.9	42.1	40.1	10"	2'	42.0
DW12	INLET	45.9	42.1	40.1	10"	2'	42.0

TEST BORING B-1



HIGHEST EXPECTED GROUNDWATER 11.3' BELOW SURFACE OR EL 35.8'+/- AS PER USGS HYDROLOGICAL SURVEY, 2014

TEST HOLE DATA BY: SOIL MECHANICS DRILLING CORP. ON: January 25, 2018
3770 Merrick Rd. Seaford, NY 11783
516-221-2333

SITE CRITERIA

SITE DATA:

SITE AREA: (TAX LOT 73.1)	9.34 ACRES	406,934	SQ. FT.
SITE AREA: (TAX LOT 19.7)	1.44 ACRES	63,033	SQ. FT.
TOTAL SITE AREA:	10.78 ACRES	469,987	SQ. FT.
EXISTING BUILDING AREA:		161,736.4	SQ. FT.
EXISTING BUILDING FOOTPRINT:		160,494.4	SQ. FT.
PROPOSED BUILDING AREA:		35,000.0	SQ. FT.
PROPOSED BUILDING FOOTPRINT:		33,500.0	SQ. FT.
TOTAL BUILDING AREA:		196,736.4	SQ. FT.
TOTAL BUILDING FOOTPRINT:		193,994.4	SQ. FT.
PROPOSED F.A.R.:		41.28	%
PARKING REQUIRED:		358	STALLS
PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

DRAINAGE CALCULATIONS:

TOTAL SITE AREA SOUTH OF WYANDANCH AVENUE	=	406,934.0 SQ.FT.
TOTAL DISTURBED LAND AREA	=	139,716.2 SQ.FT.
LAND AREA NOT TRIBUTARY TO IMPROVEMENTS	=	268,217.8 SQ.FT.
TOTAL LAND AREA	=	406,934.0 SQ.FT.
DA#1: – PARKING LOT		
PROPOSED ADDITION 33,500.0 SF x 0.417 FT x 1.0	=	13,969.5 CU.FT.
IMPERVIOUS AREA 41,606.6 SF X 0.417 FT X 1.0	=	17,350.0 CU.FT.
LB PARKING (NOT CONST.) 22,327.4 SF x 0.417 FT x 0.15	=	1,396.6 CU.FT.
LANDSCAPE AREA 38,187.2 SF x 0.417 FT x 0.15	=	2,389.2 CU.FT.
REQUIRED TOTAL VOLUME:	=	35,105.3 CU.FT.
PROP. RECHARGE BASIN	=	40,811.2 CU.FT.
PROP. (4) 12'ø X 4' DRYWELLS (TYPE B): (4) X 100.88 X 4'	=	1,614.1 CU.FT.
PROP. (3) 12'ø X 3' DRYWELLS (TYPE B): (3) X 100.88 X 3'	=	907.2 CU. FT.
TOTAL PROVIDED	=	43,332.5 CU.FT.
DA#2: – LOADING BAY #1		
LOADING BAY 1,490.0 SF x 0.167 FT x 1.0	=	248.8 CU.FT.
PROP. (2) 10'ø X 2' DRYWELLS (TYPE A): (2) X 68.42 X 2	=	273.7 CU.FT.
DA#3: – ENTRANCE		
ENTRANCE 1,595.0 SF x 0.167 FT x 1.0	=	265.5 CU.FT.
PROP. (1) 12'ø X 3' DRYWELLS (TYPE B): (1) X 100.88 X 3	=	302.6 CU.FT.
DA#4 – PROPOSED LANDBANKED PARKING AREA:		
LB PARKING 22,327.4 SF x 0.167 FT x 1.0	=	3,728.7 CU.FT.
PROP. (10) 12'ø X 4' DRYWELLS (TYPE B): (6) X 100.88 X 4	=	4,035.2 CU.FT.
DA#5 – LOADING BAY #2		
LB PARKING 975.3 SF x 0.167 FT x 1.0	=	162.9 CU.FT.
PROP. (2) 10'ø X 2' DRYWELLS (TYPE A): (2) X 68.42 X 2	=	273.7 CU.FT.

HEALTH REF# C01-19-0025

OWNER:
LINZER PRODUCT CORPORATION
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West Babylon, NY 11704

APPLICANT:
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SITE PLAN BASED ON PLANS BY:
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275 HAWKINS AVENUE
RONKONKOMA, NEW YORK 11779
PHONE (631)-676-4681
FAX (631)-676-4682
LABCREW@OPTONLINE.NET

SEAL

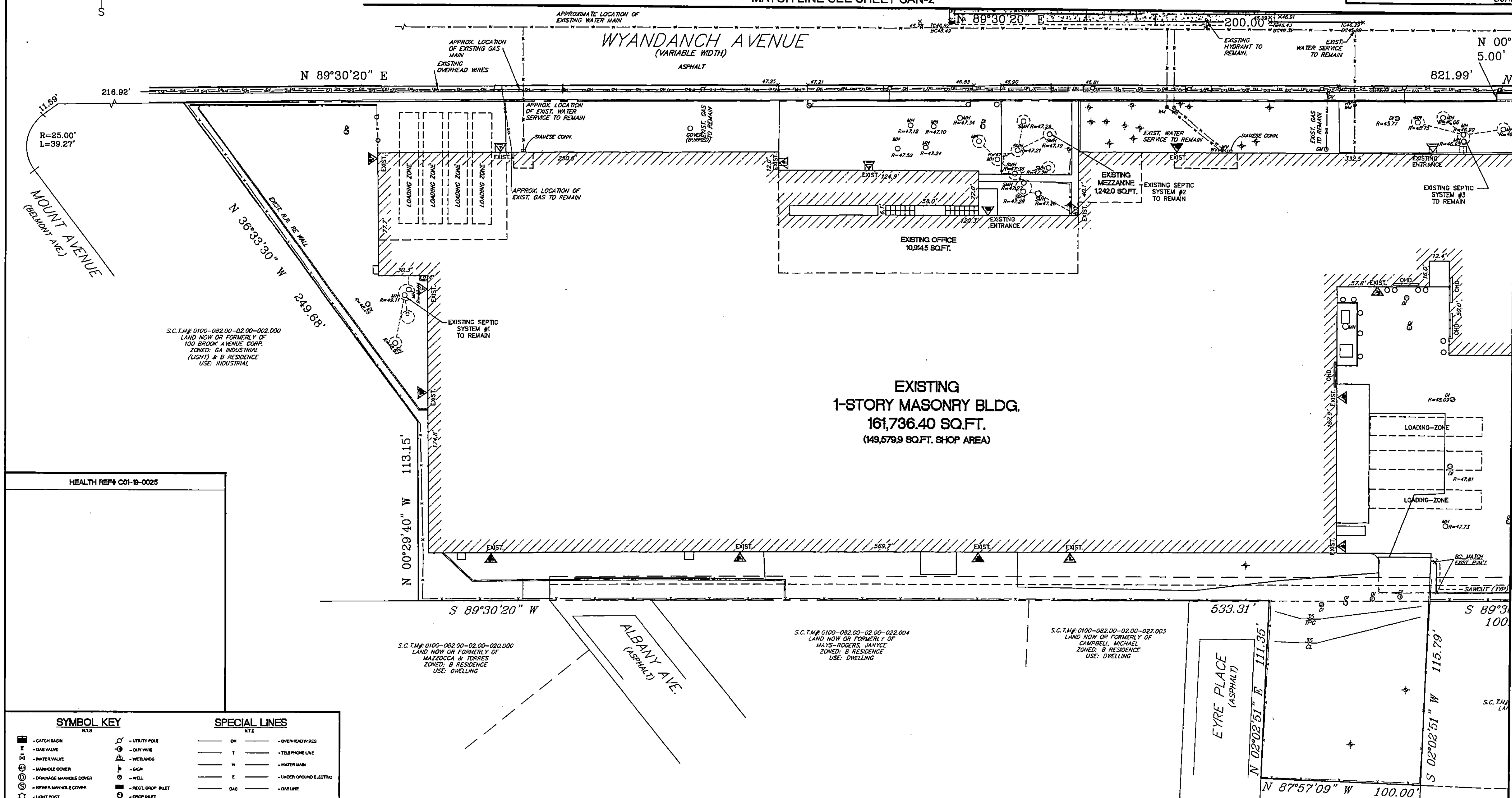
LABCREW ENGINEERING, P.C.

PROJECT	TITLE	S.C.T.M.#
LINZER PRODUCTS CORP. 248 WYANDANCH AVENUE WYANDANCH, NY 11704 TOWN OF BABYLON	GRADING & DRAINAGE PLAN #3	0100-082.00-02.00-073.001 & 37.006 0100-082.00-03.00-019.007

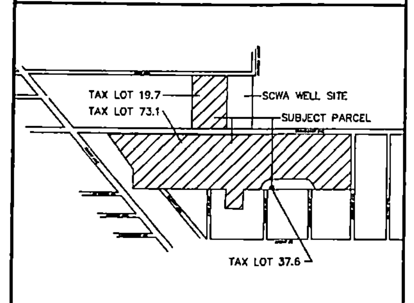
NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

SAN-4



KEY MAP



SCALE: 1"=500'

HEALTH REF# C01-19-0025

SYMBOL KEY N.T.S

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- GRATE
- PIPE
- DRILL HOLE
- HYDRANT
- WATER METER
- BOLLARD
- PROP. PAVEMENT ELEV.
- EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. DROP INLET
- DROP INLET
- ELECTRIC BOX
- CABLE BOX
- TELEPHONE BOX
- TRAFFIC SIGNAL BOX
- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES N.T.S

Line	Description
OH	OVERHEAD WIRES
T	TELEPHONE LINE
W	WATER MAIN
E	UNDER GROUND ELECTRIC
GAS	GAS LINE
X	FENCE
X	FENCE TO BE REMOVED

OWNER: LINZER PRODUCT CORPORATION 248 Wyandanch Avenue West Babylon, NY 11704

APPLICANT: LINZER PRODUCT CORPORATION 248 Wyandanch Avenue West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY: BAYFRONT ENGINEERING, PLLC Consulting Civil Engineers 26 Railroad Ave. #179 Babylon, NY 11702-2204 Office Ph: 631-539-7830 www.bayfrontengineering.com

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SITE DESIGN/PLANNERS/CIVIL ENGINEERING
273 HAWKINS AVENUE RONKONKOMA, NEW YORK 11779
PHONE (631)-676-4881
FAX (631)-676-4882
LABCREW@OPTONLINE.NET

SEAL

PROJECT: LINZER PRODUCTS CORP. 248 WYANDANCH AVENUE WYANDANCH, NY 11704 TOWN OF BABYLON

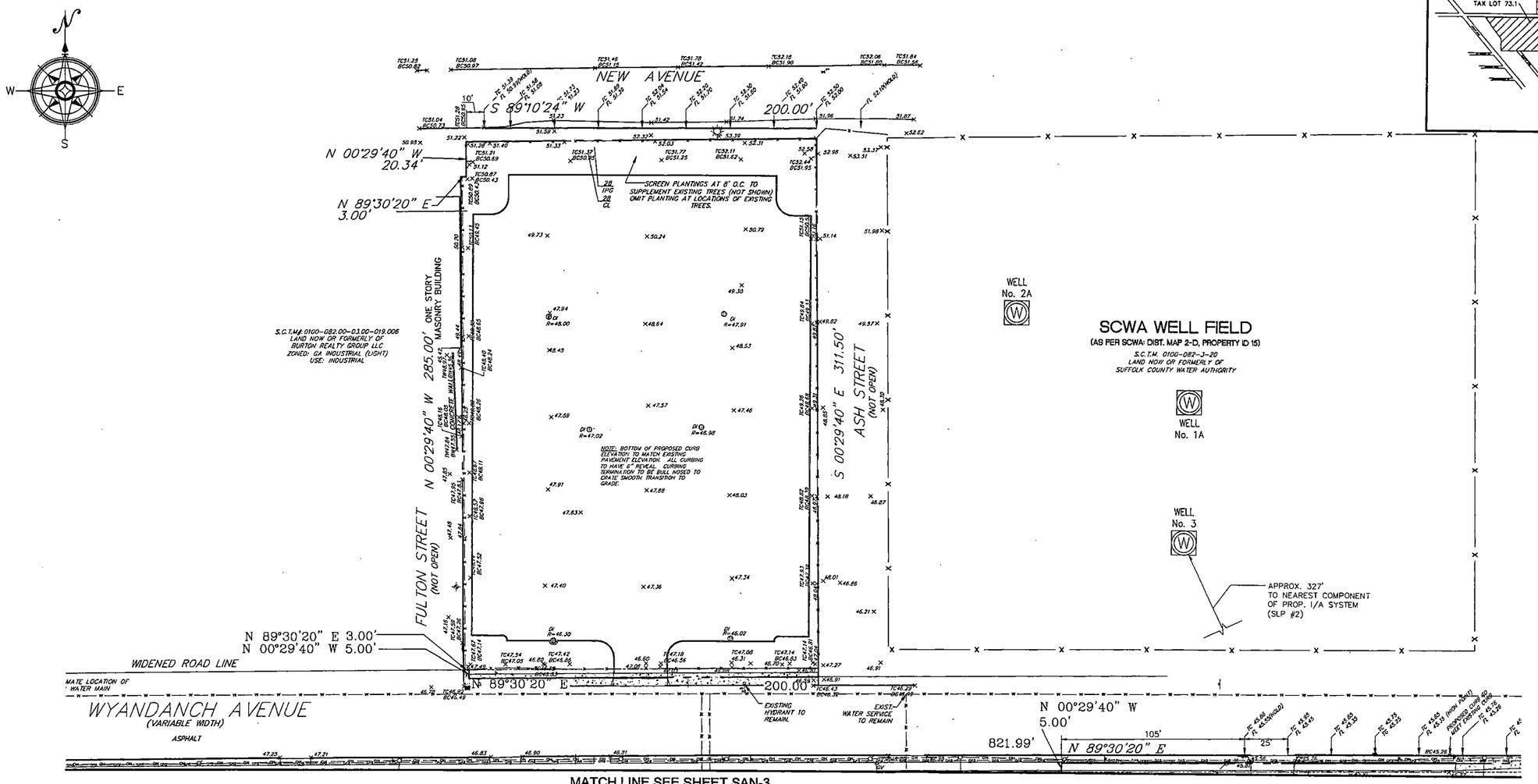
TITLE: GRADING & DRAINAGE PLAN #2

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006 0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B. COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

SAN-3



MATCH LINE SEE SHEET SAN-3

SYMBOL KEY

N.T.S.

