DREDGING / EXCAVATION WORK PLAN

GLEN COVE FERRY TERMINAL
CITY OF GLEN COVE
NASSAU COUNTY, NEW YORK

Prepared for:

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1.0 INTRODUCTION

This Dredging / Excavation Work Plan (D / E Work Plan) outlines the work to be conducted at the Glen Cove Ferry Terminal Site (hereinafter referred to as the "Subject Property") located on Garvies Point Road in Glen Cove, New York (see ***Figure 1-1***: Site Location Map).

This document was prepared in accordance with the requirement in ***Section 3.3*** of the June 2009 Draft Site Management Plan (SMP) prepared for the City of Glen Cove Industrial Development Agency (IDA) which states "*a work plan will be developed by the Contractor prior to initiating any excavation activities at the site. The work plan, at a minimum, will be consistent with the requirements specified below for excavating/dredging, screening, handling, storing, sampling, transporting, and disposing of contaminated material….*" Two additional Draft SMP-required work plans including a site-specific Health and Safety Plan (HASP) and a site-specific Quality Assurance / Quality Control Plan (QA / QC Plan) are provided under separate covers.

1.1 Site Background

According to the Draft SMP, the following history pertains to environmental conditions at the Subject Property:

- Since circa 1950's, incinerator ash, sewage sludge, solid waste, creek sediments and industrial waste were disposed at the Captain's Cove property, which is located immediately west of the Subject Property. Additionally, ore residuals from the Li Tungsten Corporation facility (a former Superfund site) were disposed of on the western and eastern sides of the Subject Property. The New York State Department of Conservation (NYSDEC) incorporated the Subject Property as part of a State Superfund site circa 1990's. Soon thereafter, the United States Environmental Protection Agency (USEPA) became involved with remediation efforts to address the radioactive contamination associated with the ore residuals from the former Li Tungsten facility.

- The NYSDEC issued a State Record of Decision (ROD) for the Li Tungsten Site in March 1999. The ROD required excavation of an on-site landfill and separation of the waste stream into solid waste, hazardous waste, construction and demolition (C&D) debris and radiological wastes which were

to be disposed of in accordance with prevailing local, state and federal regulations.

- In September 1999, after investigating the nature and extent of contamination, the USEPA executed a ROD which included the remediation of both the former Li Tungsten facility and the Captain's Cove property. The USEPA ROD required that 67,000 cubic yards of radioactive- and heavy metals-contaminated wastes be excavated and disposed of off-site.

- Reportedly, remediation of the Subject Property consisted of the excavation of contaminated soil to a depth ranging from three-to-14-feet bgs and the backfilling of the excavation with clean fill. Subsequent to the remedial activities, the NYSDEC and USEPA determined that all remedial action objectives and goals were met and no further remedial actions were necessary. It should also be noted, that according to the Draft SMP, the final depth of the excavation coincided with a layer of natural sand which was underlying the contaminated area.[1]

- During excavation activities, sub-grade features including retaining walls and a buried barge were encountered on the Subject Property.

- The selected remedy for groundwater was no action. However, long-term monitoring was conducted on the Long Island Upper Glacial Aquifer in the proximity of the Li Tungsten facility. The USEPA anticipated that groundwater quality would improve subsequent to the removal of the contaminated sediments and soils.

- Starting in December 2008, Dvirka and Bartilucci Consulting Engineers (D&B) conducted a Supplemental Phase II Environmental Site Investigation (Phase II) at the Subject Property. Based on the results of the Phase II, elevated concentrations of arsenic and barium exceeding NYSDEC Part 375 Restricted Use Soil Cleanup Objectives (RUSCO) for commercial-use sites, were detected in surface samples along the western portion of the Subject Property; asbestos was detected in surface samples along the eastern portion of the Subject Property; elevated levels of barium were detected in subsurface samples; and unfiltered groundwater samples indicated the presence of elevated levels of arsenic, barium and mercury. No metals were detected above groundwater standards, criteria and guidance values (SCGs) in filtered groundwater samples. D&B did not detect any radiation levels above background levels in any of the samples field screened as part of the Phase II.

- Glen Cove Creek, which runs along the southern portion of the Subject Property, is a 1.1-mile-long; 100-foot-wide designated Federal Navigation Channel with a Unites States Army Corps of Engineers (USACE) project depth of eight feet deep with a two-foot over-dredge allowance. It is the

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[1] *In subsequent recent discussions with the NYSDEC, it was indicated that materials were not excavated to depth in the vicinity of the existing bulkhead due to the presence of groundwater. Further, the materials underlying the buried barge were not evaluated.*

responsibility of the USACE to dredge the channel at regular intervals. It is the responsibility of the City of Glen Cove to dispose of the dredged materials. In October 2001, the USACE conducted a radiological screening survey and sediment sampling program. Eleven discrete areas of elevated gamma readings were identified in areas to be dredged and areas which were previously dredged. Additional dredging of the creek was performed in 2004.

1.2 Project Description

The Subject Property is proposed by the IDA to be used to provide improved access to the waterfront area abutting Glen Cove Creek. Due to the potential that contaminated soil / sediment maybe encountered during the implementation of construction of the Ferry Terminal, activities associated with this contract that may result in the exposure of contamination; therefore, all dredging and excavation activities which involve the disturbance of site materials must be handled in accordance with this D / E Work Plan, HASP and QA / QC Plan.

The work to be conducted at the Subject Property as part of this project includes the following:

- Excavate soil behind existing bulkhead to water level;
- Excavate other areas of on-site soils;
- Transport and dispose of all excavated materials in accordance with prevailing regulations;
- Replace excavated soils with either site materials tested and approved for use as back fill and / or with certified clean back-fill materials;
- Dismantle and remove the buried barge;
- Install new, landward sheeting / bulkhead;
- Remove existing bulkhead; and,
- Dredge area seaward of new bulkhead to desired elevation.

Prior to dredging sediments from Glen Cove Creek in front of the existing on-site bulkhead, sediment samples will be collected to evaluate the quality of the sediment that will be left exposed after dredging is completed (e.g., of the “new sea floor”). An estimated area of 17,800 square feet of Glen Cove Creek will be dredged to a target elevation of -14 feet mean sea level (msl). Additionally, similar sediment samples will be collected prior to excavation of materials from between the two bulkheads, also to a target elevation of -14 feet msl.

With NYSDEC approval of the project work plans, the aforementioned sediment sampling and site dredging / excavation program will commence. Due to the potential for encountering impacted materials associated with the two Superfund sites, each bucket of excavated materials will be field screened for the presence of volatile organic compounds (VOCs) utilizing a photo-ionization detector (PID) and for elevated radiation readings with a radiation detector. Further, air monitoring for the presence of VOCs and respirable dust will be conducted in accordance with a New York State Department of Health (NYSDOH)-compliant Community Air Monitoring Plan (CAMP) which has been incorporated into the site-specific HASP.

2.0 PROJECT WORK ELEMENTS

The following sections of this D / E Work Plan include all aspects of the work to be performed as part of this project.

2.1 Radiation Monitoring Plan

In order to address NYSDEC concerns with respect to the potential for encountering materials exhibiting high radiation levels during the conduct of the project,[2] the firm of CoPhysics Corporation (CoPhysics) has been retained to provide health-physicists' and radiological-engineering personnel support for the project. CoPhysics has been issued a broad scope Radioactive Materials License (Z1-98) for surveys, analysis, decontamination and decommissioning (D&D), leak tests and calibration. Under this license, CoPhysics is authorized to perform remediation, decommissioning, source packaging and other activities at client sites using any isotope in any quantity, subject to certain regulatory notification requirements; authorized to use all radioisotopes in any form as samples and calibration standards at its NY facility and at remote sites.

The following provides the SOW to be conducted by CoPhysics during the implementation of the Project:

- Review this Radiation Monitoring Plan, as well as the Radiation Monitoring Plan prepared for the Captains Cove Condominium Site and the Phase II recently conducted at the Subject Property. CoPhysics' recommendations / revisions have been incorporated into this version of the Radiation Monitoring Plan;

- A CoPhysics supervisor-level health physicist will provide oversight / consulting services during the conduct of the initial site excavation activities which will be conducted to determine site-specific radiation background levels, as discussed below; and,

- CoPhysics will be on "standby" to provide heath physics' support in the event that materials exhibiting high radiation levels are encountered during the conduct of the project.

Due to the nearby presence of the Li Tungsten and Captain's Cove sites and the confirmed presence of soils and sediments exhibiting elevated radiation levels in the vicinity of the Subject Property, the creek-bottom sediments collected as part of the project and each

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[2] *It should be noted that this condition is not anticipated based upon the USEPA / NYSDEC remedial actions previously conducted at the Subject Property and the results of a recent soil investigation.*

bucket of excavated materials (both dredge spoils and site soils) will be field-screened for radiation in accordance to the following procedures:[3]

- Radiation screening will be conducted utilizing a counter-rate meter and scaler such as the Ludlum™ Model 221 equipped with a (two-by-two-inch) sodium iodide detector such as the Ludlum™ Model 44-10 (hereinafter referred to as the radiation detector). Conduct the gamma survey of each excavated bucket utilizing the methodologies included in ***Appendix C***. Each bucket of excavated materials will be placed on the ground surface, allowed to spread out, field screened with the radiation detector, PID and by visual and olfactory inspection, then based upon the field screening results, transferred into an appropriate stockpile, as discussed in ***Section 2.3.3***, above.

- As discussed in the Draft SMP, site-specific radiation background levels may vary depending on the soil lithologies encountered. As such, at the initiation of field activities, the following activities will be conducted to determine site-specific radiation background levels:

    - On the landward portion of the Subject Property, a series of test pits will be conducted to the maximum anticipated depth of each area (e.g., ranging from six-inches to 15-to-20-feet below grade surface [bgs]) and encountered native soils will be evaluated;

    - Conduct a background gamma radiation survey of at least ten buckets of excavated material and record results as described in ***Appendix C***;

    - A summary table of the types of materials encountered, their depths and resultant radiation readings will be prepared and reviewed to confirm the site-specific radiation background readings; and,

    - As a safety measure, the test pits may be backfilled with the excavated materials until the associated site area is subject to being excavated.

- Each sediment core associated with the creek bottom sediment sampling program will be field screened utilizing either a Geiger-Mueller frisker (i.e., Ludlum™ 44-9 or equivalent) or a sodium iodide detector, depending on background radiation levels. If a frisker is used, the limit to be used for screening is 100 counts per minute (cpm) above background.

- Each bucket of dredged or excavated materials will be screened for radiation utilizing the radiation detector as described in ***Appendix C***. If radiation levels are less than two times the site-specific background, they will be considered as acceptable for off-site disposal at the designated facility. In the event materials are encountered which exhibit radiation readings greater than two times background concentrations, they will be stockpiled separately, in

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[3] *This radiation monitoring plan was prepared in general conformance of the January 6, 2000 Radiation Monitoring Plan prepared for the Captain's Cove Condominium Site and the Emilcott October 30, 2008 Health-Based Risk Assessment for the Glen Cove Ferry Terminal, both of which were attached to the Draft SMP.*

accordance with the protocols included in ***Section 2.3.3***, for waste characterization purposes and eventual off-site disposal.

- Although such materials are not anticipated to be encountered during the excavation work at the Subject Property, in the event materials are encountered exhibiting radiation readings in excess of 200,000 cpm,[4] all work in this portion of the Subject Property will be ceased and the situation assessed. As part of this assessment, the NYSDEC and USEPA will be immediately notified of the situation. Additionally, with the approval of the City of Glen Cove IDA, CoPhysics will be notified and brought into the project to provide heath physicists' support. As an interim measure, if the materials exhibiting the elevated radiation levels are at or above grade, then they will be covered with a minimum of one-foot of non-radiation-impacted soils. Please note that excavation activities, to be conducted with the requisite field screening, on other areas of the Subject Property will continue.

2.2 Glen Cove Creek Sediment Sampling

Per the requirements of the Draft SMP and recent additional NYSDEC requirements, the following borings will be conducted to collect samples representing the top six-inches of sediments which will remain after the proposed dredging / excavation are completed (i.e., zero-to-six-inches below the "*new sea bottom.*") The target dredge depth within the existing Glen Cove Creek, as well as the target excavation depth between the new and existing bulkheads, is -14 feet msl (referenced to the NAVD88 datum).

- Seven locations from within Glen Cove Creek as indicated in ***Figure 2-1***. The borings, which will be conducted to a maximum depth of two-feet below the target dredge depth of -14 feet msl, will be advanced utilizing either a vessel-mounted vibra-core sampling rig or a gravity corer. Separate sediment samples from each boring will be collected from zero-to-six-inches and six-to-12-inches below the -14 feet msl elevation;

- Seven sampling locations underlying the prism of materials from between the new and existing bulkheads have been identified (see ***Figure 2-1***). These borings will be conducted utilizing a hollow-stem auger drill rig. Separate samples from each boring will be collected from zero-to-six-inches and six-to-12-inches below the -14 feet msl elevation (e.g., approximately 27-to-28-feet bgs, depending on the actual surface elevation of a sampling point). It should be noted that a few of these locations are underlain by the buried barge. As such, selected borings maybe conducted post-barge removal, and an alternative sampling methodology may be required (e.g., track-mounted direct push drill rig); and,

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[4] *200,000 cpm represents approximately 0.2 millirem per hour with a two-by-two-inch sodium iodide detector. This is well above the typical background dose rate of 0.01 millirem per hour. While this is not a level that would cause radiation workers to exceed dose limits, if the work continued over several weeks at this level, then workers would need to be trained as radiation workers.*

- Sediment samples collected for the existing surface to six-inches deep from four locations within Glen Cove Creek will be analyzed to provide ambient chemical and physical conditions. These data will be utilized by the NYSDEC as part of the evaluation of the post-dredge conditions and whether additional dredging maybe required.

The purpose of analyzing the -14 feet msl sediment samples is to allow the NYSDEC to evaluate the chemical and physical nature of the newly-exposed sediments which will represent the "*new sea bottom*." NYSDEC protocols also include the collection of six-to-12-inch deep sediment samples, these samples would be placed on hold at the laboratory pending the analyses of the zero-to-six-inch samples.

All sampling equipment will either be factory decontaminated and / or decontaminated in accordance with the procedures included in the QA / QC Plan. Due to laboratory, sample-volume constraints, two-to-three individual cores per location may be required to collect sufficient sample volumes.

As an interim submission, Apex will provide the NYSDEC with summary tables summarizing the zero-to-six-inch-deep sediment analytical data and the ambient sediment sample analytical data, with recommendations for analyzing the deeper six-to-12-inch samples, if any. Please note that in order to allow the use of the QA / QC samples collected as part of the sampling effort, it is assumed that the NYSDEC will review all such data quickly and provide Apex with their requirements regarding analyses of the deeper samples.

Apex will prepare a brief letter report for submission to the appropriate party(s) (e.g., NYSDEC, IDA, etc.) which will include the following:

- Boring logs detailing lithologic conditions, PID results, any observed layering and radiation readings (all of the samples will be field screened to evaluate radiation levels in accordance with the Radiation Monitoring Plan);
- Photographs of each core;
- Original laboratory data sheets for the analytes included in the Draft SMP, as discussed below;
- Chemical data summary tables;
- A data summary usability report (DUSR), as required by Analytical Services Protocols (ASP) Level B requirements; and,
- A brief summary discussion of the work.

The zero-to-six-inch deep sediment samples and the ambient sediment samples, as well as appropriate QA / QC samples discussed in the QA / QC Plan (e.g., blind duplicate, equipment rinstate blank, etc.), will be analyzed by a NYSDOH Environmental Laboratory

Accreditation Program (ELAP)-certified laboratory (with appropriate chain-of-custody) in accordance with ASP B procedures for:

- Metals (arsenic, mercury, cadmium, lead, chromium, nickel, silver, zinc and copper) by the EPA 6010 / 7471 Series;
- Chlordane; sum of DDT, DDE and DDD; dieldrin and mirex by EPA Method 8081A;
- Polychlorinated biphenyls (PCB) (sum of all aroclors) by EPA Method 8082;
- Total poly-aromatic hydrocarbons (PAHs) by EPA Method 8270;
- Total benzene, toluene and xylenes (BTX) by EPA Method 8260;
- Grain size by ASTM D41 / D42; and,
- Total organic carbon by EPA Method 9060A.[5]

The six-to-12-inch-deep sediment samples will be analyzed for those analytes required by the NYSDEC based upon the zero-to-six-inch-deep sediment analytical data.

The Draft SMP has defined the applicable SCGs for the sediment samples as those included in the NYSDEC Technical and Operational Guidance Series (TOGS) 5.1.9 – In-Water and Riparian Management of Sediment and Dredged Materials.

2.3 Dredging / Excavation

As discussed in the Draft SMP, dredging bottom sediments from the adjacent Glen Cove Creek and excavation of soils from the surface to an estimated maximum depth of 27-feet bgs (i.e., -14 feet msl) in the land-ward portion of the Subject Property will be required as part of the project. The following sections provide for the general procedures to be utilized for field screening, staging and sampling for evaluating the chemical nature of the materials and for waste-characterization purposes. This section also includes a management plan for material stockpiles, as well as the decision matrix with respect the final disposition of designated material streams.

2.3.1 Dredging Plan

As indicated in the project Dredging and Excavation Plan – Drawing MD-002 included in ***Appendix A***, a 487-foot-long area of Glen Cove Creek in front of the existing bulkhead, with widths varying from 24 to 64 feet (for a total area of 17,800 square feet) will be dredged to a

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[5] *NYSDEC Region I has waived the requirement to analyze the samples for dioxins.*

target elevation of -14 feet msl. The materials will be dredged utilizing an environmental bucket to minimize leakage from the closed bucket. Use of a conventional bucket may be required in the event that the environmental bucket proves ineffective. Use of any equipment other than an environmental dredge bucket must first be approved by the NYSDEC.