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- STAKE
- PIPE
- DRILL HOLE
- HYDRANT
- WM WATER METER
- BOLLARD
- +100.0 PROP. PAVEMENT ELEV.
- +100.0 EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. DROP INLET
- DROP INLET
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- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES

N.T.S.

- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDERGROUND ELECTRIC
- GAS — GAS LINE
- X — FENCE
- X — FENCE TO BE REMOVED

HEALTH REF# C01-19-0025

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SEAL

PROJECT: LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE: GRADING & DRAINAGE PLAN #1

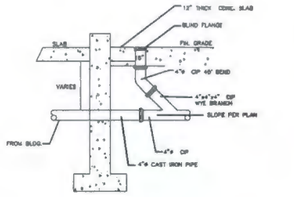
S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

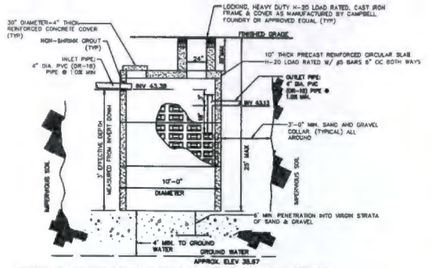
NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

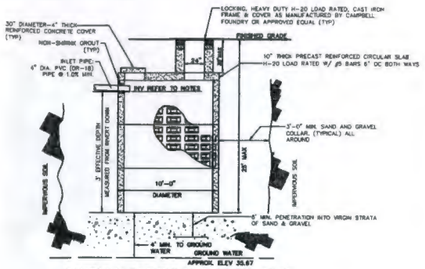
PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

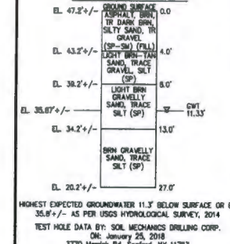
SAN-2

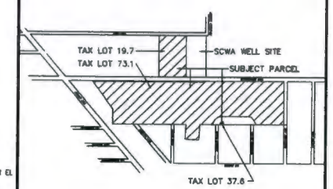
SHEET NO. 6 OF 15

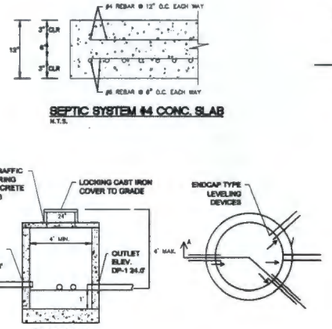


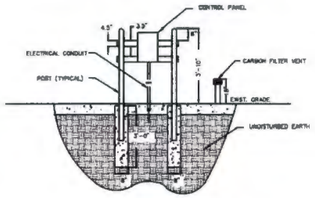


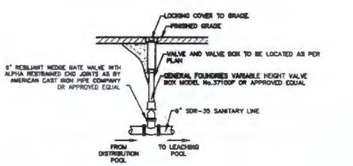


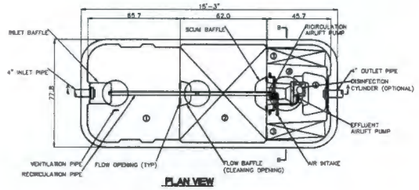


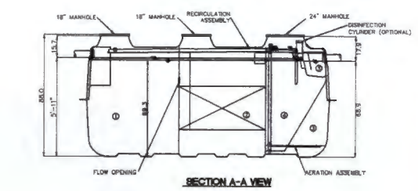


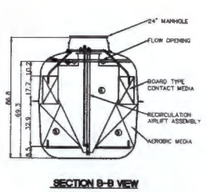


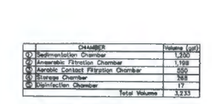


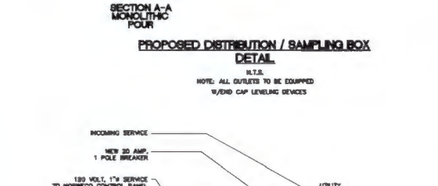


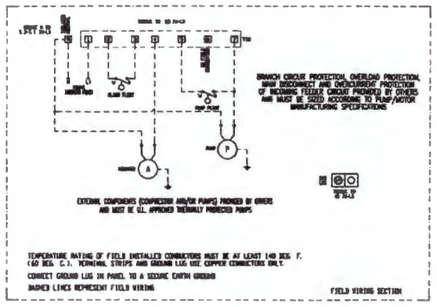


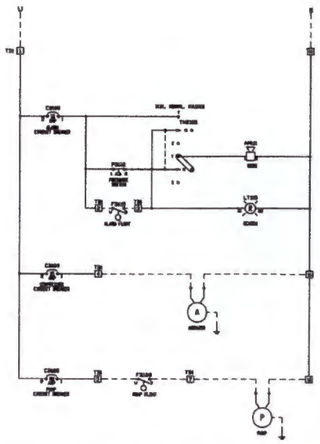












TYPICAL CLEANOUT ASSEMBLY
N.T.S.

HEAVY DUTY LOCKING CAST IRON COVER
N.T.S.

SANITARY DISTRIBUTION LEACHING POOL DETAIL (SDLP)
NTS

SANITARY LEACHING POOL DETAIL (SLP)

SEPTIC SYSTEM #4 CONC. SLAB
N.T.S.

CONTROL PANEL H-FRAME DETAIL
N.T.S.

NOTES:

1) CONTROL PANEL POSTS TO BE SET 18" MIN. INTO FOOTINGS
2) VENT TO BE 18" MIN ABOVE GRADE
3) OPTIONAL BUILDING WALL MOUNT WITH VEHICLE IMPACT PROTECTION (BOLLARDS)

PLAN VIEW

	CHAMBER	Volume (gal)
①	Sedimentation Chamber	1,200
②	Anaerobic Filtration Chamber	1,198
③	Aerobic Contact Filtration Chamber	550
④	Storage Chamber	268
⑤	Disinfection Chamber	17
	Total Volume	3,233

SPECIFICATIONS			
Anaerobic Media	PP / PE	Filling Rate	47%
Board Type Aerobic Media	PVC / PP / PE	Filling Rate	17%
Aerobic Media	PP / PE	Filling Rate	56%
Blower	7 cfm		
Tank	FRP		
Piping	PVC / PP / PE		
Access Covers	Plastic / Cast Iron		
Disinfectant (Optional)	Chlorine Tablets		

CEN21	
Standard Hydraulic Load	1900 GPD

SECTION A-A MONOLITHIC POUR

PROPOSED DISTRIBUTION / SAMPLING BOX DETAIL
N.T.S.
NOTE: ALL OUTLETS TO BE EQUIPPED W/END CAP LEVELING DEVICES

SANITARY VALVE DETAIL
NOT TO SCALE

SECTION A-A VIEW

SECTION B-B VIEW

FUJICLEAN CEN 21
NTS

NOTE: 6" POLYLOK RISERS TO BE PLACED ON TANK WITH PRECAST COLLARS AND LOCKING HDD COVER ABOVE.

ELECTRICAL ONE-LINE DIAGRAM DETAIL
N.T.S.

NOTE:
1) BURIED ELECTRICAL POWER CONDUITS SHALL BE A MINIMUM OF 24 INCHES BELOW GRADE.
2) ALL ELECTRICAL WORK TO BE PERFORMED IN ACCORDANCE WITH NFPA70 NEC

FIELD WIRING LINE DIAGRAM

ELECTRICAL WIRING LINE DIAGRAM

CONTROL PANEL DETAIL

SPECIFICATIONS	
MODEL	MAC 200R
AIR FLOW	7.0 CFM
NORMAL PRESSURE	2.6 PSI
POWER	120V/3.1A/60Hz
OUTLET CONNECTION	1 INCH
WEIGHT	20 LBS
POWER CONSUMPTION	170 W
POWER CABLE	6 FEET

Installation / Operation & Maintenance Notes:
- Install blower on concrete base. Ensure adequate ventilation and protect against sunlight.
- Maintenance requires a trained technician.
- For maximum efficiency, inspect and clean internal air filter once every 3 months
- Replace diaphragm / valve assembly once every 12 months (Note: A damaged diaphragm will trigger the Automatic-Stop function).

SANITARY CALCULATIONS:

SITE WITHIN GROUNDWATER MANAGEMENT ZONE 7 = 600 GPD/ACRE
MAX. ALLOWABLE SAN. GPD FOR SITE 10.78 ACRES x 600 GPD = 6,468 GPD

SANITARY DENSITY CALCS:

INDUSTRIAL BUILDING FLOW:
EXISTING OFFICE: 10,914.5 SF x 0.04* GPD/SF (*Office ≤ 15% of area) = 437 GPD
EXISTING SHOP AREA: 149,579.9 SF x 0.04 GPD/SF = 5,983 GPD
EXIST. MEZZANINE AREA: 1,242.0 SF x 0.04 GPD/SF = 50 GPD
PROP. INDST. ADD'T: 35,000 SF x 0.04* GPD/SF (*Office ≤ 15% of area) = 1,400 GPD
TOTAL SANITARY DESIGN FLOW: = 7,870 GPD
TOTAL SANITARY DESIGN FLOW: = 7,870 GPD
6,468 GPD ALLOWABLE < 7,870 GPD REQUIRED.
6,468 − 7,870 = −1,402 GPD
1,402 GPD OVER DENSITY / 300 GPD/TDR CREDIT = 4.67 TDR CREDITS REQUIRED

EXISTING SEPTIC SYSTEMS #1

SEPTIC TANK – EXIST. (1) 8'⌀ X 4' EFF. DEPTH
LEACHING POOL(S) – EXIST. (2) 8'⌀ X 8' EFF. DEPTH

EXISTING SEPTIC SYSTEMS #2

PRE-TANK – EXIST. (1) 4'⌀ X 6' EFF. DEPTH
SEPTIC TANK – EXIST. (1) 10'⌀ X 4' EFF. DEPTH
LEACHING POOL(S) – EXIST. (7) 8'⌀ X 8' EFF. DEPTH

EXISTING SEPTIC SYSTEMS #3

SEPTIC TANK – EXIST. (1) 8'⌀ X 4' EFF. DEPTH
LEACHING POOL(S) – EXIST. (3) 8'⌀ X 8' EFF. DEPTH

PROPOSED SEPTIC SYSTEM #4 – 35,000 SF ADD'T

SYSTEM #4 DESIGN:

SEPTIC TANK – REQUIRED CAPACITY 1,400 GPD
PROPOSED (1) FUJICLEAN CEN21 – 1,900 GPD CAPACITY

CESSPOOL – REQUIRED CAPACITY = 1,400 GPD
Required:
1,400 GAL / (1.5 GAL/SF) = 934 SF REQ'D
934 SF / (31.4 SF/VF) = 29.8 VF REQ'D
Proposed:
(10) 10'⌀ x 3' eff. depth = 30 VF PROVIDED

SANITARY STRUCTURE TABLE:
BUILDING F.FL. EL. = 47.96'
BUILDING INV. EL. = 44.26'

FUJICLEAN CEN 21:
RIM EL. = 47.60'
INV. IN = 44.06'
INV. OUT = 43.86'

SAN. DIST. LEACHING POOL (SDLP #1)
RIM EL. = 47.6'
INV. IN = 43.38'
INV. OUT = 43.13'
BOT. EL. = 40.13'
DIST. TO GW = 0.46'

SAN. LEACHING POOL (SLP #2)
RIM EL. = 47.4'
INV. IN = 43.05'
BOT. EL. = 40.05
DIST TO GW = 0.38'

SAN. LEACHING POOL (SLP #3)
RIM EL. = 47.2'
INV. IN = 42.93'
BOT. EL. = 39.93'
DIST. TO GW = 0.26'

SAN. LEACHING POOL (SLP #4)
RIM EL. = 47.0'
INV. IN = 42.93'
BOT. EL. = 39.93'
DIST. TO GW = 0.26'