The dredging equipment will either be land-based, and setup on the landward portion of the Subject Property, or barge-mounted and moored directly adjacent to the bulkhead – as discussed above, all creek sediments will be dredged with an environmental bucket, unless otherwise approved by the NYSDEC. A temporary dewatering area consisting a sufficiently-sized hay-baled enclosure will be installed just landward of the work area. Dredged materials will be placed within the impoundment until they have de-watered sufficiently for stockpiling. Each bucket of dredged material will be screened for radiation levels and with a PID for the presence of VOCs in accordance with the protocols included in ***Section 2.1***, above. The sediment de-watering protocols are included in ***Section 4.2***, below.

In order to comply with ***Special Condition No. 3*** of the NYSDEC Tidal Wetlands permit which is being required to protect the quality of the adjacent Glen Cove Creek, the project elements will be conducted in the following sequential order (see ***Figure 1-2, Project Schedule)***:

- Mobilization / Preliminary Site Work which includes the installation of NYSDEC-required, construction-site, stormwater best management practices (BMPs) (e.g., hay bales, silt fence, sediment dam and ditch dam). Please note that the express purpose of the BMPs is to prevent site-related materials (e.g., silts and clays entrained in stormwater runoff) from running off of the Subject Property during precipitation events. The project, construction-related Storm Water Pollution Prevention Plan (SWPPP) (see ***Appendix D***), dated May 2010, requires that all BMPs be inspected at least every seven days and maintained during the life of the project;

- Collection of sediment samples from Glen Cove Creek;

- Initial site work including demolition of existing site structures, initial soil remediation (i.e., **205-1.01 General Soils** discussed in ***Section 2.3.2***, below), dredging of sediments water-side of the existing bulkhead (i.e., **999.02226 Marine Demolitions and Removals** discussed in ***Section 2.3.2***, below) and removal of the buried barge (to be conducted prior to the installation of the new bulkhead);

- Installation of the new bulkhead / dead-man system;

- Removal of the soils from between the existing bulkhead and the newly-installed bulkhead (i.e., **203-1.01 Unclassified Excavation** soils discussed in ***Section 2.3.2*****,** below);

- Removal of the existing bulkhead / dead-man system; and,

- The remainder of the site work which will not result in any soil / sediment disturbance and potential impacts to the creek (the aforementioned construction-site, stormwater BMPs will remain in-place in accordance with the requirements of the SWPPP.

The following ***Monitoring and Action Plan*** will be implemented to ensure that the integrity of the existing on-site bulkhead is maintained during the excavation of materials from behind it, as well as to protect the adjacent Glen Cove Creek from site-related runoff / impacts:

- The existing soils behind the bulkhead are exerting the maximum stress on the bulkhead / tie back system. The removal of the soils from behind the bulkhead wall will result in a lowering of the stress, thereby minimizing the potential for a failure;

- The existing tie back – dead-man system will be left in-place until the bulkhead is demolished;

- It is not expected that the buried barge is tied into the existing bulkhead system. However, as the excavation work in the vicinity of the buried barge continues, care will be taken to evaluate this condition. In the event that the barge does prove to be an integral part of the dead-man system, temporary tie backs will be installed, either to the newly-installed bulkhead or temporary dead men (e.g., driven steel sheets) in order to stabilize the bulkhead wall during the removal of the barge;

- During excavation activities between the newly-installed and existing bulkheads, the integrity of the existing bulkhead will be visually inspected and photo-documented at least three times a day by qualified Chesterfield personnel to evaluate for the potential of failures (e.g., wall deflection, opening of seams, etc.). Any areas of observed potential failure will be addressed in the manner discussed above;

- During the three-times-a-day inspection, the water-side portion of the existing bulkhead will be inspected to determine if mud, sand, soils, etc., are escaping though pre-existing holes or other existing failures points and impacting the creek. Such conditions will be immediately addressed by placing impermeable materials (e.g., plastic sheeting) on the landward side of the exposed bulkhead to block the opening(s);

- 500 feet of turbidity curtain and hard oil boom will be deployed and in-place within the creek prior to the initiation of any site work;

- During all dredging activities, the turbidity of the Glen Cove Creek will be continuously visually monitored to ensure that the deployed turbidity curtain is being effective;[6]

- The contract-required hard oil boom will be deployed out-board of the turbidity curtain which will act as an additional safety factor in the event of surface turbidity-failure events;

- In the event that the visual turbidity monitoring indicates a failure of the turbidity curtain, the following ***Action Plan*** will be implemented:

  - All dredging activities will be halted;
  - A second 50-foot-length of turbidity curtain, which will be staged on-site for such a contingency, will be deployed with a pre-staged vessel to control the turbidity outside of the existing curtain;
  - The root cause of the failure of the primary turbidity curtain will be immediately evaluated / repaired;
  - The area of the repaired turbidity curtain will be inspected to ensure that no further turbidity excursions are occurring; and,
  - The deployed secondary turbidity curtain will be positioned and the turbid water controlled / contained / allowed to settle out.

2.3.2 Excavation Plan

According to the New York State Department of Transportation (NYSDOT) specifications for the Project, there were three categories of sediment / soil types that require differing handling, transportation and disposal protocols including:

- **203-1.01 Unclassified Excavation** - Unclassified excavation shall consist of the excavation and disposal of all materials.

- **205-1.01 General** - Soil contamination may include:

  - Petroleum products, which may include, but are not limited to: gasoline, heating oils, diesel fuel, kerosene, jet fuel, lubricating oils, motor oils, greases, and other fractions of crude oil;

  - Contaminants associated with past Manufactured Coal Gas Plant (MGP) operations;

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[6] *As discussed elsewhere in this document, each bucket of dredged materials will be field screened as part of the Soil Management Plan. As such, a staff person will be located adjacent to the excavation area to conduct the field screening. This field person, as well as the equipment operators, will be responsible to continually visually inspect the deployed turbidity curtain, as well as turbidity conditions in the surface waters outside of the turbidity curtain.*

- Other contamination by organic constituents including volatile organic compounds;
- Metal(s) such as lead, chromium, and/or other heavy metals; and / or,
- Any other constituents that require specialty disposal of the soil.

- **999.02226 – Marine Demolition and Removals** – dredged materials.

Although not included or discussed in the NYSDOT specifications for the project, all soils will be field screened with a radiation detector to evaluate for the presence of soils exhibiting elevated radiation levels. Any on-site soils and dredge spoils exhibiting elevated radiation levels will be addressed in accordance with the project-specific protocols included in ***Sections 2.3.3 and 2.3.4.3***, below.

Based upon the aforementioned D&B Phase II and NYSDEC / USEPA project records, it is not anticipated that significantly-contaminated groundwater will be encountered during the completion of the project. The facility SWPPP will ensure that turbid waters (e.g., those containing entrained silt and clay) will not runoff of the Subject Property. When encountered, groundwater will be evaluated for visual or olfactory evidence of impacts, as well as with a PID and radiation detector (e.g., sheen, light nonaqueous-phase liquids, odors, positive PID / radiation detector responses, etc.). If groundwater exhibiting such suspect characteristics is encountered, the associated work will cease, the appropriate parties notified (e.g., NYSDEC, oversight engineer, Apex PM, etc.) and the situation will be evaluated.

2.3.2.1 203-1.01 Unclassified Excavation Soils

According to project Drawing MD-001 – Demolition and Excavation Removal Plan included in ***Appendix A***, and the referenced NYSDOT Project Specifications, an estimated 21,072 cubic yards of materials will require addressing under this soil material category:

- A 455-foot-long, varying-width area landward of the proposed bulkhead to a depth of elevation +5.00 feet msl (e.g., approximately 10-feet bgs);
- A 375-foot-long area between the existing and new bulkheads to a depth of elevation -14.00 feet msl (e.g., approximately 27-feet bgs); and,
- An approximately 50-by-200-foot buried barge located within the last two aforementioned areas must be removed.

According to NYSDOT specifications, such materials do not require any specialized transportation and disposal procedures. However, post contract award, the NYSDEC has required additional assessment of these materials for contaminant conditions due to the nature of the Subject Property and the level of previous remedial activities. As such, the scope of the project has been revised such that these materials will be characterized in

accordance with NYSDEC protocols, and depending upon the analytical results, either be designated for on-site re-use as back fill, or disposed of off-site at an appropriately-licensed disposal facility. This is further discussed below in ***Section 2.3.4***, below.

2.3.2.2 205-1.01 General Contaminated Soils

According to project Drawing CD-001 – Existing Site / Site Demolition Plan included in ***Appendix A***, and the referenced NYSDOT Project Specifications, the following materials will require addressing under this soil material category:

- Six inches of soil (estimated 2,420 tons) from the entire northern one-half to two-thirds of the Subject Property;
- An approximately 35-by-50-foot area to two-feet bgs (an estimated 138 tons) located at the northeast corner of the Subject Property; and,
- An approximately 40-by-40-foot area to four-feet bgs (an estimated 355 tons) located in the northern-central area of the Subject Property.

The NYSDOT Project Specifications require that these materials be transported to and disposed of at an appropriately-licensed, NYSDEC-approved facility. This is further discussed below in ***Section 2.3.4***, below.

2.3.2.3 999.0226 Dredge Materials

According to project Drawing MD-002 – Dredging and Excavation Plan included in ***Appendix A***, and the referenced NYSDOT Project Specifications, an estimated 2,591 cubic yards of sediments will be dredged from the bottom of Glen Cove Creek. The NYSDOT Project Specifications required that these materials be transported to and disposed of at an appropriately-licensed, NYSDEC-approved facility. However, post contract award, the scope of the project has been revised such that these materials will be further characterized, and depending upon the analytical results, either be designated for on-site re-use as back fill, or disposed of off-site at an appropriately-licensed disposal facility. This is further discussed below in ***Section 2.3.4***, below.

Depending upon the scope of the excavation and its location, once the materials have been dredged from the creek bottom utilizing an environmental bucket, per ***Section 2.3.1***, above, a variety of equipment may be utilized including, but not necessarily limited to front-end loaders, cranes, back hoes and tracked excavators to manage the dredge spoils on the landward portion of the Subject Property. Each bucket of excavated material will be screened for radiation levels and with a PID for the presence of VOCs.

2.3.3 Material Screening and Stockpiling Protocols

This portion of the D / E Work Plan provides the protocols to be utilized to screen and stockpile dredge spoils and excavated materials. There are five basic material streams that could potentially be generated as part of the project, including the following:

1. Materials that exhibit radiation levels greater than 200,000 cpm;
2. Materials that exhibit radiation levels between two times background levels and 200,000 cpm;
3. Materials that exhibit suspect characteristics (e.g., elevated PID responses, odors and / or staining) and acceptable radiation
4. ***Unclassified Excavation Soils*** and ***Dredge Materials*** which do not exhibit suspect characteristics (e.g., elevated radiation levels, PID responses, etc.); and,
5. ***General Contaminated Soils*** that exhibit acceptable field screening characteristics.

Figure 2.2 has been prepared to graphically illustrate the project's excavated and dredged materials stockpile management protocols. Please note that the primary decision point for each bucket of excavated material is based upon the results of the radiation field screening which take precedence over all other stockpile classifications – this is if a material (no matter its other classification) exhibits elevated radiation levels, it will either be isolated or stockpiled in a designated stockpile(s) for characterization and off-site disposal at an appropriately-licensed facility(s). The secondary decision point is based upon the results of the PID, olfactory and visual (POV) field screening; therefore, the next materials classification is based upon positive or negative POV results. The tertiary decision points are only for those materials that exhibit both acceptable radiation levels and POV screening results.

All of the materials excavated as part of the project will be screened and stockpiled in accordance to the following procedures:

- Each bucket of materials will be placed on the ground, allowed to spread out, and screened for the presence of VOCs utilizing a PID, for radiation levels utilizing a radiation detector and by visual / olfactory inspection for evidence of impact. The screening results will be made available to the oversight engineer upon request.
- Applicable material streams will be placed in separate stockpiles which will be placed on top of 40-mil plastic sheeting covered by 10-mil-thick plastic sheeting in areas of the Subject Property where six-inches of soils will be

removed at a later date.[7] The maximum 500-cubic yard stockpiles will be constructed to isolate the contaminated materials from the environment. As such, the overlying plastic will be weighted down and cover maintained to prevent infiltration of rain water and prevent the generation of dust. Appropriate soil erosion BMPs (e.g., up-stream hay bales, soil berms, interceptor trenches, etc.) will be utilized to maintain the integrity of any soil stockpile. Based upon contract requirements and field screening results, there is the potential that materials will be placed into one of the following stockpile categories:

- Materials exhibiting radiation levels greater than 200,000 cpm. As discussed in the Radiation Monitoring Plan and ***Figure 2-2***, if such materials are encountered, all work will cease, the materials isolated and the NYSDEC and USEPA will be immediately notified. Therefore, it is not anticipated that a soil stockpile of these materials will be generated;

- Materials exhibiting radiation levels in excess of two times background and below 200,000 cpm (see ***Section* 2.1**, above;

- Materials exhibiting elevated VOCs[8] and / or the materials exhibiting significant olfactory or visual evidence of impact (e.g., positive POV in ***Figure 2-2***);

- Excavated materials and de-watered dredge materials exhibiting acceptable radiation levels, PID reading and visual / olfactory characteristics (e.g., negative POV in ***Figure 2-2***); and / or

- ***General Contaminated Soils*** that exhibit acceptable field screening characteristics.

Subsequent to placement of plastic sheeting and soil erosion BMPs, each soil stockpile will be identified with a label which will, at a minimum, include the following information: 1) unique identifier; 2) date of construct; 3) material stream; 4) anticipated date of receipt of

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[7] *As discussed in **Section 4.2**, materials may require de-watering on portions of the Subject Property which have already been addressed (e.g., remediated, backfilled, etc.). In these cases, endpoint soil samples will be collected and analyzed per **Section 2.3.5.2** subsequent to the removal of staged materials at the cessation of de-watering activities.*

[8] *Please note that PIDs can exhibit positive responses for a variety of reasons including, but not limited to, the presences of contaminant-related VOCs and the presence of water vapor from moist and wet soils (especially those from near and below the water table). As such, positive PID results related to the presence of water vapor do not reflect impacted soil conditions. The ultimate decision to classify a bucket of dredged / excavated material as impacted based upon positive PID responses will also be based upon visual and olfactory inspection. For instance, if a bucket of materials collected from near the water table exhibits a positive PID result, but no other suspect characteristics (e.g., staining, odors and / or radiation levels), it will be assumed that the PID readings were due to the presence of water vapor and the materials will not require special handling based solely on the PID results.*

laboratory analytical data; and, 5) if warranted, anticipated date of removal from the Subject Property.

Subsequent to the disposition of the last soil stockpile, the six-inches of ***General Contaminated Soils*** will be removed and, depending upon radiation and POV field screening results: 1) be loaded directly onto trucks for disposal at 110 Sand; or, 2) placed into a final stockpile pending its off-site disposal.

2.3.3.1 Truck / Equipment Decontamination

Subsequent to being loaded and prior to leaving the Subject Property, the trucks transporting impacted soils to the approved disposal facility will be decontaminated in accordance with the following protocols:

- A decontamination pad consisting of clean gravel will be constructed in an appropriate site location (i.e., the ***Stabilized Construction Entrance*** included in ***Section 2.7.1*** of the Project SWPPP included in ***Appendix D***);
- Each truck will stop atop the decontamination pad and brooms and shovels will be utilized to mechanically remove site-related materials from the truck tires and chassis;
- Once a truck has been decontaminated, it will be cleared for access to the public roadway
- Built up materials removed from the truck will be transferred onto an appropriate soil stockpile for transport and disposal at the appropriate facility (after requisite field screening and analytical testing have been conducted);
- Throughout the day, the decontamination area will be subject to radiation and VOC field screening; and,
- If required, a street sweeper will be retained to clean the public roadway of site-related materials, if any. The road sweepings will be addressed on-site in accordance with previously-discussed protocols.

Prior to any piece of equipment, which was in contact with impacted site materials, being demobilized from the Subject Property, it shall be decontaminated by mechanical brushing, pressure washing, etc.

The NYSDEC is requiring the collection and analyses of an existing surficial soil sample (e.g., zero-to-six-inches bgs) prior to construction of the pad. The sample will be analyzed for NYSDEC DER-10 analytes as discussed in ***Section 2.3.5.2***, below. At the completion of the project, the top six inches of materials will be excavated, field-screened and will be addressed in accordance to the decision matrix in ***Figure 2-2***. A post-removal surficial soil

sample (e.g., zero-to-six-inches below new grade) will be collected and analyzed for DER-10 analytes.

2.3.4 Excavated Materials Characterization, On-Site Re-use and / or Off-Site Transportation and Disposal

This portion of the D / E Work Plan presents the protocols to be utilized to characterize the materials excavated as part of the project. Additionally, this section includes the protocols to be utilized to determine if materials can be re-used as on-site backfill materials, or, based upon waste characterization results; require transport and disposal as either non-hazardous regulated waste(s) or hazardous waste(s) to appropriately licensed off-site facilities.

2.3.4.1 Acceptable Field Screening Unclassified Excavation Soils and Dredge Spoils

As discussed above, there are an estimated 23,663 cubic yards of materials which will require addressing under this soil material category. Much of these materials represent backfill which was emplaced during the earlier remediation of the Subject Property as part of the USEPA and NYSDEC remediation of the Captains Cove property. These materials, which will all have to pass radiation and POV field screening, will handled and characterized in accordance with the following protocols:

- The materials will be staged in 500-cubic yard stockpiles in accordance with the protocols included in ***Section 2.3.3***, above.
- In accordance with ***Table 5.4(e) 10*** of DER-10 (May 2010), during the placement of the materials into a stockpile, five representative discrete samples of the materials will be analyzed for NYSDEC Target Compound List (TCL) VOCs by EPA Method 8260. Two composite samples of the materials stockpile will be analyzed for TCL semi-volatile organic compounds (SVOCs) by EPA Method 8270, Target Analyte List (TAL) metals by the EPA 6010 / 7471 Series; TCL PCBs by EPA Method 8082 and TCL pesticides by EPA Method 8081.[9]
- The samples will be analyzed in accordance with ASP Level B Protocols including applicable QA / QC samples.
- The analytical data will be compared to the NYSDEC Part 375 Restricted Use – Commercial Soil Cleanup Objectives:

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[9] *Per DER-10, each composite sample will be composed of three to five discrete samples collected from the subject stockpile during its construction.*

- If all analytes are present at concentration less than or equal to their respective Commercial Soil Cleanup Objectives in all of a stockpile samples, those materials will be designated as appropriate for use as on-site back fill materials as discussed in ***Section 2.3.6***, below; and,

- If any analyte is present above its respective Commercial Soil Cleanup Objective in an individual soil stockpile sample, those materials will be addressed in accordance with ***Section 2.3.4.2***, below.