SAN. LEACHING POOL (SLP #5)
RIM EL. = 47.1'
INV. IN = 43.05'
BOT. EL. = 40.05'
DIST. TO GW = 0.38'

SAMPLING MANHOLE (SM):
RIM EL. = 47.20'
INV. IN = 43.71'
INV. OUT = 43.46'

SAN. DIST. LEACHING POOL (SDLP #6)
RIM EL. = 47.3'
INV. IN = 43.38'
INV. OUT = 43.13'
BOT. EL. = 40.13'
DIST. TO GW = 0.46'

SAN. LEACHING POOL (SLP #7)
RIM EL. = 47.5'
INV. IN = 43.05'
BOT. EL. = 40.05
DIST TO GW = 0.38'

SAN. LEACHING POOL (SLP #8)
RIM EL. = 47.3'
INV. IN = 42.93'
BOT. EL. = 39.93'
DIST. TO GW = 0.26'

SAN. LEACHING POOL (SLP #9)
RIM EL. = 47.1'
INV. IN = 42.93'
BOT. EL. = 39.93'
DIST. TO GW = 0.26'

SAN. LEACHING POOL (SLP #10)
RIM EL. = 47.1'
INV. IN = 43.05'
BOT. EL. = 40.05'
DIST. TO GW = 0.38'

NOTES:
- PROPOSED ADDITION ON SLAB, NO BASEMENT
- 10' MIN SEPARATION BETWEEN ANY LEACHING STRUCTURE (STORM OR SANITARY) AND WATER MAIN
- ALL SANITARY PIPING TO BE PVC (DR-18) PLEASE SEE DETAILS FOR MIN. PITCH REQ'D
- NO NEIGHBORING WELLS WITHIN 150' OF SUBJECT PROPERTY. PLEASE NOTE A SCWA WELL FIELD IS LOCATED ACROSS WYANDANCH AVE. TO THE NORTH IN EXCESS OF 300' TO PROPOSED SANITARY SYSTEM #4
- 20' MIN. SEPARATION BETWEEN SANITARY AND STORM LEACHING STRUCTURES TO BE MAINTAINED
- 8' MIN. SEPARATION BETWEEN SANITARY LEACHING STRUCTURES TO BE MAINTAINED
- LEACHING STRUCTURES ARE REQUIRED TO BE CONSTRUCTED WITH REINFORCE 10-INCH THICK H-20 LOAD BEARING FLAT SLABS. REFER TO DETAILS

TEST BORING B-1

HIGHEST EXPECTED GROUNDWATER 11.3' BELOW SURFACE OR EL 35.8'+/- AS PER USGS HYDROLOGICAL SURVEY, 2014

TEST HOLE DATA BY: SOIL MECHANICS DRILLING CORP.
ON: January 25, 2018
3770 Merrick Rd, Seaford, NY 11783
516-221-2333

KEY MAP

SCALE: 1"=500'

SITE CRITERIA

SITE DATA:

SITE AREA: (TAX LOT 73.1)	9.34 ACRES	406,934	SQ. FT.
SITE AREA: (TAX LOT 19.7)	1.44 ACRES	63,053	SQ. FT.
TOTAL SITE AREA:	10.78 ACRES	469,987	SQ. FT.
EXISTING BUILDING AREA:		161,736.4	SQ. FT.
EXISTING BUILDING FOOTPRINT:		160,494.4	SQ. FT.
PROPOSED BUILDING AREA:		35,000.0	SQ. FT.
PROPOSED BUILDING FOOTPRINT:		33,500.0	SQ. FT.
TOTAL BUILDING AREA:		196,736.4	SQ. FT.
TOTAL BUILDING FOOTPRINT:		193,994.4	SQ. FT.
PROPOSED F.A.R.:		41.28	%
PARKING REQUIRED:		358	STALLS
PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

ZONING REQUIREMENTS – GA INDUSTRIAL:

SETBACK	REQUIRED	PROPOSED	
LOT AREA	40,000	469,987 (10.78AC)	SQ. FT.
FRONT YARD SETBACK (WYANDANCH AVE) FRONT YARD SETBACK (ROCKLAND AVE)	30.0 30.0	32.3* 235.0	FEET
MIN. SIDE YARD SETBACK	19.0	6.3**	FEET
TOTAL SIDE YARD SETBACK	N/A	N/A	FEET
REAR YARD SETBACK	30.0	30.1*	FEET
MIN. WIDTH OF LOT	100	N/A	FEET
MAX BUILDING HEIGHT	35	1 STORY	FT/STORIES
FAR RATIO	45	41.28	% MAX

DRAINAGE CALCULATIONS:

TOTAL SITE AREA SOUTH OF WYANDANCH AVENUE = 406,934.0 SQ.FT.
TOTAL DISTURBED LAND AREA = 138,716.2 SQ.FT.
LAND AREA NOT TRIBUTARY TO IMPROVEMENTS = 268,217.8 SQ.FT.
TOTAL LAND AREA = 406,934.0 SQ.FT.

DA#1: – PARKING LOT

PROPOSED ADDITION 33,500.0 SF x 0.417 FT x 1.0 = 13,969.5 CU.FT.
IMPERVIOUS AREA 41,606.6 SF X 0.417 FT X 1.0 = 17,350.0 CU.FT.
LB PARKING (NOT CONST.) 22,327.4 SF x 0.417 FT x 0.15 = 1,396.6 CU.FT.
LANDSCAPE AREA 38,197.2 SF x 0.417 FT x 0.15 = 2,389.2 CU.FT.
REQUIRED TOTAL VOLUME: = 35,105.3 CU.FT.
PROP. RECHARGE BASIN = 40,811.2 CU.FT.
PROP. (6) 12'⌀ X 4' DRYWELLS (TYPE B): (6) X 100.88 X 4' = 2,421.1 CU.FT.
TOTAL PROVIDED = 43,232.3 CU.FT.

DA#2: – LOADING BAY

LOADING BAY 1,490.0 SF x 0.167 FT x 1.0 = 248.8 CU.FT.
PROP. (2) 10'⌀ X 2' DRYWELLS (TYPE A): (2) X 68.42 X 2' = 273.7 CU.FT.

DA#3: – ENTRANCE

ENTRANCE 1,595.0 SF x 0.167 FT x 1.0 = 265.5 CU.FT.
PROP. (1) 12'⌀ X 3' DRYWELLS (TYPE B): (1) X 100.88 X 3' = 302.6 CU.FT.

DA#4 – PROPOSED LANDBANKED PARKING AREA:

LB PARKING 22,327.4 SF x 0.167 FT x 1.0 = 3,728.7 CU.FT.
PROP. (10) 12'⌀ X 4' DRYWELLS (TYPE B): (6) X 100.88 X 4' = 4,035.2 CU.FT.

HEALTH REF# C01-19-0025

OWNER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY:
BAYFRONT ENGINEERING, PLLC
Consulting Civil Engineers
26 Railroad Ave, #179 Babylon, NY 11702-2204
Office Ph: 631-539-7830 www.bayfrontengineering.com

LABCREW ENGINEERING, P.C.
SITE DESIGN/PLANNERS/CIVIL ENGINEERING
273 HAWKINS AVENUE
RONKONKOMA, NEW YORK 11779
PHONE (631)-676-4881
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LABCREW@OPTONLINE.NET

SEAL

LABCREW ENGINEERING, P.C.

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PROJECT:
LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE:
SANITARY PLAN DETAILS

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
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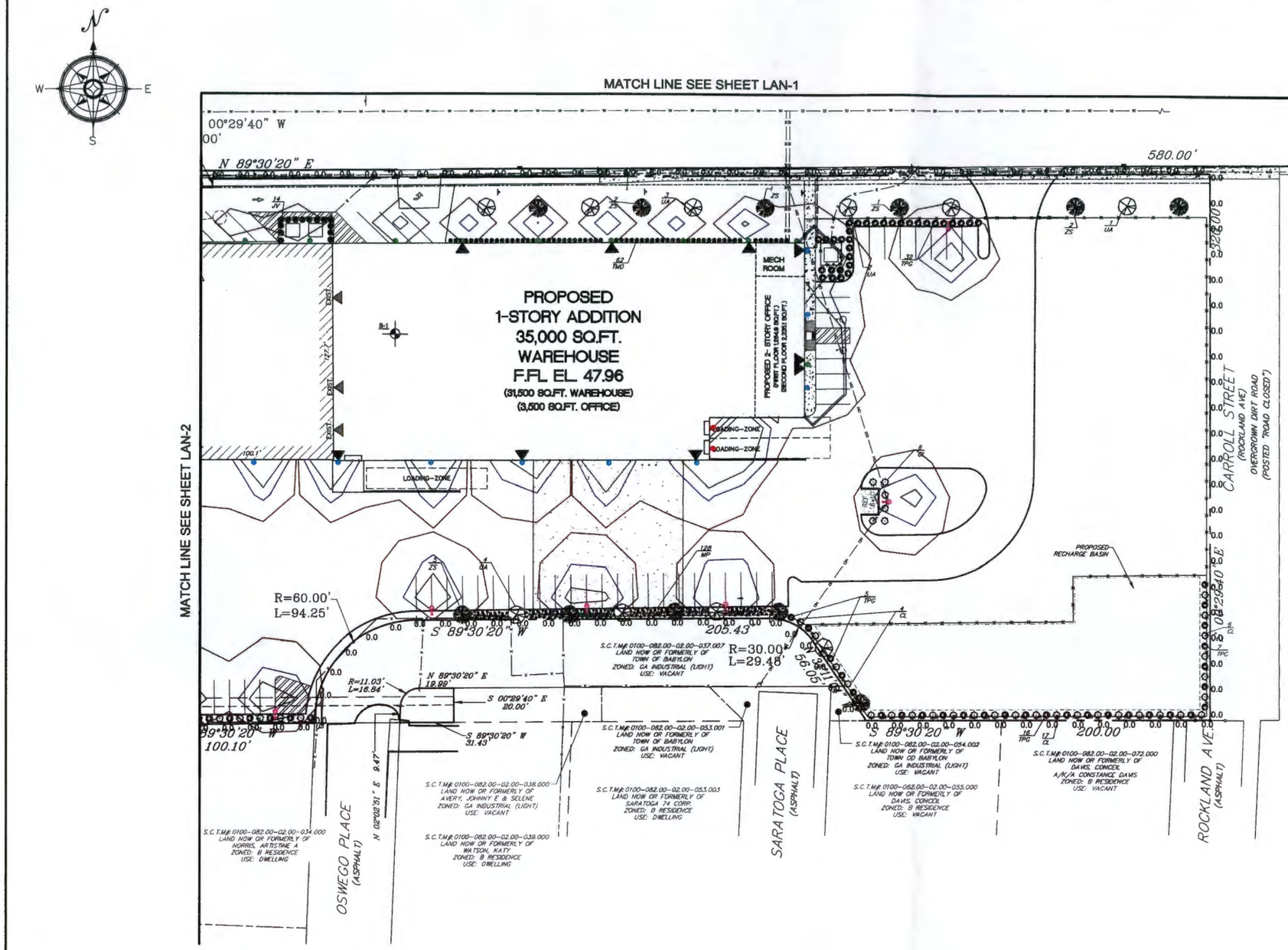
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

SAN-1

SHEET NO. 5 OF 15



SYMBOL KEY

N.T.S

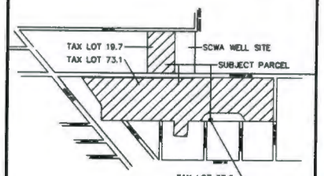
- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- BRAKE
- PIPE
- DRILL HOLE
- HYDRANT
- WATER METER
- BOLLARD
- PROP. PAVEMENT ELEV.
- EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. DROP INLET
- DROP INLET
- ELECTRIC BOX
- CABLE BOX
- TELEPHONE BOX
- TRAFFIC SIGNAL BOX
- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES

N.T.S

- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDER GROUND ELECTRIC
- GAS — GAS LINE
- X — FENCE
- X — FENCE TO BE REMOVED

KEY MAP



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PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

LUMINARY SCHEDULE:

SYM.	TAG	QTY.	NAME	MOUNT HEIGHT
	A	15	IVAFT-100LWM740KU	7'
	B	19	IVAFT-100LPA740KU	15'
	C	18	SLIMFC57N	7'
	D	2	IVAFT-100LWM740KU	10.75'

5 FOOT CANDLE CONTOUR:
3 FOOT CANDLE CONTOUR:
1 FOOT CANDLE CONTOUR:

LANDSCAPE AREA:

TOTAL NATURAL AREA/ LANDSCAPE	72,375.2	SQ.FT.
FRONT YARD NATURAL AREA/ LANDSCAPE	25,917.2	SQ.FT.

OWNER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
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SEAL

LABCREW ENGINEERING, P.C.

LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON
PROJECT

LANDSCAPE/LIGHTING PLAN #3
TITLE

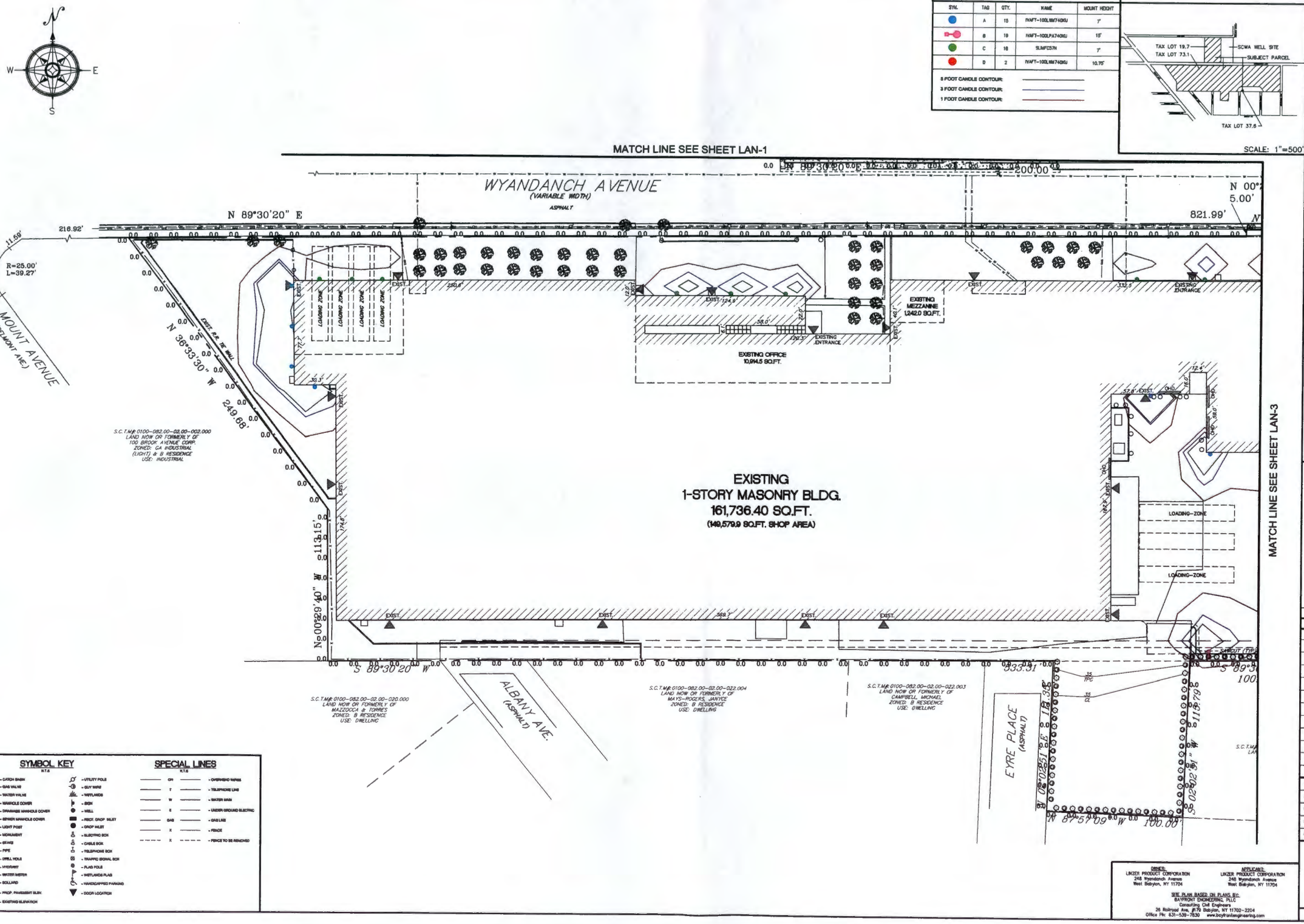
S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

LAN-3

SHEET NO. 11 OF 15



LABCREW ENGINEERING, P.C.
SITE DESIGN/PLANNERS/CIVIL ENGINEERING
273 HAWKINS AVENUE
RONKONKOMA, NEW YORK 11779
PHONE (631)-676-4681
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SEAL

PROJECT: LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE: LANDSCAPE/LIGHTING PLAN #2

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
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4.	08/15/19	CLIENT REVISIONS
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6.	10/30/19	T.O.B COMMENTS

PROJECT No. 18-074
DRAWN BY TP
CHECKED CTL
DATE February 2019
SCALE 1"=40'

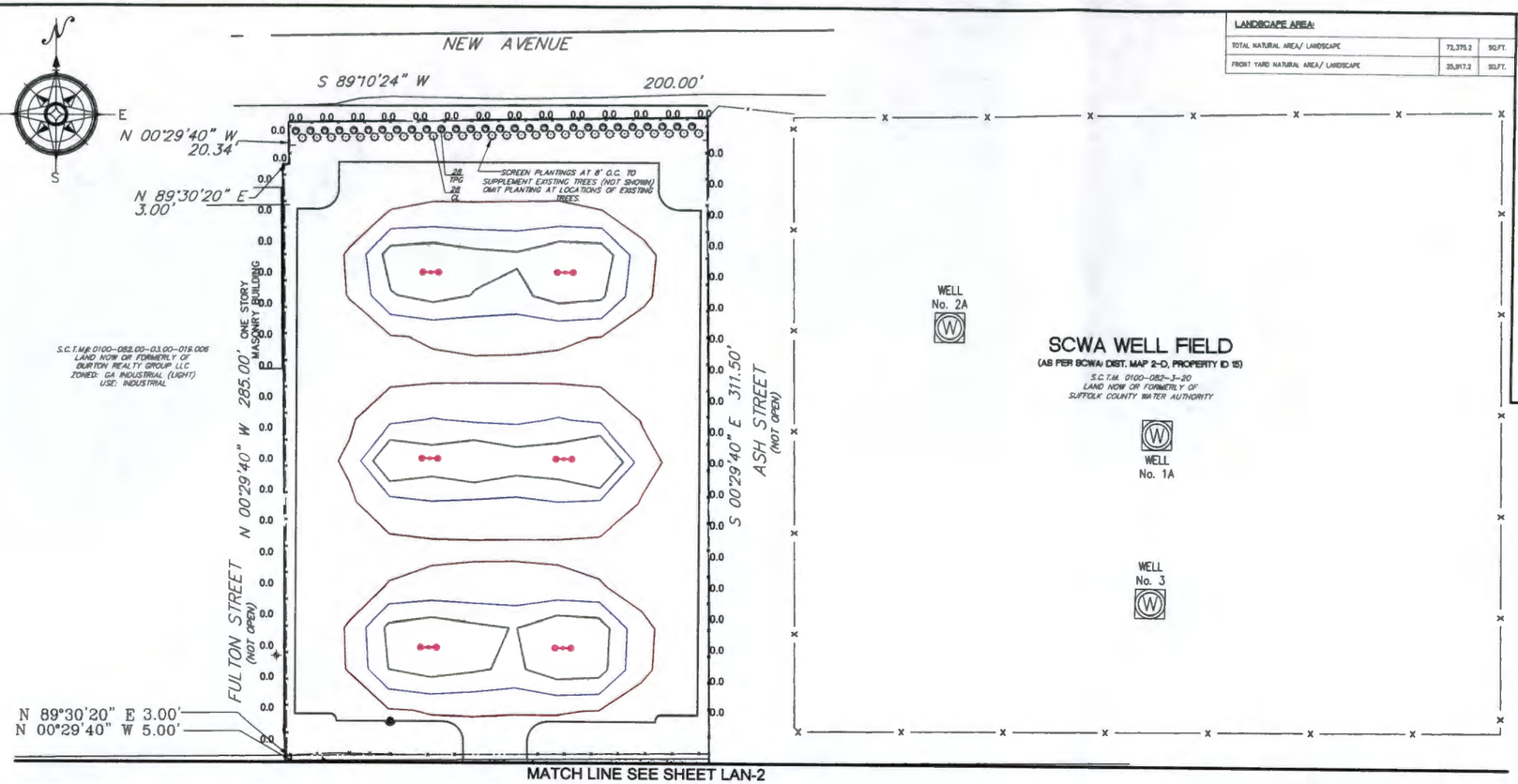
LAN-2

SHEET NO. 10 OF 15

OWNER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

SITE PLAN BASED ON PLANS, BY:
BAYFRONT ENGINEERING, PLLC
Consulting Civil Engineers
26 Railroad Ave, #179 Babylon, NY 11702-2204
Office Ph: 631-539-7830 www.bayfrontengineering.com



MATCH LINE SEE SHEET LAN-2

LANDSCAPE AREA:		
TOTAL NATURAL AREA/ LANDSCAPE	72,375.2	SQ.FT.
FRONT YARD NATURAL AREA/ LANDSCAPE	25,917.2	SQ.FT.

SYMBOL KEY

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- GUARD
- PIPE
- DRILL HOLE
- HYDRANT
- WATER METER
- BOLLARD
- PROP. PAVEMENT ELEV.
- EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. CROP INLET
- CROP INLET
- ELECTRIC BOX
- CABLE BOX
- TELEPHONE BOX
- TRAFFIC SIGNAL BOX
- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

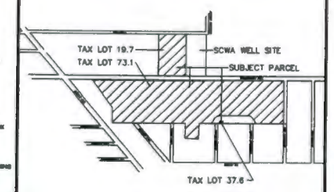
SPECIAL LINES

- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDER GROUND ELECTRIC
- GAS — GAS LINE
- X — FENCE
- X — FENCE TO BE REMOVED

- EX — EXISTING TREE TO BE REMOVED
- EX — EXISTING TREE TO REMAIN
- ZS — JAPANESE ZELKOVA
- UA — LIBERTY ELM
- TPG — WESTERN ARBORVITAE
- CL — LEYLAND CYPRESS
- NP — N. BAYBERRY
- JV — SKYROCKET JUNIPER
- TMD — DENSE YEW

LEGEND
SPECIES — EK
QUANTITY — 1

KEY MAP



SCALE: 1"=500'

SITE CRITERIA

SITE DATA:

SITE AREA: (TAX LOT 73.1)	9.34 ACRES	406,934	SQ. FT.
SITE AREA: (TAX LOT 19.7)	1.44 ACRES	63,053	SQ. FT.
TOTAL SITE AREA:	10.78 ACRES	469,987	SQ. FT.
EXISTING BUILDING AREA:		161,738.4	SQ. FT.
EXISTING BUILDING FOOTPRINT:		160,494.4	SQ. FT.
PROPOSED BUILDING AREA:		35,000.0	SQ. FT.
PROPOSED BUILDING FOOTPRINT:		33,500.0	SQ. FT.
TOTAL BUILDING AREA:		196,738.4	SQ. FT.
TOTAL BUILDING FOOTPRINT:		193,994.4	SQ. FT.
PROPOSED F.A.R.:		41.28	%
PARKING REQUIRED:		358	STALLS
PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

ZONING REQUIREMENTS - GA INDUSTRIAL:

SETBACK	REQUIRED	PROPOSED	
LOT AREA	40,000	469,987 (10.784Ac)	SQ. FT.
FRONT YARD SETBACK (WYANDANCH AVE) FRONT YARD SETBACK (ROCKLAND AVE)	30.0 30.0	32.3* 235.0	FEET
MIN. SIDE YARD SETBACK	19.0	6.3**	FEET
TOTAL SIDE YARD SETBACK	N/A	N/A	FEET
REAR YARD SETBACK	30.0	30.1*	FEET
MIN. WIDTH OF LOT	100	N/A	FEET
MAX BUILDING HEIGHT	35	1 STORY	FT/STORIES
FAR RATIO	45	41.28	% MAX

LUMINARY SCHEDULE:

SYM.	TAG	QTY.	NAME	MOUNT HEIGHT
	A	15	IVAFT-100LWM740KU	7'
	B	19	IVAFT-100LPA740KU	15'
	C	16	SLIMFCS7M	7'
	D	2	IVAFT-100LWM740KU	10.75'

5 FOOT CANDLE CONTOUR:
3 FOOT CANDLE CONTOUR:
1 FOOT CANDLE CONTOUR:

IVAFT-100LWM740KU — RAB Outdoor — Type A & D

IVAFT-100LPA740KU — RAB Outdoor — Type B

SLIMFCS7M — RAB Outdoor — Type C

DRIVER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY:
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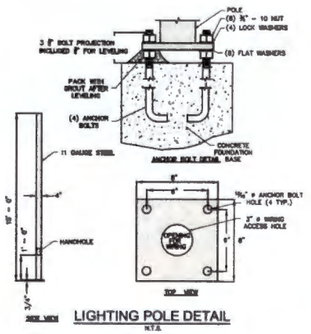
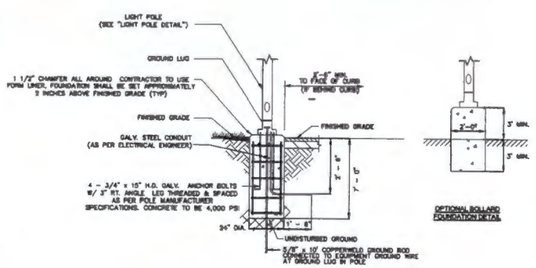
PLANT MATERIAL LIST

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE/SPACE	ROOT
DECIDUOUS TREES					
UA	10	ULMUS AMERICAN LIBERTY	LIBERTY ELM	3"-3.5"CAL./25'O.C.	B&B
ZS	11	ZELKOVA SERRATA	JAPANESE ZELKOVA	3"-3.5" CAL. - 25' O.C.	B&B
EVERGREEN TREES		Cupressus × leylandii			
CL	96	CUPRESSUS X LEYLANDII	LEYLAND CYPRESS	6'-8' HT. - 8' O.C.	B&B
TPG	123	THUJA PLICATA GREEN GIANT	WESTERN ARBORVITAE	6'-8' HT. - 8' O.C.	B&B
JV	14	JUNIPERUS VIRGINIANA	SKYROCKET JUNIPER	3'-4' HT. - 8' O.C.	#3 CONT.
SHRUBS					
MP	125	MYRICA PENSYLVANICA	N. BAYBERRY	18"-24" SP. - 3' O.C.	#2 CONT.
TMD	62	TAXUS MEDIA DENSIFORMIS	DENSE YEW	18"-24" HT. - 2.5' O.C.	#2 CONT.
ORNAMENTAL GRASS					

GRASS SEED TO BE PLANTED IN REMAINING LANDSCAPE AREAS. GRASS SEED TO BE A MIX OF FINE FESCUE @ 10000S.F. PER POUND (20%), PERENNIAL RYEGRASS @ 1,000 S.F. PER POUND (20%) AND KENTUCKY BLUEGRASS BLEND @ 200 S.F. PER POUND (60%)
ALL PLANTINGS SHALL BE SURROUNDED BY MULCH - ALL LANDSCAPE AREAS TO BE HAVE AN IRRIGATION SYSTEM



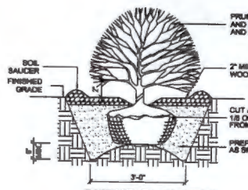
LIGHTING POLE DETAIL
N.T.S.