2.3.4. 2 Non-Radiation-Impacted Soils Exhibiting Suspect Characteristics

Soils exhibiting elevated PID readings; and / or suspect visual or olfactory characteristics; and acceptable radiation levels will be stockpiled in maximum 500-cubic yard stockpiles. Samples will be collected in accordance with the DER-10 protocols included in ***Section 2.3.4.1***.

Due to permit requirements of various disposal facilities, the resulting DER-10 analyses may not be sufficient for waste characterization purposes, or even to determine if the materials represent regulated non-hazardous waste or hazardous waste. As such, it is not feasible to provide a comprehensive list of waste characterization analyses to address the permit requirements of all potential disposal facilities. The following provides a typical list of waste-characterization analyses for a facility in New Jersey:

- Total petroleum hydrocarbons (TPH), either diesel-organics (DRO) and /or gasoline-range organics (GRO) by EPA Method 8015;
- Full-scan VOCs by EPA Method 8260;
- Total metals by the EPA 6010 / 7471 Series;
- Toxicity Characteristics Leaching Procedure (TCLP) metals by the EPA 1311 / 6010 / 7471 Series;
- Paint filter by EPA Method 9095;
- PCBs by EPA Method 8082;
- PAHs by EPA Method 8270; and,
- Reactivity / ignitability by EPA Methods 7.3 and 1010, respectively.

Facilities typically have varying parameter frequency-of-testing requirements which will be conducted in accordance with their permit protocols for this project. Typically, an eight-point

composite sample will be collected from each 500 cubic yard stockpile.[10] Based upon the analytical data, an Acceptance Letter from an appropriately-licensed disposal facility(s) (e.g., a facility permitted to accept the materials based upon their waste characterization results – which will either be non-hazardous regulated wastes or hazardous waste) will be acquired and provided to the appropriate parties (e.g., NYSDEC, City Engineer, etc.) for review and approval prior to the disposal of any wastes.

As the analytical data are generated in support of waste characterization purposes, they will be analyzed by a NYSDOH ELAP-certified laboratory in accordance with ASP A protocols.

2.3.4. 3 Radiation-Impacted Soils

In the event that radiation-impacted soils (i.e., between two times background and 200,000 cpm) are identified during the field screening, they will be placed in maximum 500 cubic yard stockpile as discussed in ***Section 2.3.3***, above. An eight-point composite sample will be collected and analyzed for typical waste-characterization parameters as discussed in ***Section 2.3.4.2***. Further, the eight-point composite sample will be analyzed for target radionuclides (e.g., uranium, thorium and their decay progency) by standard gamma spectroscopy (i.e., United States Department of Energy (USDOE) Method EML-HASL-300, GA-01, or equivalent). Count times and sample size/geometry shall be able to produce detection limits of 0.1 pCi/g for the radionuclides: Ac-228, Pb-212, Bi-212, TI-208, Ra-226 / U-235, Pb-214, Bi-214; 1 pCi/g for U-235; and 10 pCi/g for Pa-234m. All other quantified radionuclides will be reported. The complete computer-generated gamma spectrum analysis will be supplied to the oversight Engineer. Samples to be analyzed for radionuclides shall be dried samples and will be analyzed before activities of the Ra-226 and its daughter products have returned to equilibrium, the Ra-226/U-235 peak shall be reported as Ra-226.

Based upon the analytical data, an Acceptance Letter from an appropriately-licensed disposal facility(s) (e.g., a facility permitted to accept the materials based upon their waste characterization results) will be acquired and provided to the appropriate parties for review and approval prior to the disposal of any wastes. The qualifications of the transportation company (e.g., NYSDEC Part 381 permit) will also be included in the aforementioned package for review and approval by the appropriate parties.

As the analytical data are generated in support of waste characterization purposes, they will be analyzed by a USDOE-certified laboratory in accordance with ASP A-like protocols (i.e., Level II C of A with QC Summary).

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[10] *This is not in accordance most recent NYSDEC protocols (i.e., May 2010 DER-10); however, this sampling / analyses is being conducted solely for waste-characterization purposes.*

2.3.4.4 General Contaminated Soils

Based upon the results of the D&B Phase II, the 110 Sand Company (110 Sand) located at 136 Spagnoli Road in Melville, New York has issued an Acceptance Letter for ***General Contaminated Soils*** excavated from the Subject Property (see ***Appendix B*** for submission package and Acceptance Letter). However, during their excavation, these materials will be subject to radiation and POV field screening, the results of which take precedence over the contract designation of these materials. As such, in the event that these materials exhibit positive radiation or POV screening results, they will be addressed in accordance with the applicable protocols included in ***Figure 2-2***.

2.3.5 Endpoint Sampling

There are two types of endpoint samples which will be collected and analyzed as part of the project including: 1) post-excavation samples to be analyzed for metals; and, 2) samples collected from under soil stockpiles and / or temporary de-watering areas is site areas where the soils have previously been addressed.

2.3.5.1 Excavation Endpoint Sampling

In accordance with the Draft SMP and discussions with the NYSDEC technical representative, endpoint soil sample will be collected and analyzed for NYSDEC Target Analyte List (TAL) metals (i.e., aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium and zinc) by the EPA 6010 / 7470 Series. The samples will be analyzed in accordance with ASP B protocols.

The following procedures will be followed in collecting the endpoint soil samples:

- **Excavations 20 to 300 feet in perimeter** – One sample will be collected from the top of each side wall on a nominal 30-linear-foot basis. One excavation bottom sample will be collected and analyzed for every 900 square feet of bottom area.

- **Excavations greater than 300 feet in perimeter** – One sample will be collected from the top of each sidewall for every 100-linear feet of sidewall. One excavation bottom sample will be collected and analyzed for every 2,500 square feet of bottom area.

If feasible, the endpoint soil samples will be collected directly from the excavation sidewall or bottom location. The samples maybe collected directly from the equipment bucket in the event that the excavation conditions are unsafe and to not allow for personnel entrance into an excavation. All efforts will be made to collect the endpoint sample directly into the laboratory-supplied glassware and the use of plastic or stainless steel sampling implements

will be avoided. If utilized, all sampling implements will be decontaminated in accordance with the protocols included in the QA / QC Plan.

The samples will be analyzed on a nominal 24-hour basis and the analytical data will be compared to the NYSDEC Part 375 Restricted Use – Commercial Soil Cleanup Objectives. The NYSDEC will be provided with a field map indicating the sampling locations, a table summarizing the analytical results and copies of the original laboratory analytical data sheets. Upon approval by the NYSDEC of the endpoint soil data, the open excavation will be considered as cleared for backfilling with clean material, as discussed below.

2.3.5.2 Temporary De-Watering Areas

In the event that de-watering and staging of materials exhibiting passing radiation and POV field screening results are conducted in site areas where soils have been previously addressed as part of this project, the following samples will be collected per de-watering area:

- Pre-activity samples will not be required if the existing materials are either pre-tested site materials which have been approved for on-site re-use, or are imported certified backfill;
- In the event that the pre-deposition surface is not slated for remediation, or has not otherwise been addressed as part of the Project, two surface-to-six-inch deep samples from the area prior to the conduct of the work to confirm ambient site conditions; and,
- Two surface-to-six-inch deep samples per former de-watering area from final grade elevation to confirm post conditions.

The soil samples will be analyzed for the following DER-10 analytes in accordance with ASP B protocols:

- TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL metals by the EPA 6010 / 7471 Series; TCL PCBs by EPA Method 8082 and TCL pesticides by EPA Method 8081.

In the event that the post samples exhibit contaminant concentrations exceeding NYSDEC Commercial Soil Cleanup Objectives, they will be removed in accordance with project protocols.

2.3.6 Backfill Materials

The on-site excavations are required to be backfilled with uncontaminated materials. For the purposes of this section, uncontaminated backfill materials are those that do not contain

contaminants in exceedance of the project soil SCGs, namely, NYSDEC Part 375 Restricted Use – Commercial Soil Cleanup Objectives.

2.3.6.1 Re-use of On-site Materials

As discussed in ***Section 2.3.4.1***, above, Unclassified Excavation Soils which exhibit acceptable field screening results and do not contain any contaminant is exceedance of a Commercial Soil Cleanup Objective will be utilized as on-site backfill.[11] The final grades of any site location wherein such materials have been utilized as site backfill with the covered either with an impermeable material (e.g., asphalt, concrete, building envelope, etc.) or one foot of imported clean backfill discussed on ***Section 2.3.6.2***, below.

2.3.6.2 Imported Backfill

There are two protocols for confirming that backfill materials to be imported to the Subject Property are suitable for on-site use,[12] including:

- Receiving a certification from the fill provider that the materials to be utilized on the Subject Property are not contaminated. Any such certification will be provided to the NYSDEC and the IDA's oversight engineer for review and approval prior to the delivery of any material to the Subject Property; or,

- As an alternative, soil samples from an identified fill source site could be collected and analyzed to confirm the material's chemical condition. Such analyses would be conducted by a NYSDOH ELAP-certified laboratory for typical NYSDEC parameters including VOCs, PAHs, metals, PCBs, pesticides and / or herbicides. If required, a Source Site Fill Sampling and Analyses Plan will be submitted to the NYSDEC for review and approval prior to the use of any backfill from such source sites.

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[11] *Selected areas may require the use of imported backfill due to geotechnical constraints.*

[12] *Please not that this section only addressed the chemical conditions of the materials. Their geotechnical characteristics would be assessed outside the scope of this Work Plan.*

3.0 PROJECT RECORD KEEPING AND REPORTING

In accordance with the Draft SMP, there are several project-required forms of record keeping and reporting, including:

- Project work plans including the D / E Work Plan (including the Radiation Monitoring Plan), HASP and QA / QC Plan;
- Project information / data packages (e.g., site history, waste-characterization results, etc.) and Acceptance Letters from approved disposal facilities. NYSDEC approvals of selected waste disposal facilities;
- Summary report associated with the sediment sampling and analyses work conducted within Glen Cove Creek adjacent to the on-site bulkhead;
- Soil stockpile analytical data tables summarizing analyses results compared to NYSDEC Part 375 Restricted Use – Commercial Soil Cleanup Objectives, original laboratory data sheets and e-mail communications with the NYSDEC transmitting / receiving the data, and the follow up actions (e.g., approval for use as backfill, requires off-site disposal, etc.);
- Field sketch of sampling locations and table summarizing the results of the site-specific work to identify site-specific background radiation levels;
- Waste-characterization analytical results for non-110 Sand facility materials (e.g., wastes exhibiting two times background radiation levels, exhibiting elevated PID results, etc.);
- Waste disposal tracking documents and manifests;
- Field sketches of endpoint sampling locations, data tables summarizing TAL metals results compared to NYSDEC Part 375 Restricted Use – Commercial Soil Cleanup Objectives, original laboratory data sheets and e-mail communications with the NYSDEC transmitting / receiving the data, and the follow up actions (e.g., approval for backfilling, requires additional excavation, etc.);
- Certifications of clean fill;
- Field logs indicating the results of all on-site field screening of excavated materials;
- Field logs indicating the results of all air monitoring conducted in accordance with the NYSDOH CAMP;
- Field logs / forms indicating sample collection information;
- Field logs indicating that all field screening instruments have been calibrated, or their calibration checked, prior to the initiation of each day of field work;

- Sample chains of custody;
- Daily field activity reports;
- Field change forms; and,
- The on-site locations where dredge spoils and excavated materials containing contaminant(s) between their respective NYSDEC unrestricted-use Soil Clean Objectives and restricted Commercial Soil Cleanup Objectives have been utilized as on-site backfill (with NYSDEC approval) will be recorded and provided as a project as-built.

4.0 CONTINGENCY PROJECT ELEMENTS

Based upon communications with the NYSDEC, there are project elements and associated protocols which may require addressing / implementation, depending upon several factors, including but not necessarily limited to:

- Actual conditions encountered during the site activities (e.g., impacted groundwater, the presence of highly radioactive materials, etc.); and,
- Approval or denial by the IDA and City oversight engineer of value engineering changes to project scopes which will remove the requirement for de-watering to lower the water table for construction purposes.

The following sections provide the contingency project element with respect to de-watering. Please note that if additional contingency items are identified during the conduct of the Project, addenda to the project work plans summarizing the issue(s) and the protocol(s) to address same will be prepared and provided to the appropriate parties for review and comment with sufficient lead time to allow for any such review, acquisition of permits (if any), etc.

4.1 De-Watering Plan for Groundwater Depression

Based upon the current project plans, de-watering of in-situ soils will not be required as part of the project. However, in the event soil excavations below the water table are required, a temporary de-watering system will be required.

Currently, the only two specific project elements which may require excavation of materials below the water table include:

- The materials along the bulkhead which will require excavation as part of the project (i.e., A 375-foot-long area between the existing and new bulkheads to a depth of elevation -14.00 feet (e.g., approximately 27-feet bgs)). The current project plans include removing these materials by “wet” excavation, similar to a dredging project; and,
- The installation of a sub-grade sand filter as part of the permanent stormwater treatment system. Chesterfield has submitted an alternative approach to the City of Glen Cove IDA which includes the installation and use of pre-cast, sub-surface infiltration galleys, versus the specified system. If approved, the proposed system would not require installation of project infrastructure below the water table and associated de-watering. If the alternative approach is not approved, the start date of any required de-watering would be January 2011 (see ***Figure 1-2 – Project Schedule***).

If de-watering proves to be required, a NYSDEC Long Island Well Permit (a requirement if total extraction rates of the de-watering system exceed 45 gallons per minute (gpm) (or 64,800 gallons per day)) will need to be applied for and acquired prior to conducting any de-

watering activities. A copy of the NYSDEC well permit application, as well as the NYSDEC Region I-required Supplemental Data Sheet, are included in ***Appendix E***.

The **De-Watering Plan for Groundwater Depression** includes the following elements:

- According to the Project schedule, the installation of the sand filter is scheduled for January 2011. It is anticipated that the installation will require three-to-four weeks to complete. Due to the short expected operational period, it is a typical construction-industry practice to field design, install and operate a temporary de-watering system as discussed below;

- The de-watering system will consist of well points, likely installed to a target depth of 30-feet bgs. A NYS-licensed well driller will be responsible for installing the well points (see ***Appendix F*** for details regarding the Chesterfield well driller);

- The number and spacing of the de-watering points, as well as the overall flow rate of the temporary system, will be dependent upon the site-specific hydrogeologic conditions and project-specific infrastructure elements. This is typically an iterative process wherein one or two de-watering points are installed, groundwater is extracted, and additional points are added and / or flow rates are increased until the desired lowering of the water table is achieved;

- Sufficient high-capacity pumps will be available to ensure the desired lowering of the water table is achieved;

- Due to typical nine-to-ten-foot tidal variations in the adjacent Glen Cove Creek, the actual required amount of water table draw down could vary over the course of a day. Assuming a static depth to water of 10-to-12-feet below grade surface (bgs) and a target bottom depth of the sand filter of 19-feet bgs, lowering the water table elevation by as much as 12-to-15-feet could be required;

- According to the available information, the on-site groundwater is not significantly impacted by VOCs, SVOCs or dissolved metals. Additionally, it is currently planned to recharge all of the pumped groundwater back onto the site. Therefore, the only treatment believed to be warranted is to discharge the groundwater directly into the sediment filter area BMP, as required in the project SWPPP (see Note No. 24 in project drawing CD-004 included in ***Appendix A*** for the specific citation). The system discharge will be periodically monitored during pumping activities for the presence of suspect characteristics (e.g., sheens, odors, etc.) which may indicate unanticipated contaminant conditions. If such conditions are observed, pumping will be immediately halted, the appropriate parties (e.g., NYSDEC, City of Glen Cove engineers, Apex PM, etc.) notified, and the situation evaluated;

- There is the potential that the system flow rates would be too high to allow complete recharge of the discharged groundwater on the Subject Property. If this event occurs, it may prove necessary to discharge the extracted

groundwater to the adjacent Glen Cove Creek. The quality of the creek water would be protected by the following: 1) the discharge would first be run through the sediment filter BMP; 2) it is only the first few hours of pumping which results in turbid discharge (which would be address by the aforementioned BMP) and the follow on discharge would likely be "clear," as well as being addressed by the BMP; and, 3) the water would be discharged within the area of the creek within the deployed turbidity curtain and hard oil boom. If discharge to the creek is required, a sample of the groundwater will be collected and analyzed for NYSDEC TCL VOCs be EPA Method 8260. If any VOCs are detected in exceedance of NYSDEC effluent limitations to surface water bodies, no discharge will be allowed. The maximum system flow rate will be evaluated, and a temporary treatment system (e.g., a stripping tower) will be set up and operated. Prior to any operations which require discharge to the creek, a treatment system collection and analysis plan which will include such details as pre- and post-treatment sampling, sampling, analyses and schedule will be submitted to and approved to the NYSDEC as an addendum to this Work Plan; and,

- It is anticipated that de-watering activities will be required for three-to-four-weeks circa January of 2011.