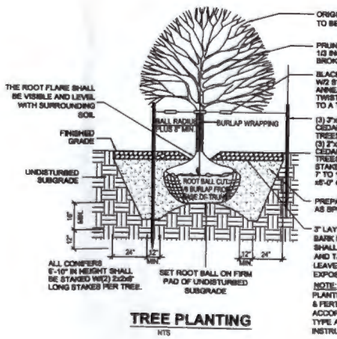
SITE LIGHTING FOUNDATION DETAIL
N.T.S.

1. 4,000 P.S.I. PRECAST CONCRETE BASE. PROVIDE (4) No. 6 RODS SET VERTICALLY, TIED WITH No. 4 HOOPS AT 12" O.C. TOP OF FOUNDATION TO BE LEVEL.
2. COPPER WELD GROUND ROD 5/8" DIA. X 10'-0" LONG CAST IN FOUNDATION, OR INSTALLED IN 1" PVC SLEEVE. BONDS TRANSFORMER BASE, CONDUIT RUNNINGS AND BALLAST CASING TO GROUND ROD BY MEANS OF No. 4 BARE STRANDED WIRE IN AN APPROVED MANNER.
3. CONTRACTOR SHALL VERIFY INDIVIDUAL MANUFACTURER REQUIREMENTS PRIOR TO FABRICATING FOUNDATIONS. FOUNDATIONS SHALL BE COORDINATED WITH MANUFACTURER BY CONTRACTOR.
4. REFER TO REVISED LIGHTING SCHEDULE FOR LIGHTING LAYOUT AND NUMBER OF FIXTURES.

TURF ESTABLISHMENT DETAIL



SHRUB PLANTING



TREE PLANTING
NTS

PLANT MATERIAL NOTES

1. ALL DECIDUOUS TREES TO BE SPECIMEN QUALITY, HAVE A SINGLE STEM AND STRAIGHT LEADER, WELL BRANCHED AND LIMBED UP 6'-0"
2. ALL EVERGREEN TREES TO BE SPECIMEN QUALITY, FULL AND DENSE AND BRANCHED TO THE GROUND.
3. ALL SHRUBS TO BE FULL AND DENSE WITH THE MIN. # OF CANES PER SIZE REQUESTED IN ACCORDANCE W THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. SPACING SHALL BE AS SHOWN ON THE PLAN OR AS NOTED

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. NO PLANTS SHALL BE INSTALLED BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE ARCHITECT OR EQUAL.
4. ALL PLANTS SHALL BE INSTALLED AS PER THE DETAILS AND CONTRACT SPECIFICATIONS
5. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON.
6. ALL PLANTING BEDS SHALL BE MULCHED WITH 4" OF SHREDDED BARK MULCH OVER A SYNTHETIC WEED BARRIER FABRIC.
7. THE CONTRACTOR SHALL FURNISH A ONE YEAR WARRANTY ON ALL PLANT MATERIALS.
8. ALL PLANT MATERIALS SHALL BE INSTALLED USING STANDARD ACCEPTABLE LANDSCAPE PRACTICE
9. LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN COMPLIANCE WITH THE TOWN OF ISLIP REGULATIONS & SPECIFICATIONS.
10. NO PLANTINGS AT THE DRIVEWAYS SHALL VIOLATE ANY LINES OF SIGHT.
11. NO PLANT MATERIAL, EXCEPT LAWN OR GROUND COVER, TO BE LOCATED WITHIN 2' OF ANY PASSING LOT LINES.
12. PRUNE ALL BROKEN OR DAMAGED BRANCHES. ORIGINAL LEADER OF TREES SHALL BE MAINTAINED. TREES WITH BROKEN, DAMAGED OR PRUNED LEADERS WILL BE REJECTED
13. GROUND LINE TO BE THE SAME AS EXISTED AT NURSERY
14. PLANTING HOLES SHOULD BE AT LEAST TWICE THE DIAMETER OF THE ROOT BALL.
15. ROOT BALLS OF PLANTS SHOULD BE PLACED ON UNDISTURBED EARTH. THE CROWN OF THE ROOT BALL AND FLARE OF THE PLANT TRUNK OR STEM SHOULD BE AT GROUND LEVEL. ROOT FLARE AT BASE OF TREE IS TO BE VISIBLE AFTER PLANTING
16. BURLAP SHOULD BE REMOVED FROM AT LEAST THE TOP ONE THIRD OF THE ROOT BALL ALL WIRES AND NON-BIODEGRADABLE MATERIAL SHOULD BE REMOVED COMPLETELY FROM THE ROOT BALL.
17. BACKFILL SHOULD CONSIST OF A MINIMUM OF 50% OF THE ORIGINAL SOIL EXCAVATED FROM THE PLANTING HOLE, UNLESS THE CONDITIONS OF THE EXCAVATED MATERIAL WARRANT REPLACEMENT OF SIGNIFICANT AMENDMENTS.
18. PEAT MOSS IS NOT RECOMMENDED FOR USE AS MULCH OR AS A SOIL AMENDMENT IN BACKFILL.
19. THREE (3) INCHES OF MULCH SHOULD BE SPREAD OVER THE PLANTING HOLE. THE MULCH SHOULD BE KEPT AWAY FROM THE TRUNK OF TREES.
20. TREES SHOULD NOT BE STAKED UNLESS ABSOLUTELY NECESSARY. IF TREES ARE TO BE STAKED, THE GUY WIRES SHOULD BE LEFT LOOSE SO THAT THE TREE HAS A CHANCE TO ADAPT TO THE SITE CONDITIONS. STAKES AND WIRES SHOULD BE REMOVED FROM THE TREES WITHIN ONE YEAR.
21. TREE WRAPPING IS NOT RECOMMENDED UNLESS SPECIFICALLY REQUIRED.
22. ALL LANDSCAPING AS SHOWN ON AN APPROVED PLAN SHALL BE MAINTAINED IN A VIGOROUS GROWING CONDITION. ANY PLANTS NOT SO MAINTAINED SHALL BE REPLACED WITH HEALTHY NEW PLANTS OF COMPARABLE SIZE, TYPE AND QUALITY AT THE BEGINNING OF THE NEXT GROWING SEASON.
23. CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL IRRIGATION SYSTEM AS PER TOWN STANDARDS AND SPECIFICATIONS.
24. PLANTINGS WITHIN THE ROAD FRONTAGE AND RESIDENTIAL BUFFERS ARE TO BE MAINTAINED WITH AN IRRIGATION SYSTEM. FERTILIZERS & OTHER REQUIRED MATERIALS TO MAINTAIN A NEAT & HEALTHY APPEARANCE.
25. ALL DISTURBED AREAS NOT SPECIFICALLY DESIGNATED FOR IMPROVEMENTS ARE TO BE RESTORED WITH 4" OF TOPSOIL AND GRASS SEED
26. THERE SHALL BE NO PLANT SUBSTITUTIONS UNLESS AUTHORIZED BY STAFF OF THE BABYLON PLANNING AND ENVIRONMENTAL DEPARTMENT.
27. EXISTING VEGETATION AS SHOWN ON THIS PLAN SHALL BE RETAINED UNLESS SPECIFIED AS OTHER

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SEAL

LABCREW ENGINEERING, P.C.

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PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

PROJECT

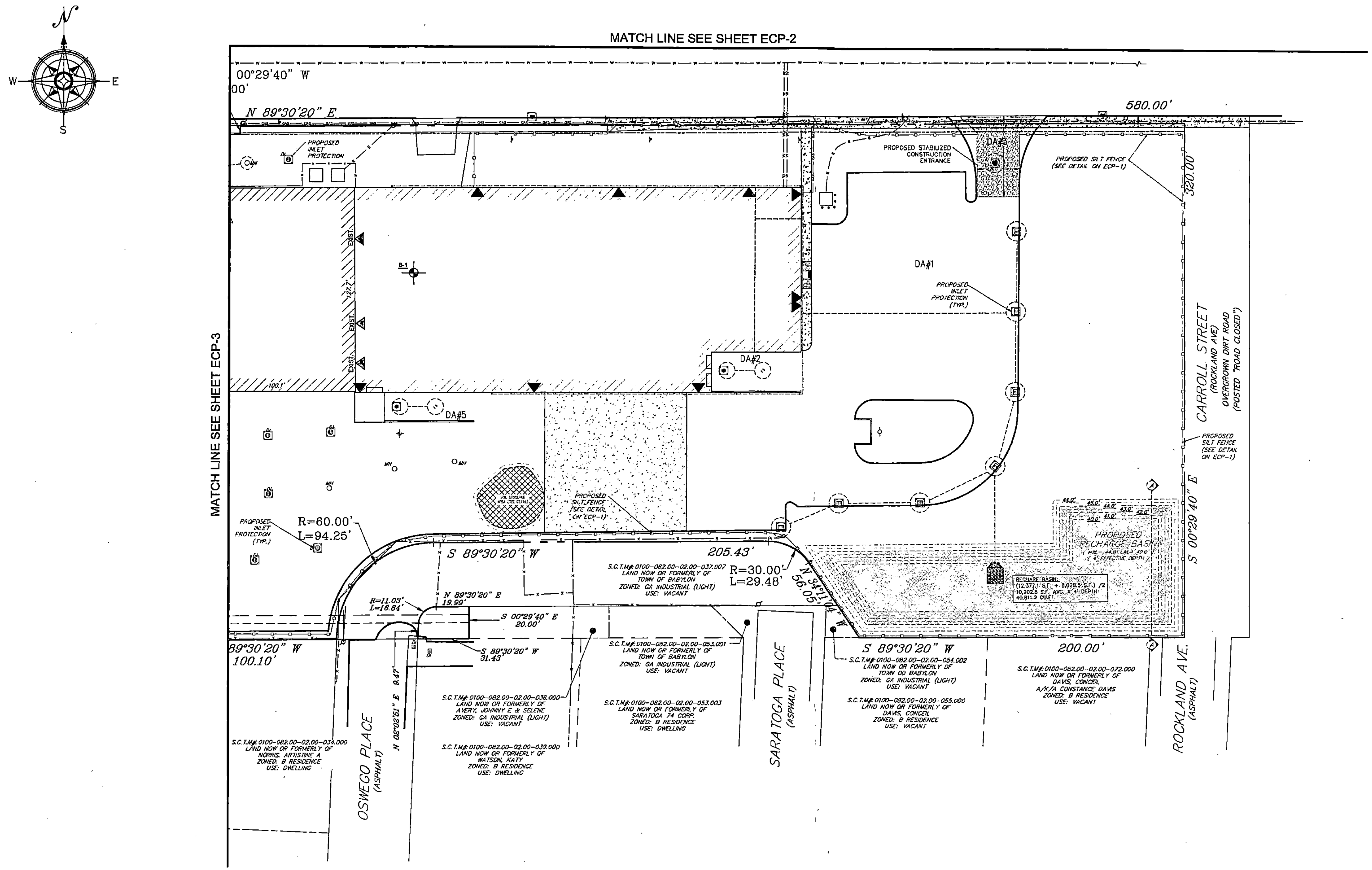
LANDSCAPE/LIGHTING PLAN #1

TITLE

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

LAN-1

SHEET NO. 9 OF 15



SYMBOL KEY
N.T.S

- CATCH BASIN
- GAS VALVE
- WATER VALVE
- MANHOLE COVER
- DRAINAGE MANHOLE COVER
- SEWER MANHOLE COVER
- LIGHT POST
- MONUMENT
- STAKE
- PIPE
- DRILL HOLE
- HYDRANT
- WM - WATER METER
- BOLLARD
- 100.0 - PROP. PAVEMENT ELEV.
- +100.0 - EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
- WETLANDS
- SIGN
- WELL
- RECT. DROP INLET
- DROP INLET
- ELECTRIC BOX
- CABLE BOX
- TELEPHONE BOX
- TRAFFIC SIGNAL BOX
- FLAG POLE
- WETLANDS FLAG
- HANDICAPPED PARKING
- DOOR LOCATION