4.2 Dredged Sediment / Excavated Soil De-Watering Plan

Based upon the project elements, the dredge spoils and the deeper materials removed from between the two bulkheads will be saturated with water and will require de-watering prior to their placement into on-site stockpiles for analytical testing. The following provides the plan to de-water sediments and materials upon their dredging and / or excavation:

- A temporary dewatering area consisting of a sufficiently-sized hay-baled enclosure13 will be installed just landward of the dredging work area or adjacent to the excavation. The size and configuration of the temporary de-watering areas will be determined in the field and be based upon observed infiltration rates and acceptable retention times;

- Dredged materials will be placed directly into an adjacent impoundment directly from the environmental bucket, and the wet materials excavated from between the two bulkheads will be placed into an adjacent impoundment until they have de-watered;

- During the placement of the materials in the de-watering areas, samples will be collected and analyzed in accordance with Section 2.3.4.1 for chemical analysis purposes. It is anticipated that the de-watering process will require a

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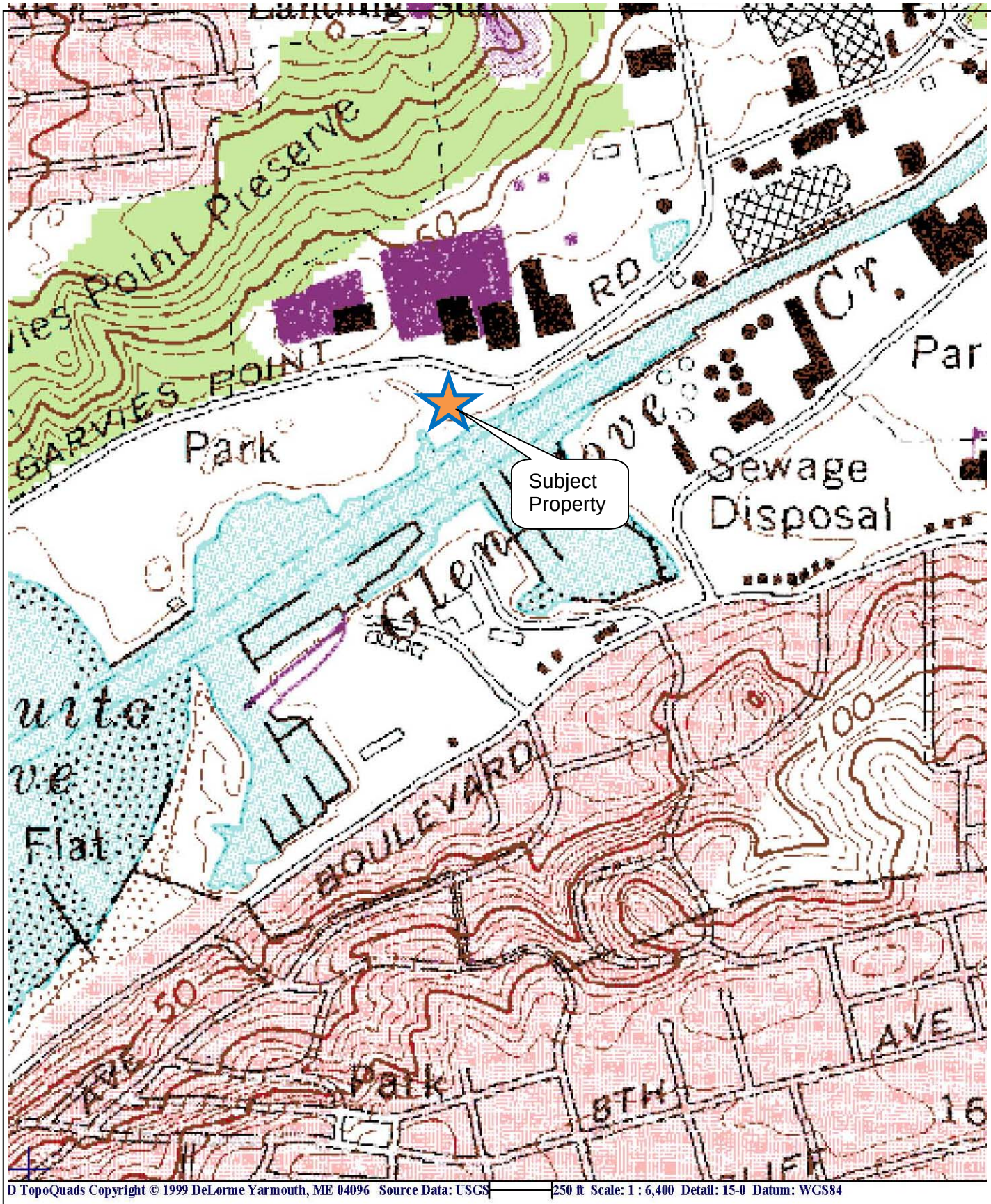
[13] *The hay-bale-enclosure methodology is an industry-standard technique. Please note that the "*dewatering*" discussed in this item will result in relatively minimal amounts of decant which will either infiltrate through the bottom of the enclosure, or through the hay bales. The passage of the decant through the hay bales will effectively remove any entrained silts and clays. Additionally, the stormwater BMPs associated with the facility's SWPPP will further protect adjacent properties and surface water bodies from any unanticipated soils and clays entrained in the decant.*

longer time period than the analytical testing; therefore, sufficient testing data will be available prior to completion of de-watering and will allow for the determination of the final disposition of the de-watered materials; and,

- ***Section 2.3.5.2***, above, provides the requirements for pre- and post-de-watering areas soil sampling and analyses. As discussed, in the event that the post samples exhibit contaminant concentrations exceeding NYSDEC Commercial Soil Cleanup Objectives, they will be removed in accordance with project protocols.

FIGURES



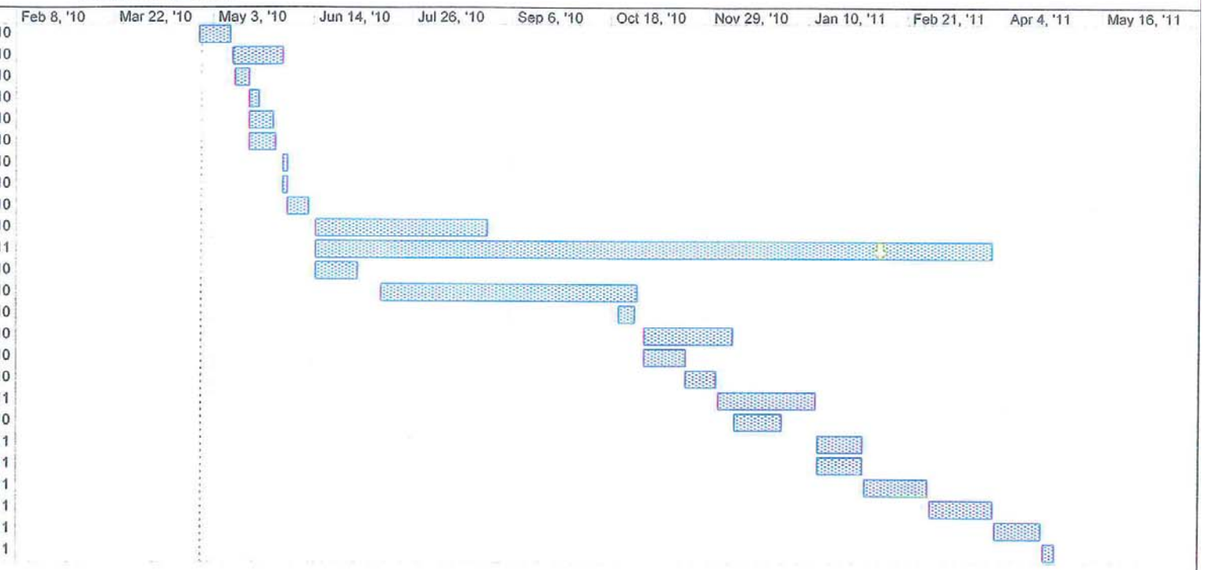
D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 250 ft Scale: 1 : 6,400 Detail: 15-0 Datum: WGS84

Figure 1-1
GLEN COVE
USGS Sea Cliff Quadrangle

Client:	Chesterfield
Project No.:	
Project Location:	Glen Cove, NY
Date:	April 2010

Glen Cove Ferry Terminal
Water Borne and Site Improvements
Contract No. 09-0800R

ID	Task Name	Duration	Start	Finish
1	Submittals	10 days	Mon 4/26/10	Mon 5/10/10
2	Mobilization/Temporary Construction Fence	16 days	Mon 5/10/10	Mon 5/31/10
3	Engineer's Office Installation	5 days	Tue 5/11/10	Mon 5/17/10
4	Environmental Testing (Vibracores for Dredging)	5 days	Mon 5/17/10	Fri 5/21/10
5	Install Strawbales, Silt Fence, Sediment Trap and Ditch Dam	9 days	Mon 5/17/10	Thu 5/27/10
6	Remove Existing Structures	10 days	Mon 5/17/10	Fri 5/28/10
7	Clearing & Grubbing	3 days	Mon 5/31/10	Wed 6/2/10
8	Construction Entrance	3 days	Mon 5/31/10	Wed 6/2/10
9	Dredging Outside Existing Bulkhead	8 days	Wed 6/2/10	Fri 6/11/10
10	Excavation- Phase 1	54 days	Mon 6/14/10	Thu 8/26/10
11	Environmental Remediation - (Concurrent with other tasks)	207 days	Mon 6/14/10	Wed 3/30/11
12	Removal of Barge	15 days	Mon 6/14/10	Fri 7/2/10
13	Bulkhead & Deadman Installation	80 days	Mon 7/12/10	Fri 10/29/10
14	Excavation - Phase 2	6 days	Thu 10/21/10	Fri 10/29/10
15	Bulkhead Removal	29 days	Mon 11/1/10	Thu 12/9/10
16	Building Piles	15 days	Mon 11/1/10	Fri 11/19/10
17	Foundation Installation	10 days	Fri 11/19/10	Thu 12/2/10
18	Utilities Installation	30 days	Fri 12/3/10	Thu 1/13/11
19	Drainage Installation	15 days	Fri 12/10/10	Thu 12/30/10
20	Pipe Pile Installation	14 days	Fri 1/14/11	Wed 2/2/11
21	Floating Dock Installation	14 days	Fri 1/14/11	Wed 2/2/11
22	Pavers	20 days	Thu 2/3/11	Wed 3/2/11
23	Landscape	20 days	Thu 3/3/11	Wed 3/30/11
24	Parking Lot Installation	15 days	Thu 3/31/11	Wed 4/20/11
25	Demobilization	4 days	Thu 4/21/11	Tue 4/26/11



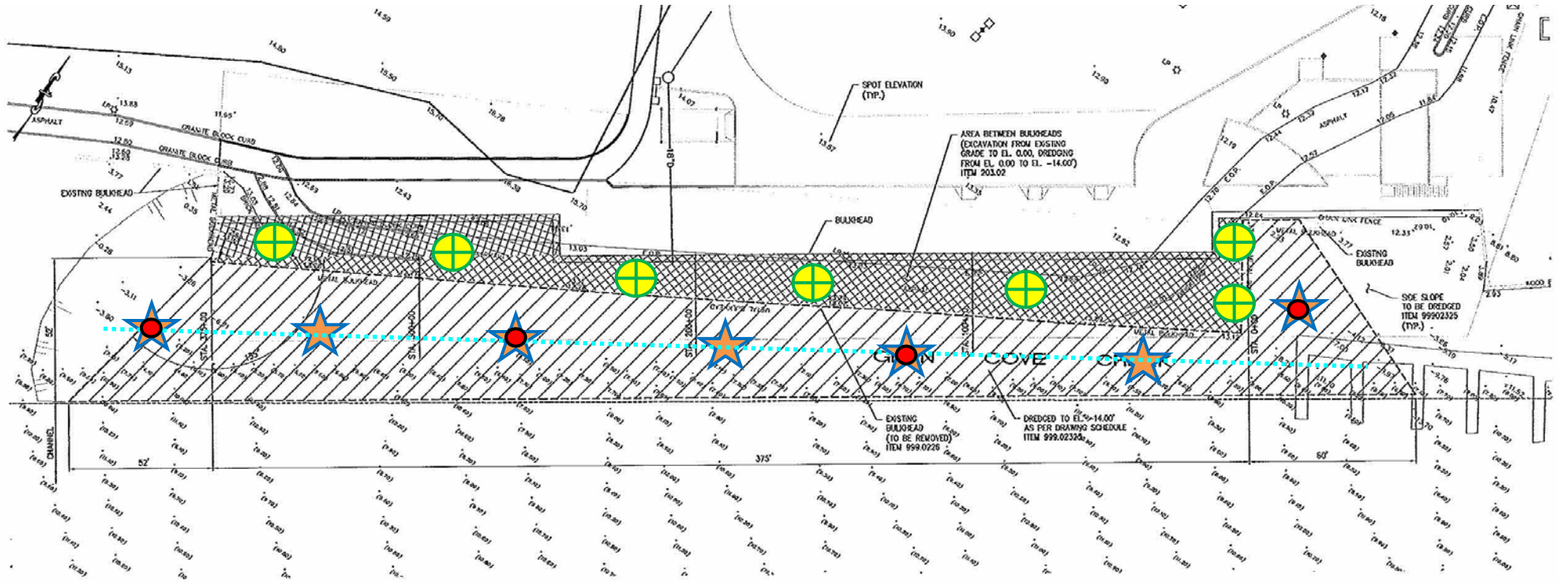
Date: Wed 4/28/10

Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Deadline

Apex Companies, LLC

Figure 1-2 – Current Project Schedule
Glen Cove Ferry Terminal Project

Client:	Chesterfield
Project No.:	85185.001
Project Location:	Glen Cove, NY
Date:	June 2010



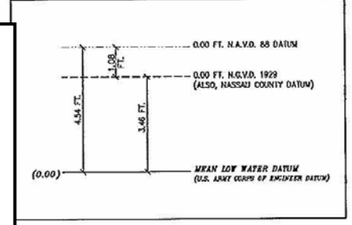
DREDGING PLAN
1"=20'

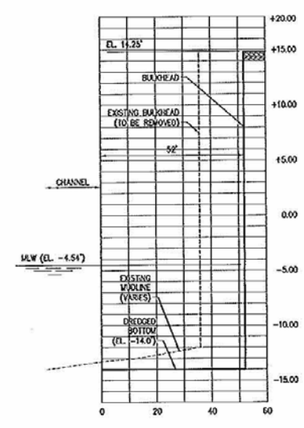
ESTIMATED EXCAVATION AND DREDGE QUANTITIES ITEM 999.02325			
AREA	AREA (SQ. FOOT)	EXCAVATION VOLUME (CUBIC FOOT) ITEM 203.01	DREDGE VOLUME (CUBIC FOOT)
INSHORE OF EXISTING BULKHEAD	7990	111860	111860
OFFSHORE OF EXISTING BULKHEAD	17800	0	53241
SIDE SLOPES	2612	0	7836
INSHORE OF NEW BULKHEAD *	25287	204767	0
TOTAL	53889	316627	172937

*SEE DRAWING MD-001 FOR LIMITS

A-PDF Split DEMO : Purchase from www.A-PDF.com to remove the watermark

DATUM RELATIONSHIPS





SECTION AT STA. 200+00
1"=20' HORIZ., 1"=5' VERT.

NOTES

1. SOUNDINGS ARE IN FEET AND REFER TO MLW.
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3. MLW IS 3.46' BELOW NGVD (1929).
4. ALL OTHER ELEVATIONS REFER TO NAVD 88 DATUM.
5. TOPOGRAPHIC SURVEY BY ALBERT W. TAY, L.S., MAY 2004 AND SOUNDINGS FROM SURVEYS ON JULY 24 & 25, 2001.

1"=20' 0 20 40 FT.

CITY OF GLEN COVE, NEW YORK · FOUNDED 1668 ·

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Woodbury, NY 11797
PH: (516) 364-9999
Fax: (516) 364-9045

STATE OF NEW YORK · SEWELL V. PARSON · No. 42173 · LICENSED PROFESSIONAL ENGINEER

Project Name
GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
3	01-30-09	ISSUED TO CITY OF GLEN COVE
2	11-21-08	ISSUED TO CITY OF GLEN COVE
1	09-06-08	ISSUED FOR N.Y.S.D.O.T. REVIEW

Issued/Revised

Drawing Title
DREDGING AND EXCAVATION PLAN

CONTRACT NO. 09-0800R
PIN 0757.52

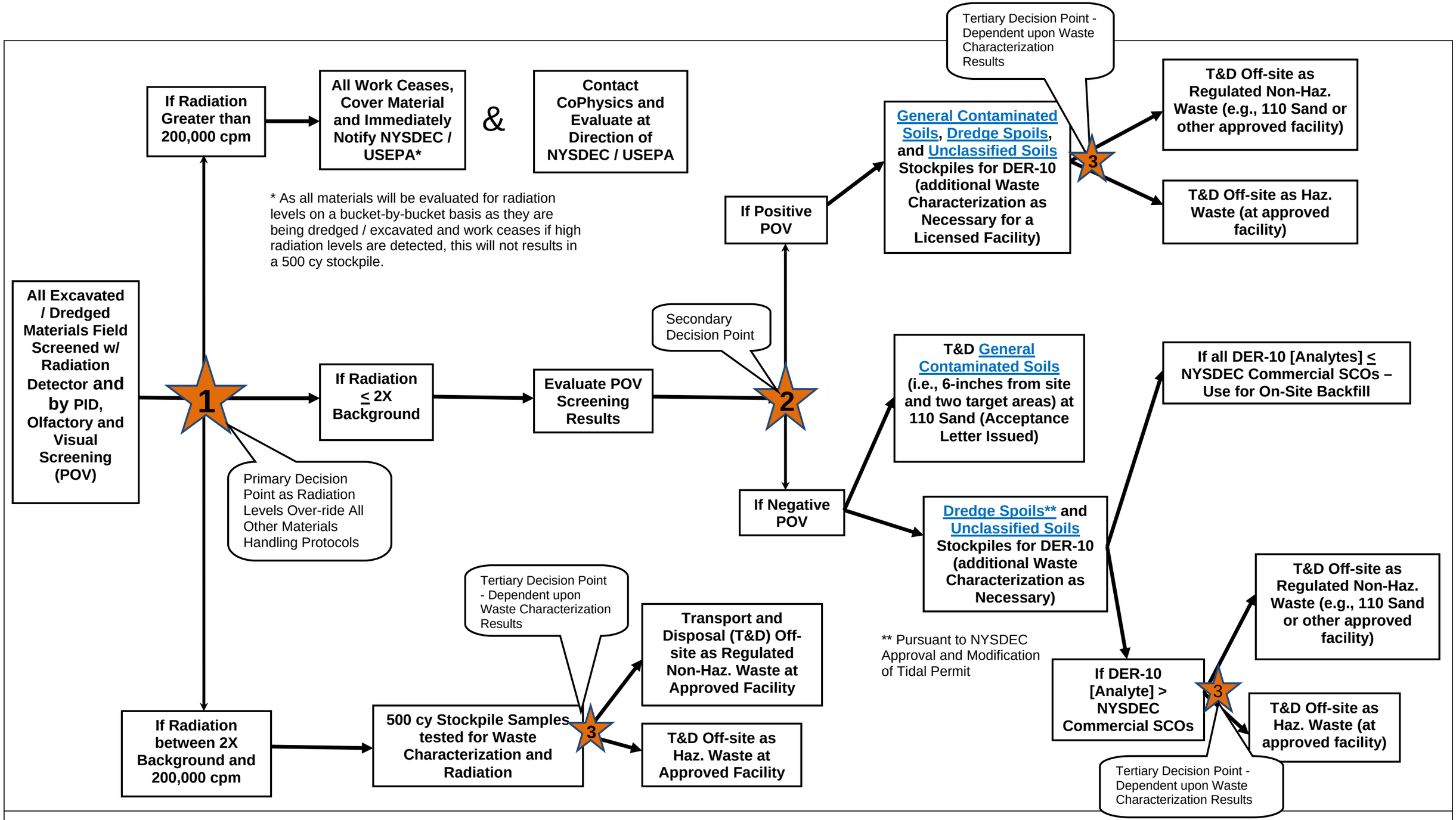
Project Manager	RS
Drawn By	A. P.
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040
Drawing No.	MD-002

- Proposed Creek Sampling Location
- Proposed Soil Boring Location
- Proposed Ambient Sediment Sampling Location

Apex Companies, LLC

Figure 2-1
With Proposed MHP Sediment Sampling Locations

Client:	Chesterfield
Project No.:	85185.001
Project Location:	Glen Cove, NY
Date:	July 2010



Apex Companies, LLC

Figure 2-2
Excavated and Dredged Materials Stockpile Management Plan / Decision Matrix

Client:	Chesterfield
Project No.:	85185.001
Project Location:	Glen Cove, NY
Date:	July 2010

APPENDICES

Appendix A

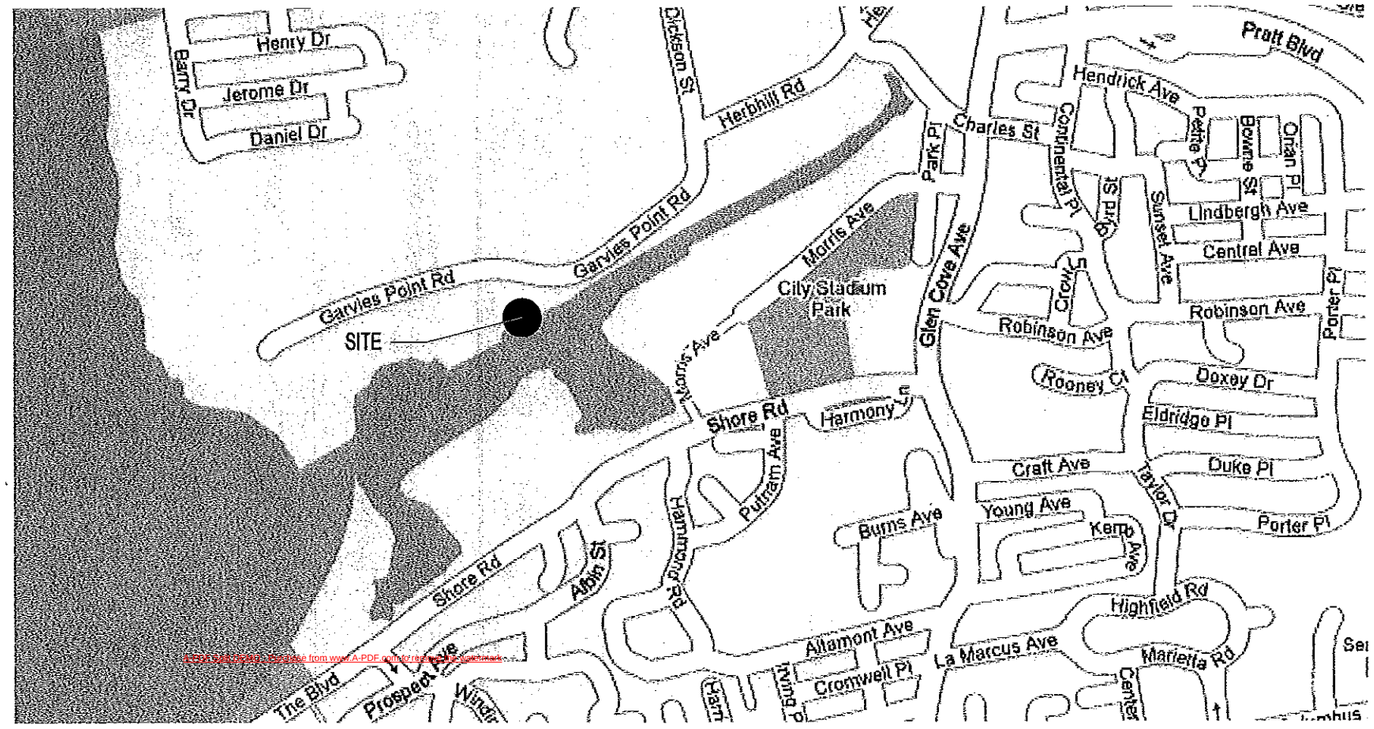
Applicable Project Plans

GLEN COVE FERRY TERMINAL

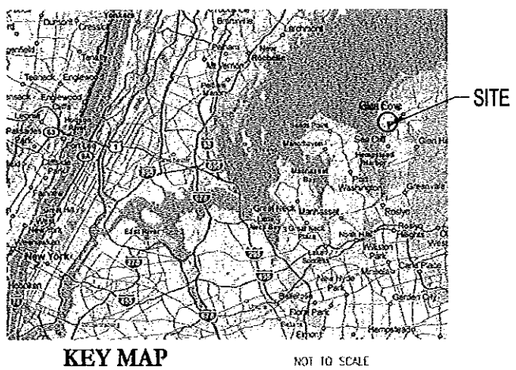
WATER BORNE AND SITE IMPROVEMENTS

PIN 0757.52 CONTRACT NO. 09-0800R

CONSTRUCTION DOCUMENTS



SITE LOCATION MAP NOT TO SCALE



KEY MAP NOT TO SCALE

NYSDOT STANDARD SHEETS

203-01, 203-05, 209-01, 209-03, 209-05, 209-06, 209-07, 402-01, 502-03, 502-04, 502-06, 604-02, 607-04, 607-06, 608-01, 608-02, 609-01, 609-03, 611-01, 655-03, 655-04, 655-05, 655-06, 663-01, 663-02, 663-03, 663-05, 663-06, 663-07, 670-01, 670-02, 685-01

APPROVED BY:

02/03/10

WILLIAM ARCHAMBAULT
DEPARTMENT OF PUBLIC WORKS
CITY OF GLEN COVE

DATE

LIST OF DRAWINGS

DWG NO.	DWG NAME	DATE
GENERAL		
T-001	COVER SHEET	02-01-10
T-002	STAGING AND PROJECT LIMIT PLAN	02-01-10
SITE WORK		
CD-001	EXISTING SITE/SITE DEMOLITION PLAN	02-01-10
CD-002	GRADING AND DRAINAGE PLAN	02-01-10
CD-003	SOIL EROSION AND SEDIMENT CONTROL PLAN	02-01-10
CD-004	SOIL EROSION AND SEDIMENT CONTROL DETAILS	02-01-10
CD-005	DRAINAGE DETAILS 1	02-01-10
CD-006	DRAINAGE DETAILS 2	02-01-10
L-001	SITE PLAN	02-01-10
L-001A	SITE PLAN FOR ALTERNATE PARKING PAVING	02-01-10
L-002	CONSTRUCTION AND LIGHTING LAYOUT PLAN	02-01-10
L-003	CONSTRUCTION DETAILS	02-01-10
L-004	PLANTING PLAN	02-01-10
L-005	PLANTING DETAILS	02-01-10
L-006	PLAZA LAYOUT PLAN	02-01-10
L-007	CIVIL DETAILS	02-01-10
L-008	UTILITY PLAN	02-01-10
L-009	UTILITY DETAILS 1	02-01-10
L-010	UTILITY DETAILS 2	02-01-10
L-011	UTILITY DETAILS 3	02-01-10
S-001	GENERAL NOTES 1	02-01-10
S-002	GENERAL NOTES 2	02-01-10
S-101	FOUNDATION PLAN	02-01-10
S-102	FOUNDATION DETAILS 1	02-01-10
S-103	FOUNDATION DETAILS 2	02-01-10
S-104	FOUNDATION DETAILS 3	02-01-10
MD-001	DEMOLITION AND EXCAVATION REMOVAL PLAN	02-01-10
MD-002	DREDGING AND EXCAVATION PLAN	02-01-10
MS-001	WATERFRONT STRUCTURES - GENERAL PLAN AND SECTIONS	02-01-10
MS-002	WATERFRONT STRUCTURES - PILE AND GUIDE PILE PLAN	02-01-10
MS-003	BULKHEAD PLAN - SECTION AND DETAILS	02-01-10
MS-004	BULKHEAD PLAN - DETAILS	02-01-10
MS-005	PILE AND GUIDE PILE SCHEDULE AND DETAILS	02-01-10
MS-006	FLOATING PLATFORM - PLAN, SECTIONS AND DETAIL	02-01-10
MS-007	LANDING PLATFORM 1 AND 2 - PLAN, SECTION AND DETAIL	02-01-10
MS-008	WATERFRONT STRUCTURES - FLOATING DOCK PLAN	02-01-10
MS-009	FLOATING DOCK PLAN, SECTIONS AND DETAIL	02-01-10
MS-010	FLOATING LANDING PLAN, SECTIONS AND DETAIL	02-01-10
MS-011	FLOATING GANGWAY PLAN, ELEVATIONS, SECTIONS AND DETAIL	02-01-10
MS-012	FIXED GANGWAY PLAN, ELEVATION, SECTIONS AND DETAIL	02-01-10
MS-013	MISC DETAILS PLAN, AND SECTIONS	02-01-10
MS-014	BOW LOADER FENDER PLAN, SECTIONS, DETAILS	02-01-10
MS-015	CONCRETE DEADMAN PLAN AND SECTIONS	02-01-10
E-001	SITE ELECTRICAL PLAN, SYMBOLS, ABBREVIATION AND GENERAL NOTES	02-01-10
E-002	ELECTRICAL PLAN SECTIONS AND DETAILS	02-01-10
E-003	ELECTRICAL ELEVATION AND DETAILS	02-01-10
E-004	HEAT TRACE DIAGRAM DETAILS AND PANEL SCHEDULE	02-01-10
E-005	CATHODIC PROTECTION PLAN, SECTIONS AND DETAILS	02-01-10
E-006	SITE ELECTRICAL POWER PLAN, ABBREVIATIONS AND GENERAL NOTES	02-01-10
E-007	SITE LIGHTING PLAN, ABBREVIATIONS AND GEN NOTES	02-01-10
E-008	ONE LINE DIAGRAM	02-01-10
MM-001	MECHANICAL LEGEND, ABBREVIATIONS, GEN NOTES AND SCHEDULE	02-01-10
MM-002	MECHANICAL-GENERAL SITE PLAN, WATER AND SEWER PIPING ROUTING	02-01-10

Owner:
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STATE OF NEW YORK · PAUL A. MUSCARELLA · LICENSED PROFESSIONAL ENGINEER · NO. 81888

Project Name

GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
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Issued/Revised

Drawing Title

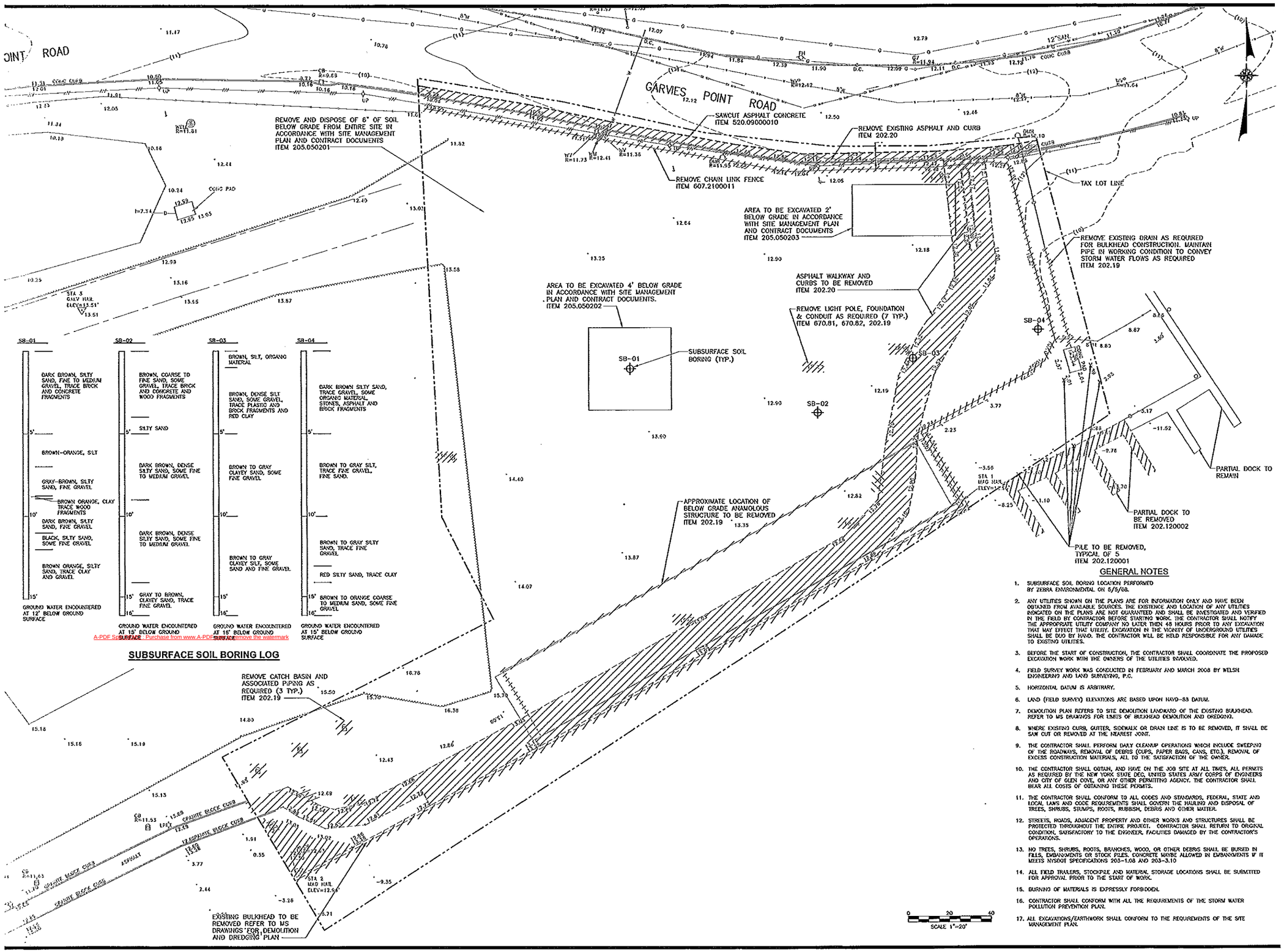
COVER SHEET

CONTRACT NO. 09-0800R

PIN 0757.52

Project Manager	ES
Drawn By	EB
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040
Drawing No.	