SPECIAL LINES
N.T.S

- OH - OVERHEAD WIRES
- T - TELEPHONE LINE
- W - WATER MAIN
- E - UNDER GROUND ELECTRIC
- GAS - GAS LINE
- X - FENCE
- X (dashed) - FENCE TO BE REMOVED

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SEAL

PROJECT: LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

TITLE: EROSION CONTROL PLAN #3

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
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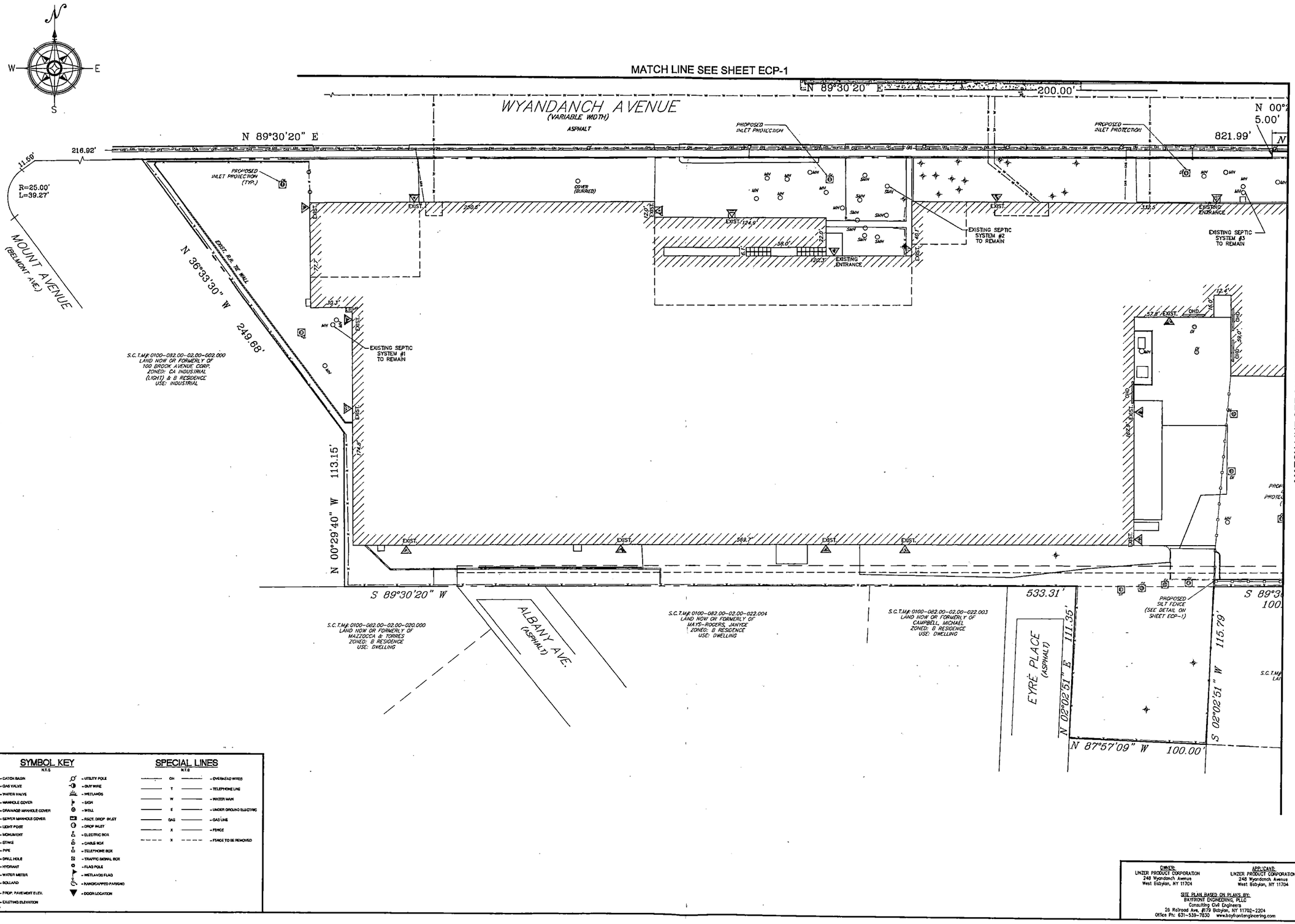
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=60'

ECP-3



SYMBOL KEY

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- HYDRANT
- WM WATER METER
- BOLLARD
- ±100.5 PROP. PAVEMENT ELEV.
- +100.0 EXISTING ELEVATION
- UTILITY POLE
- GUY WIRE
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SPECIAL LINES

N.T.S

- OH — OVERHEAD WIRES
- T — TELEPHONE LINE
- W — WATER MAIN
- E — UNDER GROUND ELECTRIC
- GAS — GAS LINE
- X — FENCE
- X — FENCE TO BE REMOVED

OWNER:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

APPLICANT:
LINZER PRODUCT CORPORATION
248 Wyandanch Avenue
West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY:
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SEAL

LINZER PRODUCTS CORP.
248 WYANDANCH AVENUE
WYANDANCH, NY 11704
TOWN OF BABYLON

PROJECT: EROSION CONTROL PLAN #2

TITLE

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
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PROJECT No.	18-074
DRAWN BY	TP
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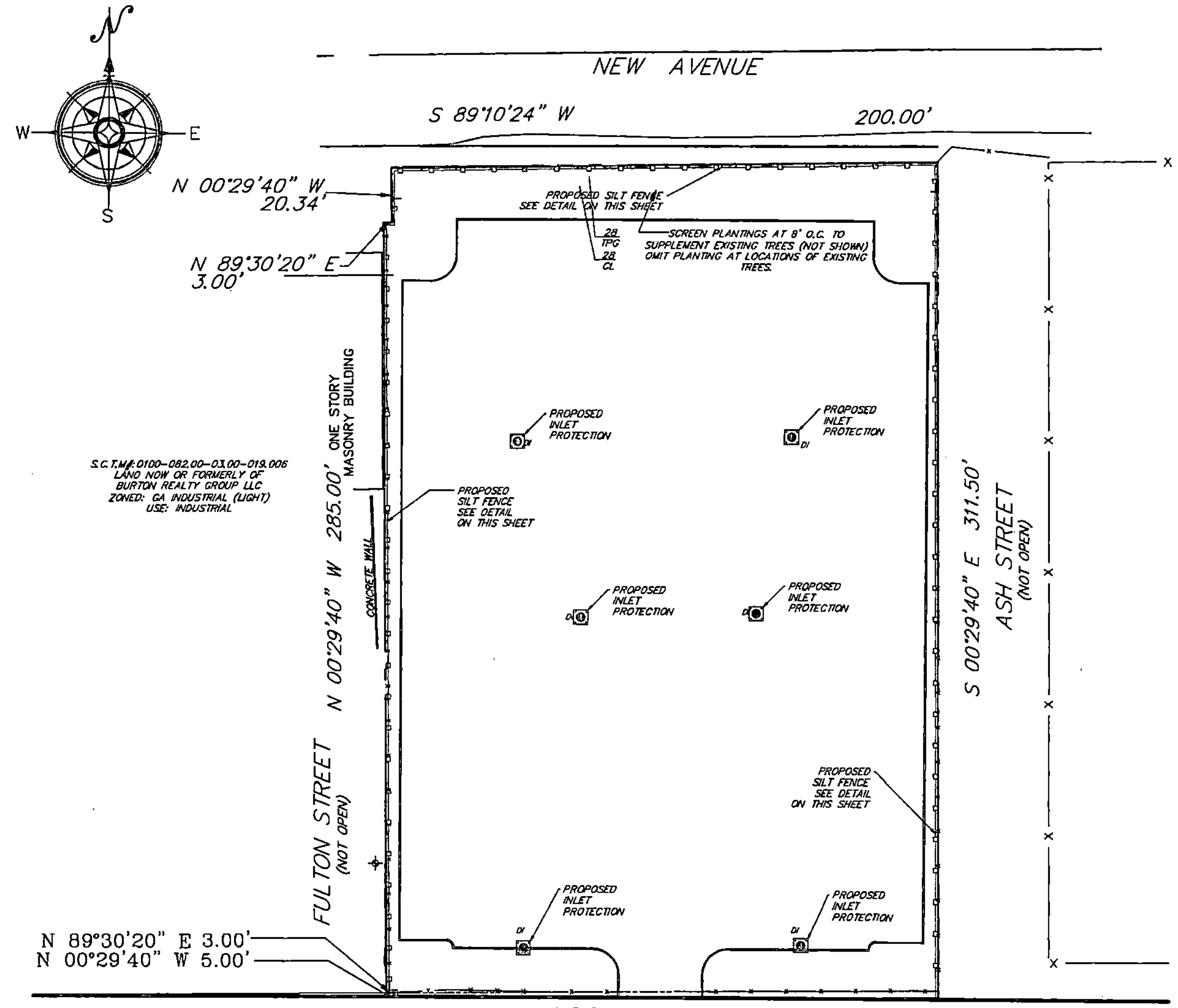
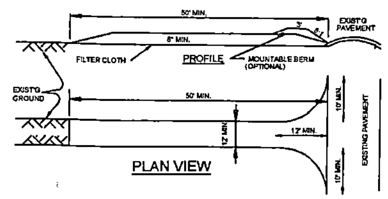
DATE	February 2019
SCALE	1"=30'

ECP-2



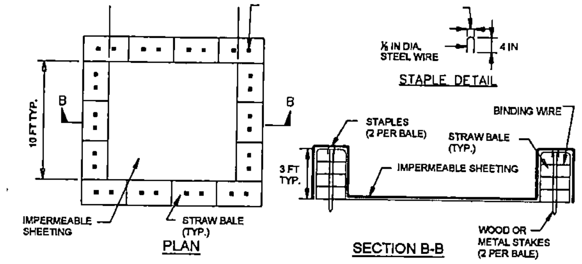
MATCH LINE SEE SHEET ECP-2



1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - THIRTY FOUR (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

TEMPORARY CONSTRUCTION ENTRANCE

NTS



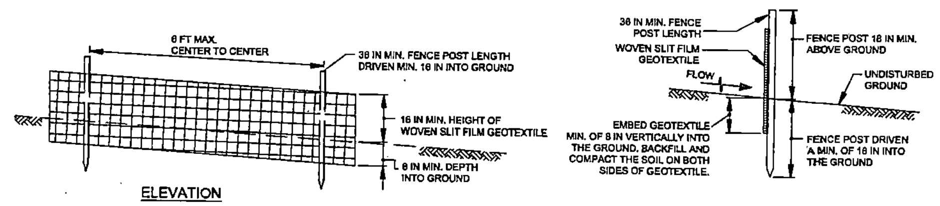
NOTE: 1. CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH
2. CAN BE A SHORT WALL 10 YARD STEEL REFUSE CONTAINER (IMPERMEABLE SHEETING LINER IS STILL REQUIRED FOR THIS OPTION)

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.
6. A METAL ROOL-OFF BIN DESIGNATED TO SECURELY CONTAIN CONCRETE WASHWATER AND SOLIDS MAY BE PROVIDED IN LIEU OF A HAY BALE AN PLASTIC WASHOUT PIT.

HAY BALE (OR STEEL CONTAINER) AND PLASTIC CONCRETE WASHOUT DETAIL

NTS



CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

SILT FENCE DETAIL

NTS

EROSION CONTROL MEASURES

1. THE PROPOSED EROSION CONTROL MEASURES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. ADDITIONAL EROSION CONTROL MAY BE NECESSARY BASED UPON FIELD CONDITIONS THAT MAY DEVELOP AS CONSTRUCTION PROGRESSES AND AS REQUIRED BY THE TOWN. THE FOLLOWING GENERAL CONDITIONS SHALL BE OBSERVED.
   A. EXISTING VEGETATION TO REMAIN SHALL BE PROTECTED AND REMAIN UNDISTURBED.
   B. CLEARING AND GRADING SHALL BE SCHEDULED SO AS TO MINIMIZE THE SIZE OF EXPOSED AREAS AND THE LENGTH OF TIME THAT AREAS ARE EXPOSED.
   C. THE LENGTH AND STEEPNESS OF CLEARED SLOPES SHALL BE MINIMIZED TO REDUCE RUNOFF VELOCITIES AND QUANTITIES.
   D. RUNOFF SHALL BE DIVERTED AWAY FROM CLEARED SLOPES.
   E. SEDIMENT SHALL BE TRAPPED ON THE SITE.

SPECIFIC METHODS AND MATERIALS EMPLOYED IN THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES SHALL CONFORM TO THE "NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL".

2. SEDIMENT BARRIERS (SILT FENCE OR APPROVED EQUAL) SHALL BE INSTALLED PRIOR TO ANY GRADING WORK ALONG THE LIMITS OF DISTURBANCES AND SHOULD BE MAINTAINED FOR THE DURATION OF THE WORK. NO SEDIMENT FROM THE SITE SHALL BE PERMITTED TO WASH ONTO ADJACENT PROPERTIES, WETLAND OR ROADS.