T-001



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GENERAL NOTES

1. SUBSURFACE SOIL BORING LOCATION PERFORMED BY ZEBRA ENVIRONMENTAL ON 5/5/08.
2. ANY UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND HAVE BEEN OBTAINED FROM AVAILABLE SOURCES. THE EXISTENCE AND LOCATION OF ANY UTILITIES INDICATED ON THE PLANS ARE NOT GUARANTEED AND SHALL BE INVESTIGATED AND VERIFIED IN THE FIELD BY CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY NO LATER THEN 48 HOURS PRIOR TO ANY EXCAVATION THAT MAY EFFECT THAT UTILITY. EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES SHALL BE DUG BY HAND. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.
3. BEFORE THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE PROPOSED EXCAVATION WORK WITH THE OWNERS OF THE UTILITIES INVOLVED.
4. FIELD SURVEY WORK WAS CONDUCTED IN FEBRUARY AND MARCH 2008 BY WELSH ENGINEERING AND LAND SURVEYING, P.C.
5. HORIZONTAL DATUM IS ARBITRARY.
6. LAND (FIELD SURVEY) ELEVATIONS ARE BASED UPON NAVD-88 DATUM.
7. DEMOLITION PLAN REFERS TO SITE DEMOLITION LANDWARD OF THE EXISTING BULKHEAD. REFER TO MS DRAWINGS FOR LIMITS OF BULKHEAD DEMOLITION AND DREDGING.
8. WHERE EXISTING CURB, GUTTER, SIDEWALK OR DRAIN LINE IS TO BE REMOVED, IT SHALL BE SAW CUT OR REMOVED AT THE NEAREST JOINT.
9. THE CONTRACTOR SHALL PERFORM DAILY CLEANUP OPERATIONS WHICH INCLUDE SWEEPING OF THE ROADWAYS, REMOVAL OF DEBRIS (CUPS, PAPER BAGS, CANS, ETC.), REMOVAL OF EXCESS CONSTRUCTION MATERIALS, ALL TO THE SATISFACTION OF THE OWNER.
10. THE CONTRACTOR SHALL OBTAIN, AND HAVE ON THE JOB SITE AT ALL TIMES, ALL PERMITS AS REQUIRED BY THE NEW YORK STATE DEC, UNITED STATES ARMY CORPS OF ENGINEERS AND CITY OF GLEN COVE, OR ANY OTHER PERMITTING AGENCY. THE CONTRACTOR SHALL BEAR ALL COSTS OF OBTAINING THESE PERMITS.
11. THE CONTRACTOR SHALL CONFORM TO ALL CODES AND STANDARDS, FEDERAL, STATE AND LOCAL LAWS AND CODE REQUIREMENTS SHALL GOVERN THE HAULING AND DISPOSAL OF TREES, SHRUBS, STUMPS, ROOTS, RUBBISH, DEBRIS AND OTHER MATTER.
12. STREETS, ROADS, ADJACENT PROPERTY AND OTHER WORKS AND STRUCTURES SHALL BE PROTECTED THROUGHOUT THE ENTIRE PROJECT. CONTRACTOR SHALL RETURN TO ORIGINAL CONDITION, SATISFACTORY TO THE ENGINEER, FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS.
13. NO TREES, SHRUBS, ROOTS, BRANCHES, WOOD, OR OTHER DEBRIS SHALL BE BURIED IN FILLS, EMBANKMENTS OR STOCK PILES. CONCRETE MAYBE ALLOWED IN EMBANKMENTS IF IT MEETS NYSDOT SPECIFICATIONS 203-1.08 AND 203-3.10
14. ALL FIELD TRAILERS, STOCKPILE AND MATERIAL STORAGE LOCATIONS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO THE START OF WORK.
15. BURNING OF MATERIALS IS EXPRESSLY FORBIDDEN.
16. CONTRACTOR SHALL CONFORM WITH ALL THE REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLAN.
17. ALL EXCAVATIONS/EARTHWORK SHALL CONFORM TO THE REQUIREMENTS OF THE SITE MANAGEMENT PLAN.

Client:

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Issued/Revised

Drawing Title

EXISTING SITE/ SITE DEMOLITION PLAN

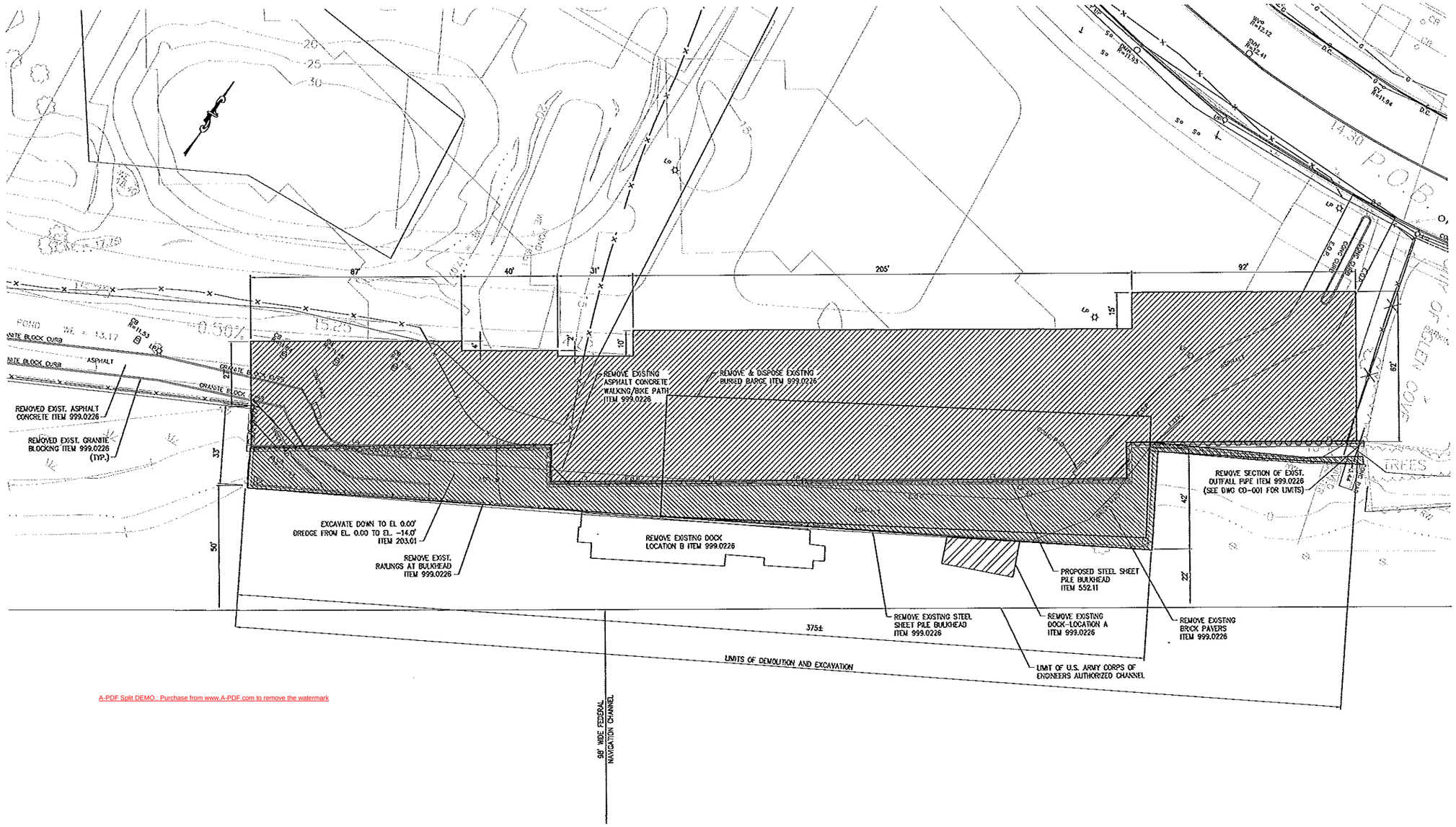
CONTRACT NO. 09-0800R

PIN 0757.52

Project Manager	ES
Drawn By	
Checked By	KH
Scale	1"=20'
Date	02/03/10
Project No.	204040

Drawing No.

CD-001



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PLAN
SCALE 1"=20'

NOTES:

1. ELEVATIONS REFER TO NAVD88 DATUM.
2. SEE SHEET MD-2 FOR FURTHER DEFINITION OF LIMITS

LEGEND

- EXCAVATION TO EL. -14.00'
- EXCAVATION TO EL. +5.00'
- DEMOLITION

1"=20' 0 20 40 FT.

S:\JOB77.20\Contract\GCF-Structural\GCF7-MD01-02.dwg 01/29/10 02:03 portelstine

Client:

CITY OF GLEN COVE, NEW YORK · FOUNDED 1668 ·

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Fax: (516) 364-9045

STATE OF NEW YORK · DENNIS V. FIORINO · No. 45115 · LICENSED PROFESSIONAL ENGINEER

Project Name:

GLEN COVE FERRY TERMINAL

No	Date	Description
6	02-03-10	NYSDOT COMMENTS/ITEM NOS.
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Issued/Revised

Drawing Title

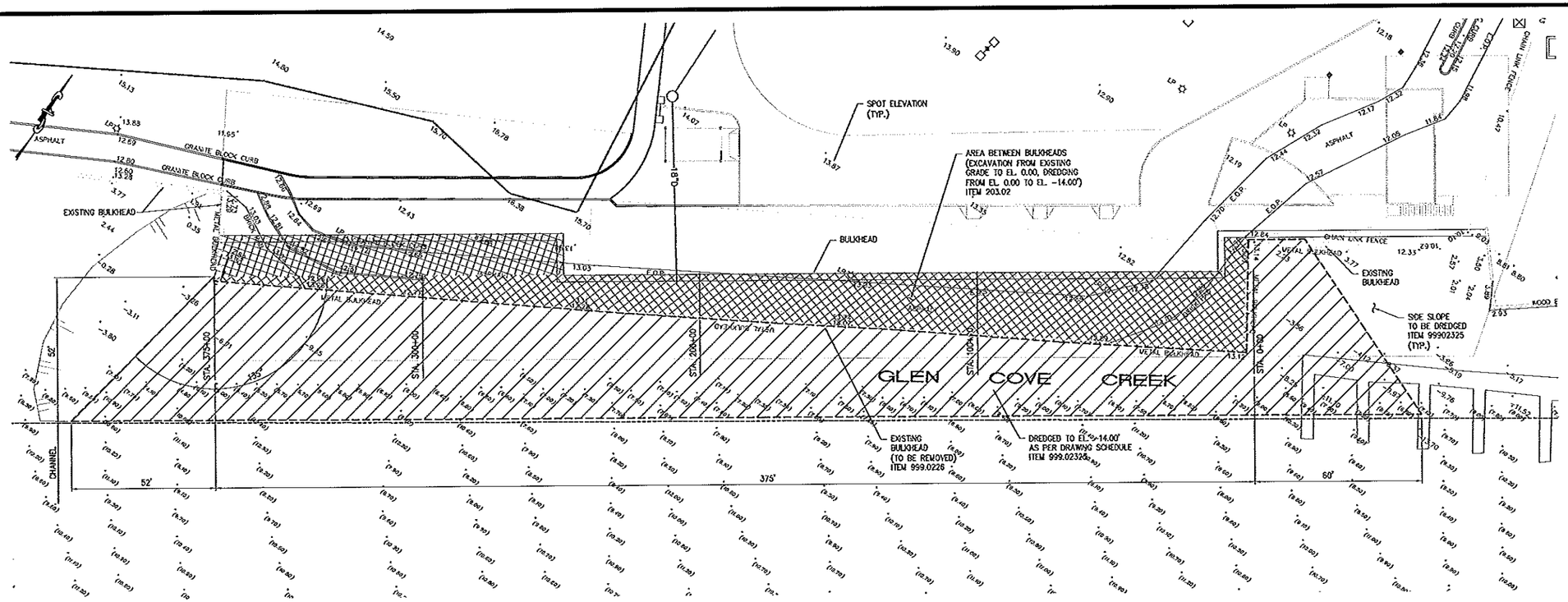
DEMOLITION AND EXCAVATION REMOVAL P

CONTRACT NO. 09-0800R
PIN 0757.52

Project Manager	BS
Drawn By	A. P.
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040

Drawing No.

MD-001



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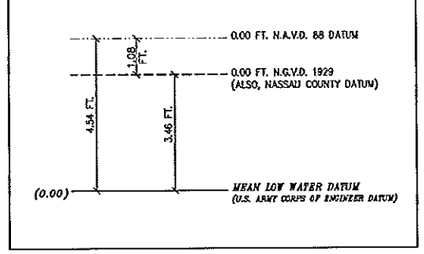
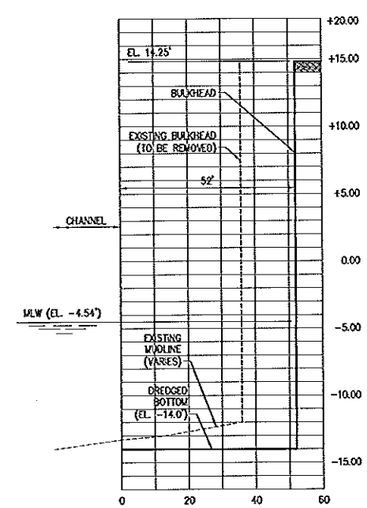
DATUM RELATIONSHIPS





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4 West Red Oak Lane, Ste 104, White Plains, NY 10604, PH: (914) 467-7000, Fax: (914) 467-6983
330 Crossways Park Drive, Woodbury, NY 11797, PH: (516) 364-9890, Fax: (516) 364-9045

STATE OF NEW YORK · DENIS V. FADEN · No. 45775 · LICENSED PROFESSIONAL ENGINEER

Project Name
GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
3	01-30-09	ISSUED TO CITY OF GLEN COVE
2	11-21-08	ISSUED TO CITY OF GLEN COVE
1	09-08-08	ISSUED FOR N.Y.S.D.O.T. REVIEW

Issued/Revised

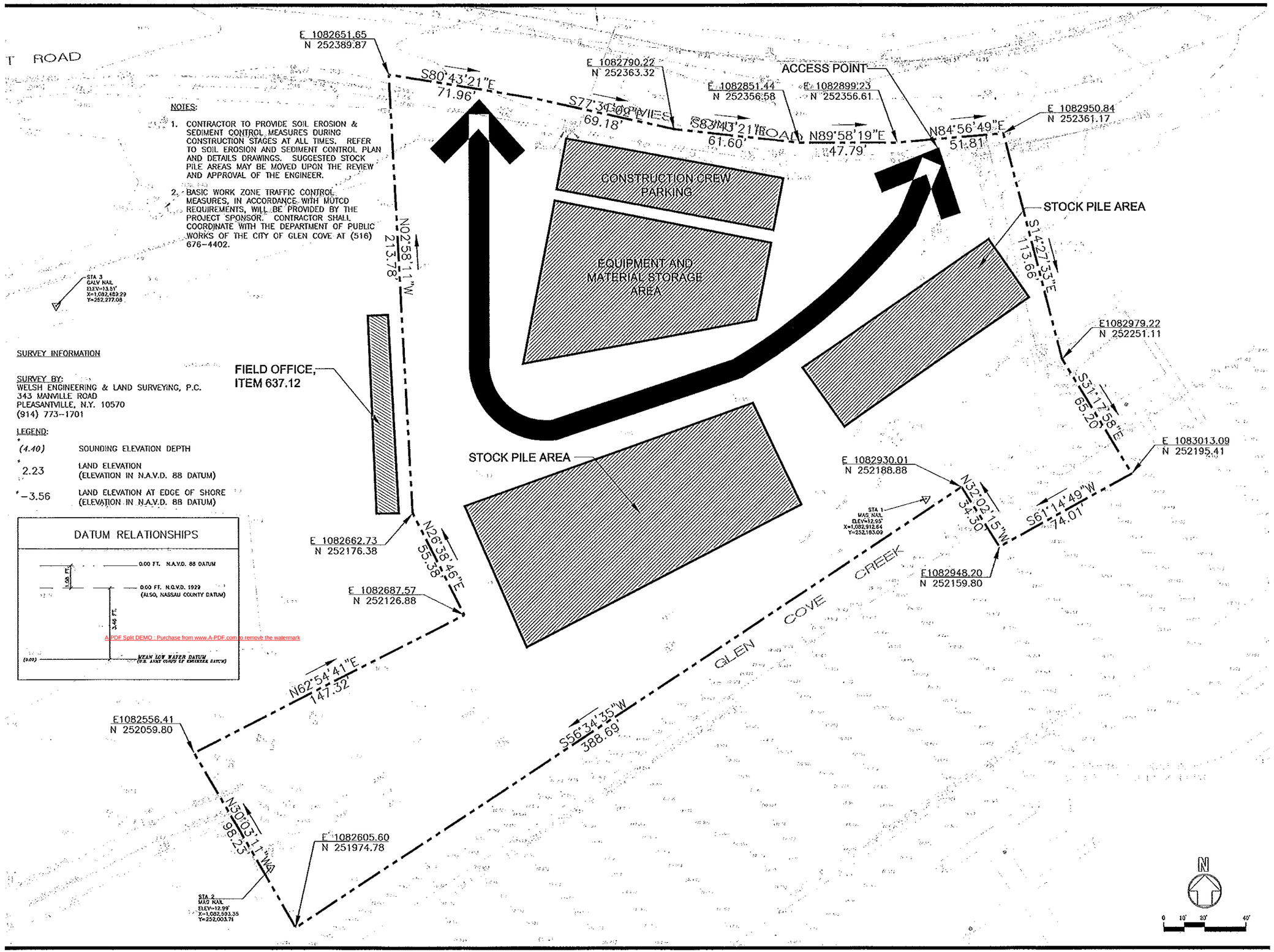
Drawing Title
DREDGING AND EXCAVATION PLAN

CONTRACT NO. 09-0800R
PIN 0757.52

Project Manager	ES
Drawn By	A. P.
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040

Drawing No.
MD-002

S:\VJCPT\20\Contract\Ode-Structural\CCPT-MD02-04.dwg 01/29/10 09:03 portolina



NOTES:

1. CONTRACTOR TO PROVIDE SOIL EROSION & SEDIMENT CONTROL MEASURES DURING CONSTRUCTION STAGES AT ALL TIMES. REFER TO SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS DRAWINGS. SUGGESTED STOCK PILE AREAS MAY BE MOVED UPON THE REVIEW AND APPROVAL OF THE ENGINEER.
2. BASIC WORK ZONE TRAFFIC CONTROL MEASURES, IN ACCORDANCE WITH MUTCD REQUIREMENTS, WILL BE PROVIDED BY THE PROJECT SPONSOR. CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS OF THE CITY OF GLEN COVE AT (516) 676-4402.

SURVEY INFORMATION

SURVEY BY:
WELSH ENGINEERING & LAND SURVEYING, P.C.
343 MANVILLE ROAD
PLEASANTVILLE, N.Y. 10570
(914) 773-1701

LEGEND:

(4.40)	SOUNDING ELEVATION DEPTH
2.23	LAND ELEVATION (ELEVATION IN N.A.V.D. 88 DATUM)
-3.56	LAND ELEVATION AT EDGE OF SHORE (ELEVATION IN N.A.V.D. 88 DATUM)

DATUM RELATIONSHIPS

A-PDF Split DEMO : Purchase from www.A-PDF.com to remove the watermark

Client:

CITY OF GLEN COVE, NEW YORK · FOUNDED 1668

Architect:

URBITRAN GROUP
Architecture · Engineering · Planning
71 West 23rd Street, 12th Fl.
New York, N.Y. 10010
Tel: (212) 763-4585
Fax: (646) 424-0835

Consultants:

Halcrow Group, Inc.
22 Cortlandt Street
New York, NY 10007
PH: (212) 608-3990
Fax: (212) 566-5059

DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
4 West Red Oak Lane, Ste 104
White Plains, NY 10604
PH: (914) 467-7000
Fax: (914) 467-6103
330 Crossways Park Drive
Woodbury, NY 11797
PH: (516) 364-9890
Fax: (516) 364-9045

STATE OF NEW YORK · PAUL J. MUCCIO · NO. 51199 · LICENSED PROFESSIONAL ENGINEER

Project Name

GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
3	01-30-09	ISSUED TO CITY OF GLEN COVE
2	11-21-08	ISSUED TO CITY OF GLEN COVE
1	09-08-08	ISSUED FOR N.Y.S.D.O.T. REVIEW

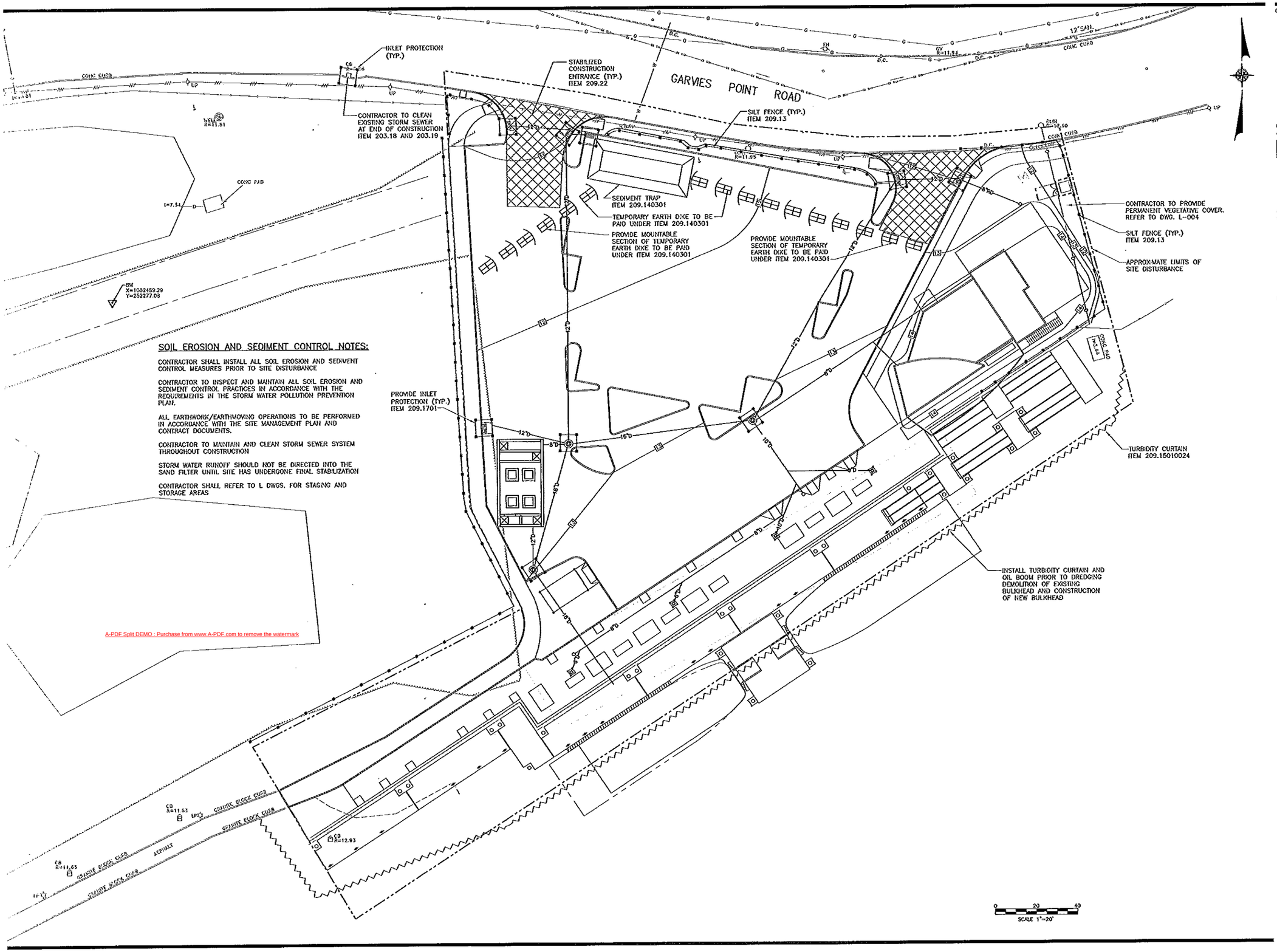
Issued/Revised

Drawing Title

STAGING AND PROJECT LIMIT PLAN

CONTRACT NO. 09-0800R
PIN 0757.52

Project Manager	ES
Drawn By	EB
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040
Drawing No.	T-002



SOIL EROSION AND SEDIMENT CONTROL NOTES:

CONTRACTOR SHALL INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE

CONTRACTOR TO INSPECT AND MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES IN ACCORDANCE WITH THE REQUIREMENTS IN THE STORM WATER POLLUTION PREVENTION PLAN.

ALL EARTHWORK/EARTHMOVING OPERATIONS TO BE PERFORMED IN ACCORDANCE WITH THE SITE MANAGEMENT PLAN AND CONTRACT DOCUMENTS.

CONTRACTOR TO MAINTAIN AND CLEAN STORM SEWER SYSTEM THROUGHOUT CONSTRUCTION

STORM WATER RUNOFF SHOULD NOT BE DIRECTED INTO THE SAND FILTER UNTIL SITE HAS UNDERGONE FINAL STABILIZATION

CONTRACTOR SHALL REFER TO L DWGS. FOR STAGING AND STORAGE AREAS

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Client

CITY OF GLEN COVE, NEW YORK · FOUNDED 1668 ·

Architect

URBITRAN GROUP
Architecture · Engineering · Planning
71 West 23rd Street, 12th Fl.
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PH: (212) 608-3990
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DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
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PH: (914) 467-7000
Fax: (914) 467-6183
333 Crossways Park Drive
Woodbury, NY 11797
PH: (516) 364-9890
Fax: (516) 364-9045

Project Name

GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
3	01-30-09	ISSUED TO CITY OF GLEN COVE
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1	09-08-08	ISSUED FOR N.Y.S.D.O.T. REVIEW

Issued/Revised

Drawing Title

SOIL EROSION AND SEDIMENT CONTROL PLAN

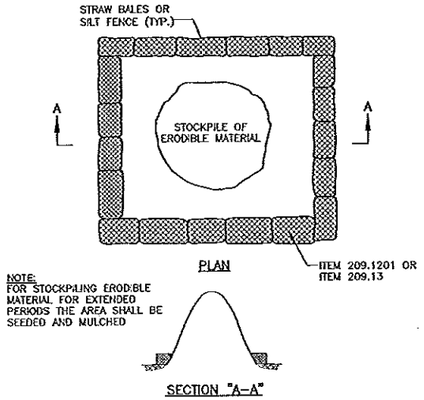
CONTRACT NO. 09-0800R

PIN 0757.52

Project Manager	ES
Drawn By	
Checked By	KH
Scale	1"=20'
Date	02/03/10
Project No.	204040

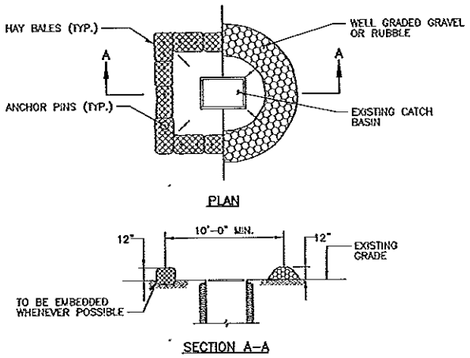
Drawing No.

CD-003



SEDIMENT CONTROL DETAIL FOR STOCKPILING OF ERODIBLE MATERIAL

N.T.S.



INLET PROTECTION ITEM 209.1701

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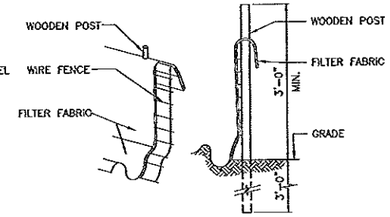
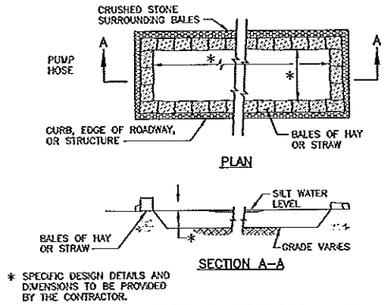


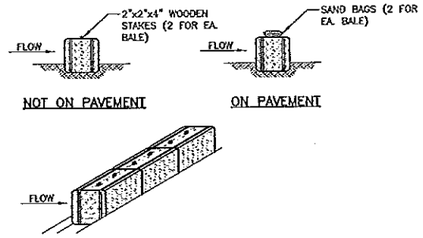
ITEM 209.13
TYPICAL SILT FENCE DETAIL

N.T.S.



SEDIMENT TRAP ITEM 209.140301

N.T.S.



ITEM 209.1201
STRAW BALE TEMPORARY

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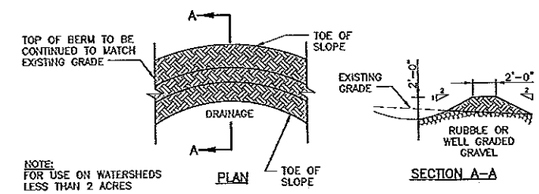
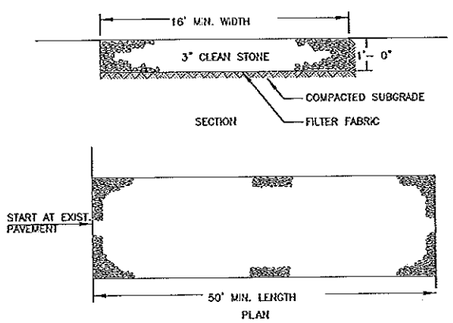


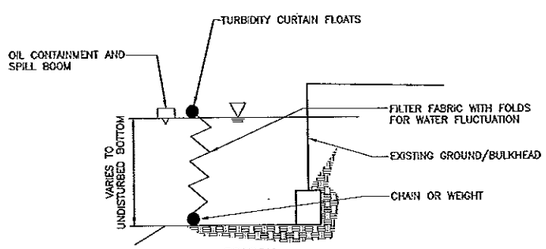
FILTER BERM/PERIMETER DIKE SWALE DETAIL TO BE PAID UNDER ITEM 209.140301

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE ITEM 209.22

N.T.S



ITEM 209.15010024
TURBIDITY CURTAIN

N.T.S.

INSTALLATION NOTES:

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1. STONE SIZE – USE 3" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. PROVIDE INDEPENDENT LABORATORY GRADATION ANALYSIS PRIOR TO INSTALLATION

2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.

3. THICKNESS – NOT LESS THAN TWELVE (12) INCHES AFTER COMPACTION.

4. WIDTH – 16 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.

5. FILTER CLOTH – SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.

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 RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY SHALL BE REMOVED IMMEDIATELY.

8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. 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.

10. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE AREA USED FOR TRACKING PAD SHALL BE RETURNED TO ELEVATIONS AND CONDITIONS WHICH EXISTED PRIOR TO THE START OF CONSTRUCTION.

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. ANY DISTURBED AREAS THAT WILL NOT RECEIVE PERMANENT RESTORATION WITHIN TEN (10) DAYS AFTER FINAL GRADING, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY COVER. THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

3. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.

4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW YORK.

5. A SUB–BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB–BASE SHALL BE INSTALLED WITHIN 15 DAYS OF THE PRELIMINARY GRADING.

6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.; STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY COVER OF STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.; SLOPES GREATER THAN 3:1)

8. NEW GRAVEL PAD SHALL BE INSTALLED WITH 1–1/2" TO 2–1/2" STONE, AS PER TRAFFIC CONTROL STANDARD REQUIREMENTS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE. SAID PAD SHALL BE UNDERLAIN WITH A SUITABLE SYNTHETIC FILTER FABRIC. THE PAD SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS AND PRIVATE PROPERTY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT–OF–WAY OR PRIVATE PROPERTY SHALL BE REMOVED IMMEDIATELY. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE AREA USED FOR TRACKING PAD SHALL BE RETURNED TO ELEVATIONS AND CONDITIONS WHICH EXISTED PRIOR TO THE START OF CONSTRUCTION.

9. IN ACCORDANCE WITH THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, ANY SOIL HAVING A pH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A pH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION.

10. THE CITY OF GLEN COVE AND THE ENGINEER, SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.

11. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON–VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

12. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO MAINTAIN DUST CONTROL. DIRT HAUL ROADS SHALL BE SPRINKLED WITH WATER OR GIVEN A SURFACE OF CRUSHED STONES OR WOODCHIPS AS REQUIRED. VEHICLES SHALL BE CLEANED, AS NECESSARY, PRIOR TO USING PUBLIC STREETS. PAVED ROADS SHALL BE SPRINKLED WITH WATER.

13. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE LOCATED IN THE FIELD AS REQUIRED OR AT THE DIRECTION OF THE ENGINEER. THE CONTRACT DRAWINGS ARE NOT INTENDED TO SHOW THE LOCATION AND DETAILS FOR ALL SUCH DEVICES BUT ARE TO BE USED AS A REASONABLE GUIDE.

14. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE CITY OF GLEN COVE AND THE ENGINEER. THE REVISED PLANS MUST BE PREPARED BY THE CONTRACTOR AND MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL PRACTICES.

15. CONTRACTOR SHALL OBTAIN ALL REQUIRED LOCAL BUILDING/CONSTRUCTION PERMITS.

16. UPON COMPLETION OF CONSTRUCTION WORK AND AFTER FINAL GRADING AND WHEN PERMANENT STABILIZATION HAS BEEN ESTABLISHED, HAY BALES, SILT FENCES AND ALL OTHER SOIL PLAN APPURTENANCES WILL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, UNLESS ORDERED TO REMAIN BY THE ENGINEER.

17. ALL EXCESS EXCAVATED MATERIAL, EXCEPT FOR TOP SOIL, WILL BE REMOVED FROM THE SITE BY THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

18. CONDUIT OUTLETS AND CATCH BASIN INLETS MUST BE PROTECTED PRIOR TO START OF CONSTRUCTION.

19. THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION OPERATIONS FOR REVIEW AND SUBMITAL TO THE ENGINEER.

20. THE CONTRACTOR SHALL MEET ENGINEER ON–SITE TO DEFINE THOSE AREAS WHICH WILL REQUIRE SOIL EROSION AND SEDIMENT CONTROL FACILITIES, DISCUSS THEIR CONSTRUCTION AND THEREAFTER PROVIDE DETAILED PLANS FOR REVIEW OF SUCH FACILITIES BY THE CITY OF GLEN COVE AND THE ENGINEER.

21. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE WHERE POSSIBLE PRIOR TO, OR IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING.

22. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE AND MAINTAINED; INCLUDING SILT AND SEDIMENT REMOVAL, UNTIL CONSTRUCTION IS COMPLETED, AREA STABILIZED AND THE ENGINEER SO DIRECTS.

23. THE CONTRACTOR SHALL CONFINE SOIL DISTURBANCE ACTIVITY TO THE AREAS CONTAINED WITHIN THE " LIMIT OF DISTURBANCE " LINES EXCEPT AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE AND COORDINATION WITH ADJACENT CONTRACTS. SUCH ACTIVITY SHALL ESSENTIALLY CONSIST OF CLEARING, GRUBBING, GRADING AND CONSTRUCTION IN AREAS DEFINED AS BUILDINGS, TANKS, PIPELINE, PARKING AREAS, DRIVES AND WALKWAYS OR AS MAY BE REQUIRED DUE TO GRADE CHANGES OR RETAINING WALLS.

24. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. SEDIMENT FILTER SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. THE DETAILS OF DESIGN AND CONSTRUCTION SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR TO THE ENGINEER, AND ALL OTHER PERTINENT AGENCIES FOR REVIEW.

25. THE PROJECT IS ANTICIPATED TO BE COMPLETED WITHIN THE TIME ALLOTMENT AS SPECIFICALLY DESCRIBED IN THE CONTRACT DOCUMENTS.

26. SOIL STABILIZATION METHODS SHALL BE UNDERTAKEN COINCIDENTALLY WITH ALL MAJOR SITE IMPROVEMENTS AND CONTINUE DURING THE ENTIRE CONSTRUCTION ACTIVITY PERIOD.