3. GRADED AND STRIPPED AREAS AND STOCKPILES SHALL BE KEPT STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AS REQUIRED. SEED MIXTURES SHALL BE IN ACCORDANCE WITH SOIL CONSERVATION SERVICE RECOMMENDATIONS.

4. DRAINAGE INLETS INSTALLED AS PART OF THE PROJECT SHALL BE PROTECTED FROM SEDIMENT BUILDUP THROUGH THE USE OF SEDIMENT BARRIERS, SEDIMENT TRAPS, ECT. AS REQUIRED.

5. PROPER MAINTENANCE OF EROSION CONTROL MEASURES IS TO BE PERFORMED AS INDICATED BY PERIODIC INSPECTION AND AFTER HEAVY OR PROLONGED STORMS. MAINTENANCE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, CLEANING OF SEDIMENT BASINS OR TRAPS, CLEANING OR REPAIR OF SEDIMENT BARRIERS, CLEANING AND REPAIR OF BERMS AND DIVERSIONS AND CLEANING AND REPAIR OF INLET PROTECTION.

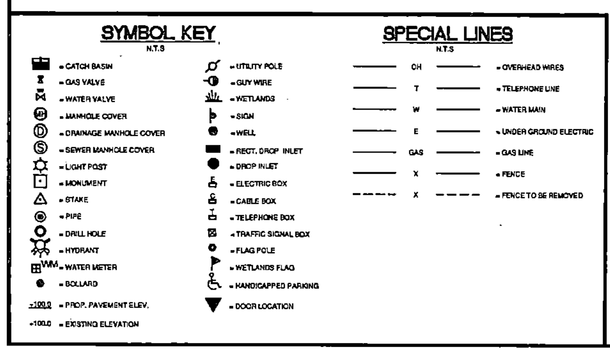
6. APPROPRIATE MEANS SHALL BE USED TO CONTROL DUST DURING CONSTRUCTION. IF THE CONTRACTOR WATER-DOWNS ANY SPACE TO MITIGATE UNWANTED DUST LEVELS, RUNOFF FROM THE "WETTING" OPERATIONS SHALL NOT BE ALLOWED TO ENTER THE ON-SITE STORM DRAIN OR SANITARY SYSTEM NOR SHALL IT BE ALLOWED TO DISCHARGE OFF THE PROPERTY. THE CONTRACTOR SHALL ARRANGE FOR WATER SUPPLY, PROVIDE ANY BACK FLOW PREVENTION DEVICES REQUIRED BY THE LOCAL WATER SUPPLIER, AND PAY FOR ALL ASSOCIATED COSTS.

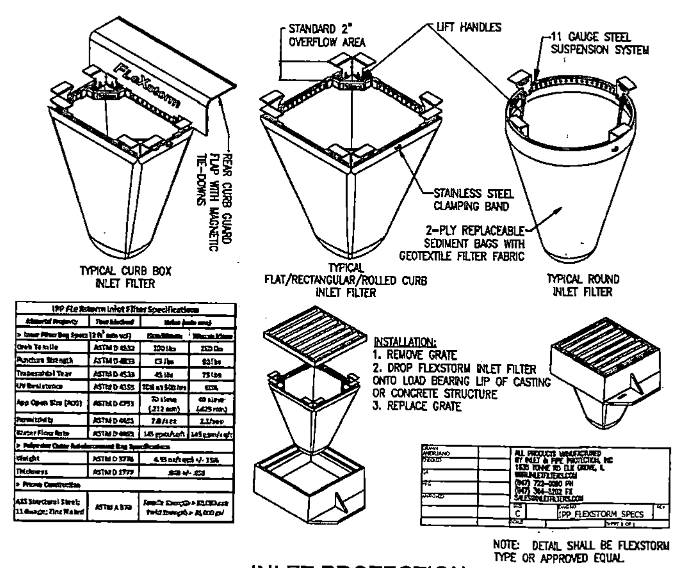
7. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED TO PREVENT SOIL AND LOOSE DEBRIS FROM BEING TRACKED ONTO LOCAL ROADS. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED.

8. SEDIMENT BARRIERS AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL UPLAND DISTURBED AREAS ARE PERMANENTLY STABILIZED (SEE GRADING NOTE NUMBER 1). AFTER PERMANENT STABILIZATION, PAVED AREAS SHALL BE CLEANED AND DRAINAGE SYSTEMS CLEANED AND FLUSHED AS NECESSARY.

9. SILT FENCE TO BE INSTALLED AROUND ALL MATERIAL STOCKPILING AREAS.

10. STOCKPILED MATERIAL NOT TO BE PLACED WHERE IT CAN BE IN CONFLICT WITH THE DEED RESTRICTED AREAS.





NOTE: DETAIL SHALL BE FLEXSTORM TYPE OR APPROVED EQUAL.

INLET PROTECTION

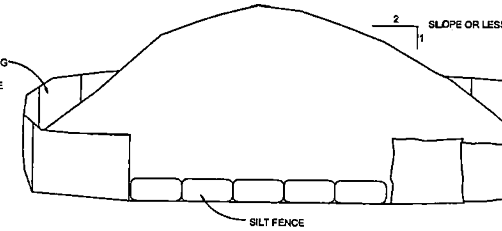
NTS

SCHEDULE OF OPERATIONS:

1. INSTALLATION OF SEDIMENT AND EROSION CONTROL MEASURES.
2. SITE CLEARING AND EXCAVATION.
3. CONSTRUCTION ACTIVITIES.
4. ROUGH GRADING.
5. INSTALLATION OF NEW CONSTRUCTION.
6. INSTALLATION OF NEW TREES AND SHRUBS
7. FINAL GRADING AND STABILIZATION.
8. REMOVAL OF SEDIMENT AND EROSION CONTROL MEASURES.
9. FINAL LANDSCAPING.

GRADING NOTES

1. ALL 1:2 & 1:3 SLOPE AREAS WILL BE PROTECTED AGAINST EROSION DURING CONSTRUCTION AND PERMANENT GROUND COVER SHALL BE SUCH THAT EROSION WILL BE PREVENTED. NECESSARY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, SILT FENCE, SILT TRAPS/BASINS, JUTE MESH, HYDROSEEDING, ECT. AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION AS WELL AS FOLLOWING THE COMPLETION OF CONSTRUCTION UNTIL SUCH TIME THAT THE PROPOSED PLANTINGS HAVE BECOME ACCLIMATED/ESTABLISHED.



SOIL STOCKPILE

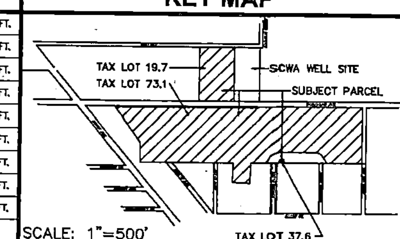
NTS

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 2 ON 1.
- UPON COMPLETION OF SOIL STOCKPILING WHICH IS TO BE MAINTAINED FOR MORE THAN TWO WEEKS, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

SITE DATA:

SITE AREA: (TAX LOT 73.1)	9.34 ACRES	406,934	SQ. FT.
SITE AREA: (TAX LOT 19.7)	1.44 ACRES	63,053	SQ. FT.
TOTAL SITE AREA:	10.78 ACRES	469,987	SQ. FT.
EXISTING BUILDING AREA:		161,736.4	SQ. FT.
EXISTING BUILDING FOOTPRINT:		160,494.4	SQ. FT.
PROPOSED BUILDING AREA:		35,000.0	SQ. FT.
PROPOSED BUILDING FOOTPRINT:		33,500.0	SQ. FT.
TOTAL BUILDING AREA:		196,736.4	SQ. FT.
TOTAL BUILDING FOOTPRINT:		193,994.4	SQ. FT.
PROPOSED F.A.R.:		41.28	%
PARKING REQUIRED:		358	STALLS
PARKING PROVIDED W/LAND BANKED:		358	STALLS
DATUM:		NAVD 88	
ZONING:		GA INDUSTRIAL DISTRICT	
USE:		WAREHOUSE	

KEY MAP



SCALE: 1"=500'

OWNER: LINZER PRODUCT CORPORATION 248 Wyandanch Avenue West Babylon, NY 11704

APPLICANT: LINZER PRODUCT CORPORATION 248 Wyandanch Avenue West Babylon, NY 11704

SITE PLAN BASED ON PLANS BY: BAYPOINT ENGINEERING, PLLC Consulting Civil Engineers 25 Railroad Ave. #70 Babylon, NY 11702-2204 Office Ph: 631-539-7630

LABCREW ENGINEERING, P.C.
SITE DESIGN/PLANNERS/CIVIL ENGINEERING
273 HAWKINS AVENUE
RONKONKOMA, NEW YORK 11779
PHONE (631)-676-4881
FAX (631)-676-4882
LABCREW@OPTONLINE.NET

SEAL

PROJECT: LINZER PRODUCTS CORP. 248 WYANDANCH AVENUE WYANDANCH, NY 11704 TOWN OF BABYLON

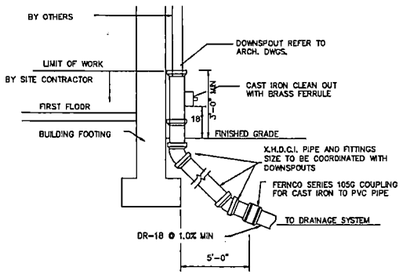
TITLE: EROSION CONTROL PLAN #1

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006 0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

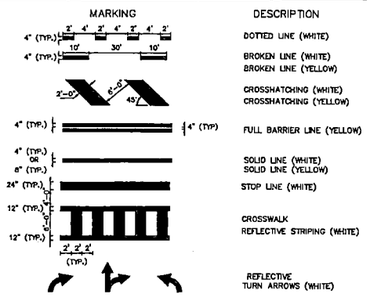
PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	1"=30'

ECP-1



DOWNSPOUT CONNECTION DETAIL

NOTES: 1. CONTRACTOR SHALL COORDINATE DOWNSPOUT SIZE WITH ARCHITECTS PLANS.



PAVEMENT MARKING LEGEND ON-SITE

1. LEGENDS AND SYMBOLS: SERIES SMS-900, WHITE. CONTACT CEMENT AS RECOMMENDED BY THE MANUFACTURER.

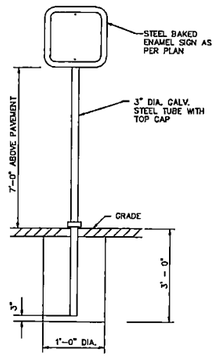
DO NOT ENTER SIGN (R5-1)

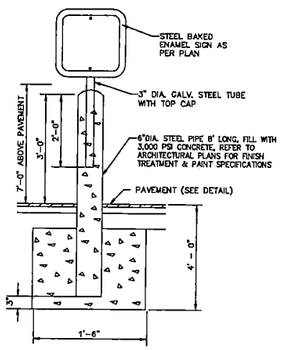
PEDESTRIAN CROSSING ROAD SIGN (W11-2)

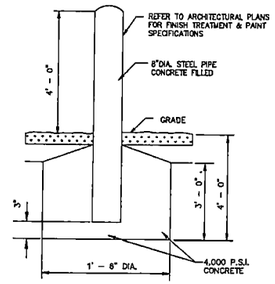
AHEAD SIGN (W16-9P)

"NO PARKING ANY TIME" SIGN (R7-1D)

"ACCESSIBLE RESERVED PARKING" SIGN (R7-8)

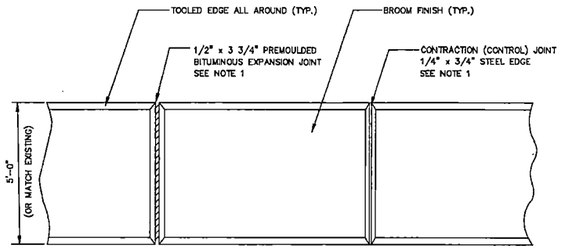




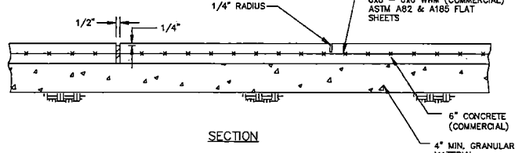


TYPICAL SIGN POST AND BOLLARD DETAIL

1. CONCRETE SHALL HAVE AN UNCONFINED COMPRESSIVE STRENGTH OF 3,500 PSI MIN. @ 28 DAYS.
2. REFER TO ALIGNMENT PLAN FOR ADDITIONAL NOTES, SIGN LOCATIONS, AND THE SCHEDULE OF SIGNS.
3. PAINT SHALL BE APPLIED IN TWO (2) COATS.
4. ALL SIGNS SHALL BE LOCATED A MINIMUM 2'-6" BEHIND THE FACE OF CURB.



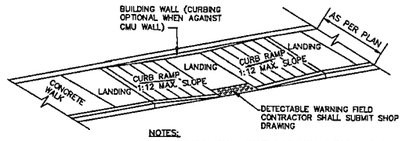
PLAN



SECTION

CONCRETE SIDEWALK DETAIL

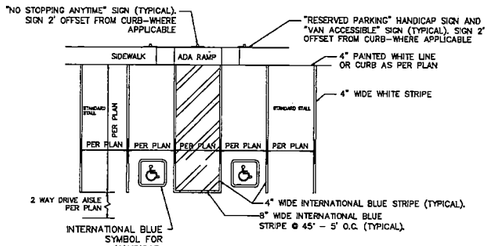
NOTES: 1. CONTROL JOINTS ARE TO BE PLACED EVERY 5'-0" AND EXPANSION JOINTS SHALL BE LOCATED A MINIMUM 20'-0" O.C.
2. SIDEWALK SHALL HAVE A COARSE BROOM FINISH
3. ALL CONCRETE SHALL BE 4,000 PSI @ 28 DAYS



NOTES:
1. LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 5' X 5' SQUARE.
2. THE MAXIMUM CROSS SLOPE AT LANDINGS IS 2% IN ANY DIRECTION.
3. LANDINGS MAY OVERLAP WITH ADJACENT LANDINGS OR A SIGNAL LANDING MAY SERVE MULTIPLE CURB RAMPS OR PARALLEL RAMPS.

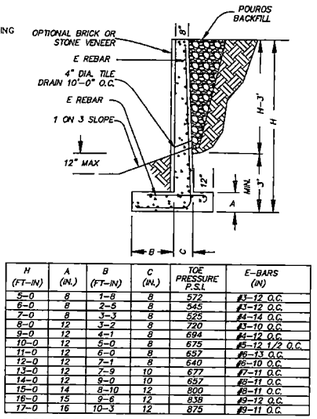
HANDICAPPED ACCESSIBLE RAMP

N.T.S.



PARKING AREA STRIPING AND ALIGNMENT DETAIL

NOTES 1. ALL HANDICAP RAMPS SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE BUILDING CODE AND CABO/ANSI A117.1.
2. ALL STRIPING SHALL HAVE A MINIMUM OF TWO - (2) COATS OF PAINT.
3. ALL PARKING LOT STRIPING TO BE WHITE SHERWIN-WILLIAMS A-100 ACRYLIC EXTERIOR FLAT LATEX SERIES A6 PAINT OR EQUAL, EXCEPT HANDICAP STRIPING COLOR, TWO - (2) COATS



H (FT-IN)	A (IN.)	B (FT-IN)	C (IN.)	TOE PRESSURE P.S.I.	E-BARS (IN)
5'-0	8	1'-8	8	572	#3-12 O.C.
6'-0	8	2'-5	8	545	#3-12 O.C.
7'-0	8	3'-3	8	525	#4-14 O.C.
8'-0	12	3'-2	8	720	#3-10 O.C.
9'-0	12	4'-1	8	694	#4-12 O.C.
10'-0	12	5'-0	8	675	#5-12 1/2 O.C.
11'-0	12	6'-0	8	657	#6-13 O.C.
12'-0	12	7'-1	8	640	#6-10 O.C.
13'-0	12	7'-9	10	677	#7-11 O.C.
14'-0	12	9'-0	10	657	#8-11 O.C.
15'-0	14	8'-10	12	800	#8-11 O.C.
16'-0	15	9'-6	12	838	#9-12 O.C.
17'-0	16	10'-3	12	875	#9-11 O.C.

CONCRETE RETAINING WALL DETAIL

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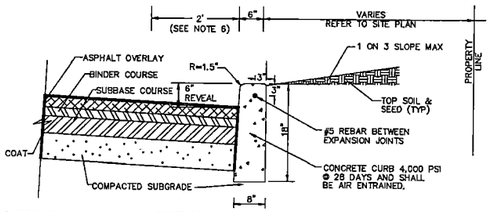


ASPHALT OVERLAY:
1 1/2" COMPACTED ASPHALT TOP COURSE, N.Y.S.D.O.T. TYPE 6 FRA

BINDER COURSE:
3" COMPACTED ASPHALT BINDER COURSE, N.Y.S.D.O.T. TYPE 3 RA

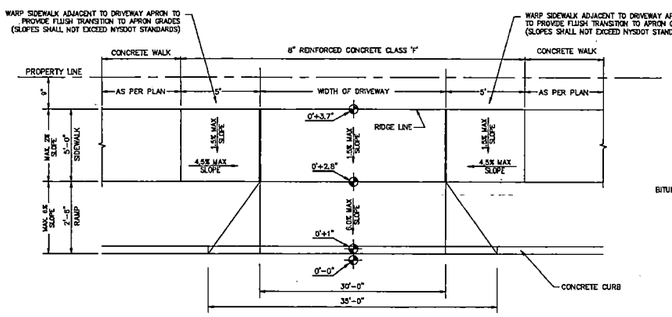
SUBBASE COURSE:
6" COMPACTED RCA SUBBASE COURSE, N.Y.S.D.O.T. TYPE 1011 MATERIAL "A"

ALTERNATIVE ASPHALT OVERLAY:
2" TOP WEARING COURSE (TYPE 51F)

ALTERNATIVE BINDER COURSE:
4" THICKNESS COMPACTED STONE BLEND (RCA WITH LESS THAN 12% FINES, NO ORGANICS)

ON-SITE CURB AND PAVEMENT DETAIL

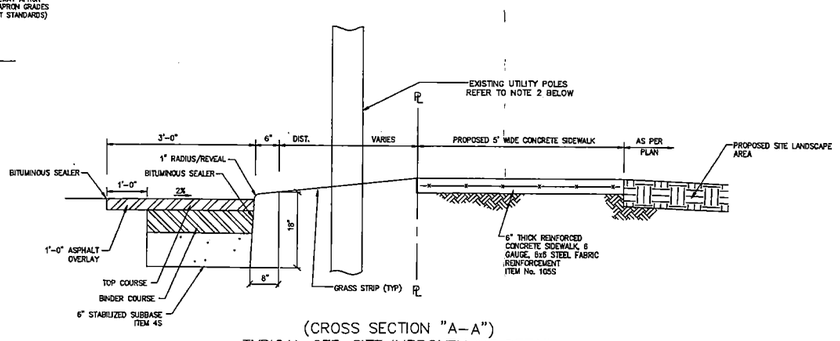
1. EXPANSION JOINTS SHALL BE 1/2" RIGID BITUM. MATERIAL & SHALL BE PLACED AT INTERVALS NOT GREATER THAN 15'-0" O.C. AND AT ALL POINTS OF CURVATURE AND TANGENCY.
2. ALL CONCRETE FOR CURB SHALL BE 4,000 PSI @ 28 DAYS.
3. CURB REVEAL SHALL BE 6" TYPICAL, UNLESS WHERE NOTED ON PLAN.
4. DAMAGED BASE AND BINDER COURSE SHALL BE REMOVED AND REPLACED PRIOR TO PLACEMENT OF TOP COURSE.
5. TOP COURSE SHALL BE PLACED AFTER CONSTRUCTION HAS BEEN SUBSTANTIALLY COMPLETED AS DETERMINED BY THE OWNER OR OWNERS REPRESENTATIVE.
6. WHEN CURB IS REPLACED OR INSTALLED WITHIN THE TOWN OF BABYLON RIGHT-OF-WAY (R.O.W.) THE EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED A MINIMUM OF TWO (2) FROM THE PROPOSED CURB.



PLAN VIEW

TYPICAL WYANDANCH OFF-SITE DRIVEWAY APRON DETAIL

NOTES:
1. THE FIRST FULL FLAG OF SIDEWALK TO EITHER SIDE OF THE DRIVEWAY SHALL BE 8" THICK, WIRE FABRIC REINFORCED
2. ALL SLOPES SHALL COMPLY WITH THE LATEST NYSDOT STANDARDS AND SPECIFICATIONS.
3. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS
4. EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT GREATER THAN 15'-0" O.C. AND AT ALL POINTS OF CURVATURE AND TANGENCY.
5. MAINTENANCE AND PROTECTION SHALL CONFORM TO THE NYS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, TOWN, POLICE DEPARTMENT, AND ALL PUBLIC AND PRIVATE EMERGENCY SERVICES OF ALL DETOURS, PROPOSED STREET CLOSINGS, OR ANY WORK THAT MIGHT AFFECT THE MOBILITY OR ACCESS OF THE FIRE OR POLICE DEPARTMENT 72 HOURS IN ADVANCE OF THEIR IMPLEMENTATION. IN ADDITION, THE CONTRACTOR SHALL ENSURE THAT ALL HYDRANTS ARE KEPT CLEAR AND ACCESSIBLE.

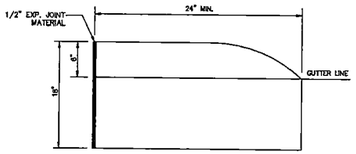


(CROSS SECTION "A-A")

TYPICAL OFF-SITE IMPROVEMENT DETAIL (WYANDANCH AVENUE)

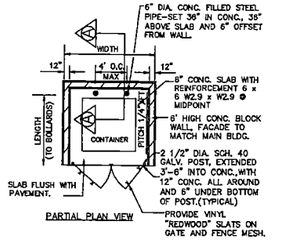
TOP COURSE: 1 1/2" ASPHALT CONCRETE TOP COURSE TYPE 1A - ITEM No. 51FX
BINDER COURSE: ASPHALT CONCRETE DENSE BINDER COURSE TYPE 1B - ITEM No. 51FX COMPACTED IN 3" LIFTS TO BOTTOM OF EXISTING PAVEMENT HEIGHT
SUBBASE COURSE: 6" RECYCLED CONCRETE AGGREGATE

NOTES:
1. IN ADDITION TO THE REQUIREMENTS OF ITEM No. 97, 1/2" PREMOULDED BITUMINOUS JOINT FILLER SHALL BE PLACED IN JOINTS AT 15 FOOT INTERVALS ALONG THE LENGTH OF THE CURB AND WHERE THE CURB ABUTS DRAINAGE CASTINGS.
2. EXISTING UTILITY POLES ARE REQUIRED TO BE 18 INCHES CLEAR OF PROPOSED FACE OF CURB. CONTRACTOR SHALL FIELD VERIFY LOCATIONS. IF CLEARANCE IS NOT A MINIMUM OF 18 INCHES CONTRACTOR SHALL CONTACT PSEGLI TO COORDINATE UTILITY POLE RELOCATIONS.



CURB ENDING BULL NOSE

NOTES:
1. IN ADDITION TO THE REQUIREMENTS OF ITEM No. 97, 1/2" PREMOULDED BITUMINOUS JOINT FILLER SHALL BE PLACED IN JOINTS AT 15 FOOT INTERVALS ALONG THE LENGTH OF THE CURB AND WHERE THE CURB ABUTS DRAINAGE CASTINGS.
2. CURB ENDING SHALL EXTEND 10 FT BEYOND F.C., F.T. CATCH BASIN OR A.G.B.E.



PARTIAL PLAN VIEW

REFUSE ENCLOSURE DETAIL

1. GATE SHALL BE CHAIN LINK STYLE 07, INDUSTRIAL APPLICATION, AS MANUFACTURED BY CHAIN LINK FENCE COMPANY OF PENNSYLVANIA OR APPROVED EQUAL.
2. THE CONCRETE BLOCK WALL SHALL HAVE A 3' FOOTING.
3. THE CONCRETE BLOCK WALL SHALL BE REINFORCED USING MASONRY REINFORCING MESH (CONTINUOUS- HORIZONTAL DIRECTION) AND #5 REINFORCING BARS (CONTINUOUS VERTICAL DIRECTION) EMBEDDED IN THE BLOCK AND SUPPORTED WITH CONCRETE FILLING. THE REINFORCING SHALL BE A MAXIMUM OF 16" ON CENTER, BOTH DIRECTIONS.
4. FOR LENGTH AND WIDTH DIMENSIONS, REFER TO SHEET AL-1.
5. C.M.U. CELLS CONTAINING STEEL REINFORCING RODS SHALL BE PRESSURE GROUTED FROM TOP OF FOUND. WALL FLUSH TO TOP OF THE MASONRY WALL.
6. C.M.U. CELLS CONTAINING STEEL REINFORCING RODS SHALL BE CLEARED OF OBSTRUCTIONS PRIOR TO GROUTING.
7. MASONRY TIES MUST EXTEND A MINIMUM OF 1-1/2" ONTO SOLID MASONRY UNITS AND BE FULLY EMBEDDED IN MORTAR ON THE OUTER FACE SHELL OF HOLLOW MASONRY UNITS.
8. ALL CONCRETE SHALL BE 4000PSI @ 28 DAYS.
9. ALL REINFORCING STEEL SHALL BE GRADE 60

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SEAL

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TOWN OF BABYLON

PROJECT

SITE DETAILS

TITLE

S.C.T.M.# 0100-082.00-02.00-073.001 & 37.006
0100-082.00-03.00-019.007

NO.	DATE	REVISION
1.	03/25/19	T.O.B. COMMENTS
2.	05/14/19	T.O.B. COMMENTS
3.	07/01/19	T.O.B. COMMENTS & REVISED LAYOUT
4.	08/15/19	CLIENT REVISIONS
5.	09/06/19	CLIENT REVISIONS
6.	10/30/19	T.O.B COMMENTS

PROJECT No.	18-074
DRAWN BY	TP
CHECKED	CTL
DATE	February 2019
SCALE	N/A

DET-1

SHEET NO. 15 OF 15