Client:
CITY OF GLEN COVE, NEW YORK · FOUNDED 1668 ·

Architect:
URBITRAN GROUP
Architecture • Engineering • Planning
71 West 23rd Street, 12th Fl.
New York, N.Y. 10010
Tel: (212) 763-4585
Fax: (646) 424-0835

Consultants:
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DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
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Fax: (914) 697-6193
330 Crossways Park Drive
Woodbury, NY 11797
PH: (516) 364-9890
Fax: (516) 364-9045

Project Name
GLEN COVE FERRY TERMINAL

No	Date	Description
4	02-03-10	NYSDOT COMMENTS/ITEM NOS.
3	01-33-09	ISSUED TO CITY OF GLEN COVE
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1	09-08-08	ISSUED FOR N.Y.S.D.O.Y. REVIEW

Issued/Revised

Drawing Title

SOIL EROSION AND SEDIMENT CONTROL DETAILS

CONTRACT NO. 09-0800R

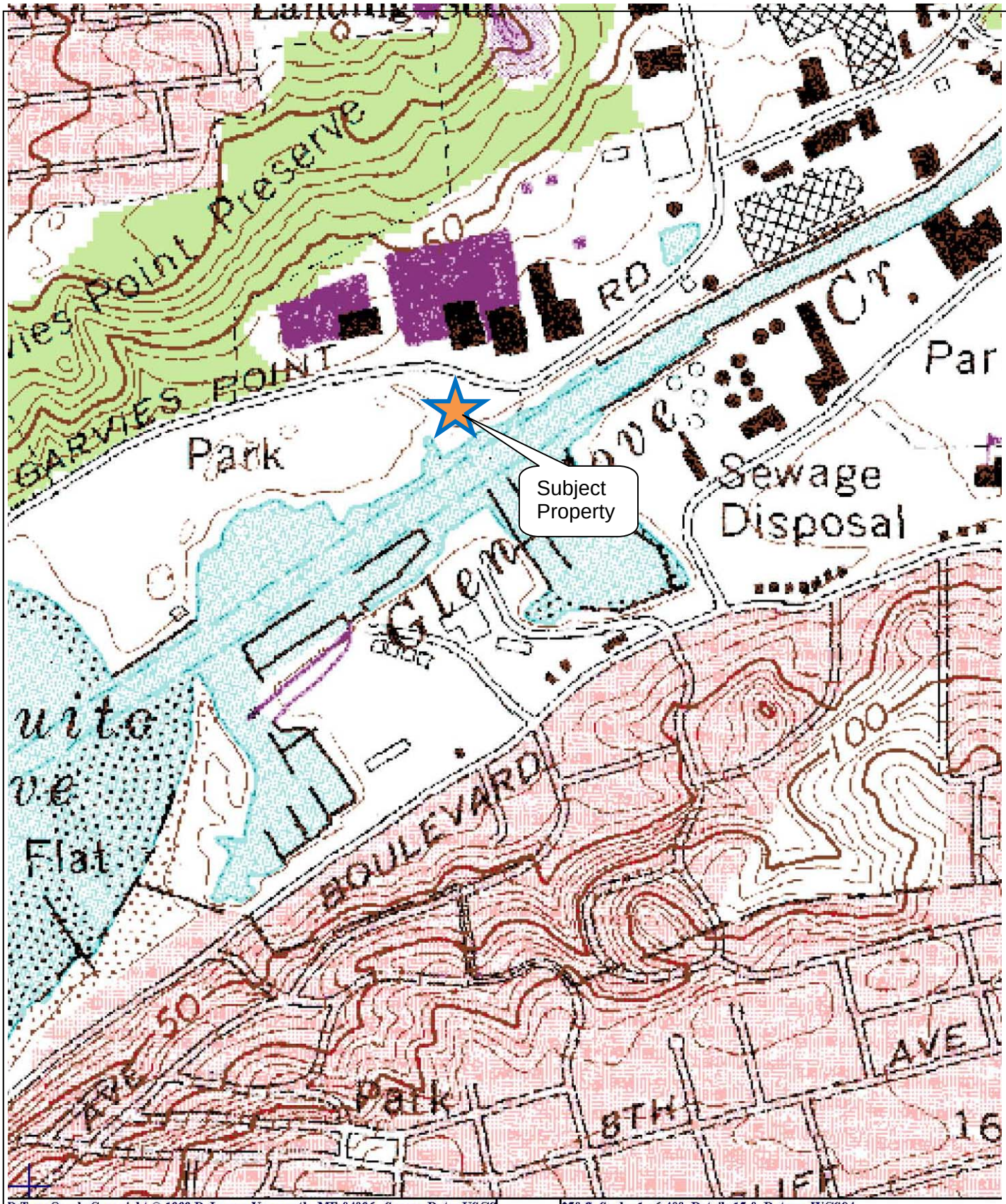
PIN 0757.52

Project Manager	ES
Drawn By	
Checked By	KH
Scale	AS NOTED
Date	02/03/10
Project No.	204040
Drawing No.	

CD-004

Appendix B

110 Sand Company Acceptance Letter / Backup



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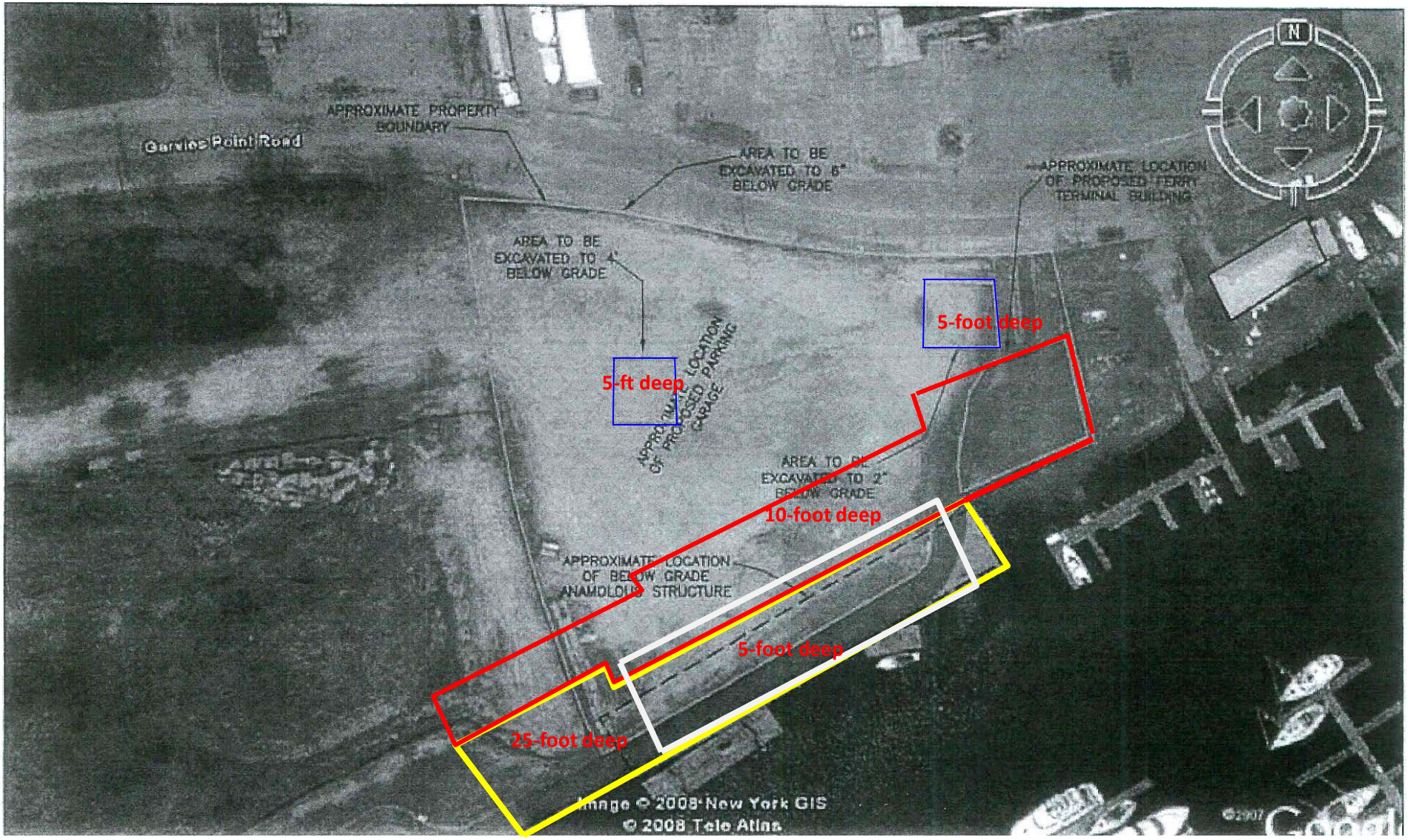
Apex Companies, LLC

GLEN COVE

USGS Sea Cliff Quadrangle

Client:	Chesterfield
Project No.:	
Project Location:	Glen Cove, NY
Date:	April 2010



Apex Companies, LLC

Figure 2
Glen Cove Ferry Terminal
Soil Boring Areas

Client:	Chesterfield
Project No.:	
Project Location:	Glen Cove, NY
Date:	April 2010

110 Sand Company Waste Profile Form

CFDS Location:
136 Spagnoli Road
Melville, NY 11747

Mailing Address:
170 Cabot Street
West Babylon, NY 11704

Submitted By:

Name: Richard J. Baldwin
Company: Apex Companies, LLC
Address: 120-D Wilbur Place
Bohemia, New York 11716
Phone: (631) 567-1777, ext. 106
Fax: (631) 567-1967

Analytical ID Number: _____

Site Description: City of Glen Cove Industrial Developement Agency Glen Cove Ferry Terminal Project.

Waste Description: (Include approximate yardage / tonnage) 30,000 to 40,000 tons of arsenic and barium impacted soils to be removed from the upland portion of the 1.6 acre property.

Site History: Property is located on the Captain's Cove EPA Superfund Site. Materials from the Li Tungston Site may have also be dumped on-site.

Regulatory/Government Official Contact:

Name: Roger Evans
Title: Region 1 Permit Administrator
Agency: NYS Department of Environmental Conservation
Phone: (631) 444-0365

Approximate Start Date of Job: June 1, 2010

Waste Carter:

Name: Mrs. Elta Bergold
Company: Long Island Sound Transport, Inc. dba: A&R Materials
Address: 72 Union Avenue
Ronkonkoma, NY 11779
Phone: (631) 585-5736
Fax: (631) 585-5760

Payor:

Name: Mr. Jeff Grube
Company: Chesterfield Associates, Inc.
Address: P.O. 1229
Westhampton Beach, NY 11978
Phone: (631) 288-5100
Fax: (631) 288-5161

Signed: _____ Date: May 6, 2010

Please return form to Jim Debis

Fax: 631-460-7495
Email: jimd@110sand.com

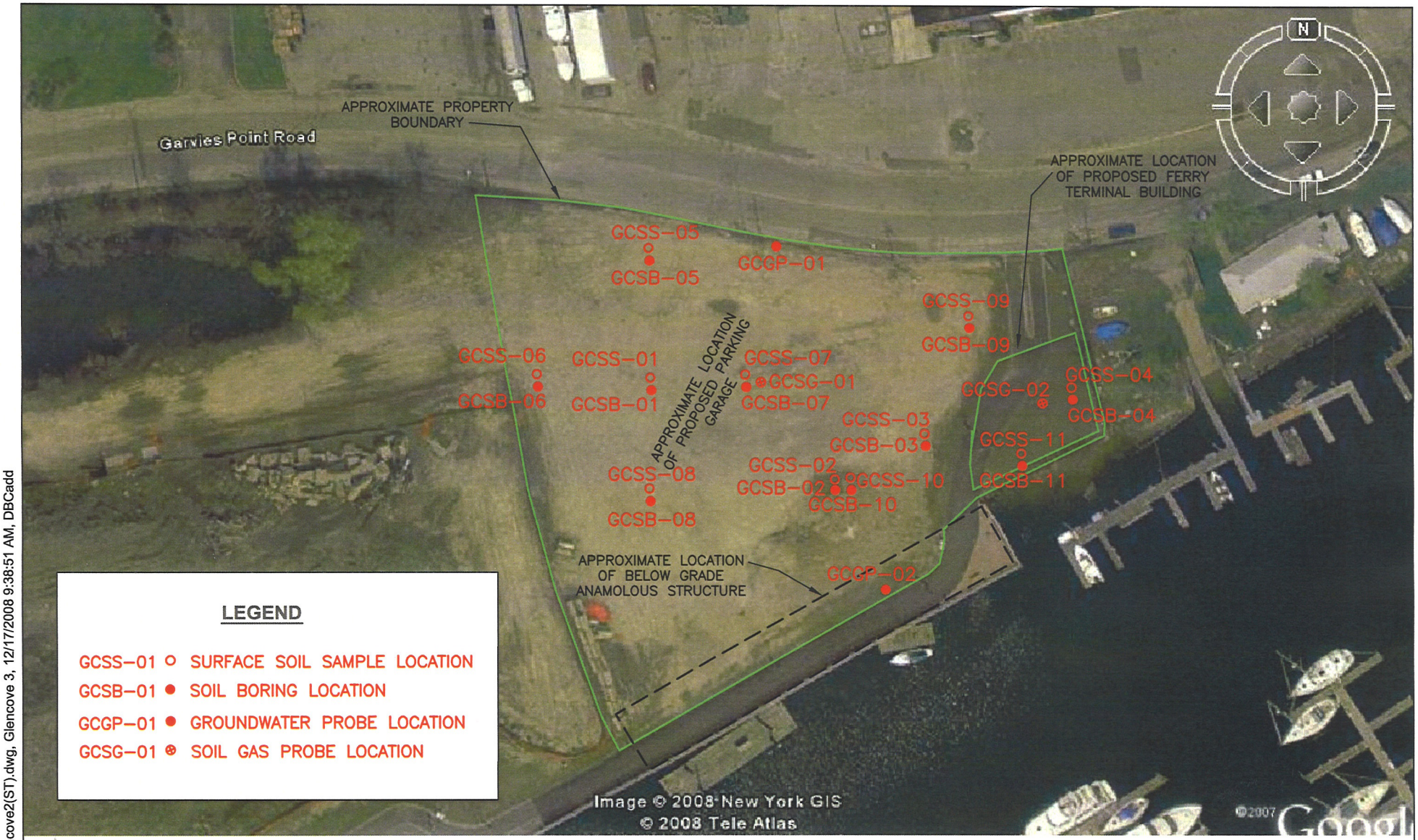
THE CITY OF GLEN COVE

Ferry Terminal Project
Supplemental Phase II Environmental Site Investigation

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

December 2008

2358/GlenCoveFerry/EnvPermit(12/17/08)RLA



LEGEND

GCSS-01	○	SURFACE SOIL SAMPLE LOCATION
GCSB-01	●	SOIL BORING LOCATION
GCGP-01	●	GROUNDWATER PROBE LOCATION
GCSG-01	⊗	SOIL GAS PROBE LOCATION

SOURCE: GOOGLE EARTH GIS 2008

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

GLEN COVE FERRY TERMINAL
GLEN COVE, NASSAU COUNTY, NEW YORK
PHASE II ENVIRONMENTAL SITE ASSESSMENT

SAMPLE LOCATION MAP

N.T.S.

FIGURE 1

F:\2358\dwg\2358-01B glencove2(ST).dwg, Glencove 3, 12/17/2008 9:38:51 AM, DBCadd

APPENDIX C

ANALYTICAL DATA

TABLE 1

URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN

GLEN COVE FERRY TERMINAL

PHASE II ENVIRONMENTAL SITE ASSESSMENT

SURFACE SOIL SAMPLING RESULTS

POLYCYCLIC AROMATIC HYDROCARBONS

Sample ID	**GCSS-01**		**GCSS-02**		**GCSS-03**		**GCSS-04**		**Restricted Use Commercial Soil Cleanup Objectives ug/Kg**
Sampling Date	5/8/2008		5/8/2008		5/8/2008		5/8/2008		
Matrix	SOIL		SOIL		SOIL		SOIL		
Dilution Factor	1.0		1.0		1.0		1.0		
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Naphthalene	110	J		U		U		U	500,000
2-Methylnaphthalene	100	J		U		U		U	--
Acenaphthylene	200	J	110	J		U		U	500,000
Acenaphthene	230	J		U		U		U	500,000
Fluorene	230	J		U		U		U	500,000
Phenanthrene	4,700		820		190	J	120	J	500,000
Anthracene	930		280	J		U		U	500,000
Fluoranthene	3,900		1,500		500		310	J	500,000
Pyrene	2,900		1,200		430		260	J	500,000
Benzo(a)anthracene	1,700		770		300	J	200	J	5,600
Chrysene	1,600		790		300	J	210	J	56,000
Benzo(b)fluoranthene	1,700		1,200		420		280	J	5,600
Benzo(k)fluoranthene	770		430		210	J	160	J	56,000
Benzo(a)pyrene	**1,200**		870		310	J	210	J	1,000
Indeno(1,2,3-cd)pyrene	920		770		230	J	150	J	5,600
Dibenz(a,h)anthracene	350	J	250	J		U		U	560
Benzo(g,h,i)perylene	950		810		270	J	170	J	500,000
Total PAHs	22,490		9,800		3,160		2,070		--

Notes:

U: The compound was not detected.

J: The concentration given is an approximate value.

--: Not established.

: Value exceeds NYSDEC Part 375 Commercial Use Soil Cleanup Objectives.

TABLE 2

URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN

GLEN COVE FERRY TERMINAL

PHASE II ENVIRONMENTAL SITE ASSESSMENT

SURFACE SOIL SAMPLING RESULTS

RCRA METALS

Sample ID	**GCSS-01**	**GCSS-02**	**GCSS-03**	**GCSS-04**	**Restricted Use Commercial Soil Cleanup Objectives mg/Kg**
Sampling Date	5/8/2008	5/8/2008	5/8/2008	5/8/2008	
Matrix	SOIL	SOIL	SOIL	SOIL	
Dilution Factor	1.0	1.0	1.0	1.0	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Arsenic	**87.7**	9.8	5.9	4.9	16.0
Barium	54.2	77.4	70.0	57.9	400
Cadmium	0.46	0.56	0.30	0.53	9.3
Chromium	12.5	16.3	14.0	19.2	400
Lead	80.3	94.1	65.6	59.1	1,000
Mercury	0.11	0.096	0.14	0.08	2.8
Selenium	U	0.43 B	U	U	1,500
Silver	1.3	1.3	1.1 B	U	1,500

Sample ID	**GCSS-05**	**GCSS-06**	**GCSS-07**	**GCSS-08**	**Restricted Use Commercial Soil Cleanup Objectives mg/Kg**
Sampling Date	7/31/2008	7/31/2008	7/31/2008	7/31/2008	
Matrix	SOIL	SOIL	SOIL	SOIL	
Dilution Factor	1.0	1.0	1.0	1.0	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Arsenic	**27.8**	**32.9**	**65.7**	**52.9**	16.0
Barium	NA	NA	NA	NA	400
Cadmium	NA	NA	NA	NA	9.3
Chromium	NA	NA	NA	NA	400
Lead	NA	NA	NA	NA	1,000
Mercury	NA	NA	NA	NA	2.8
Selenium	NA	NA	NA	NA	1,500
Silver	NA	NA	NA	NA	1,500

Notes:

U: The compound was not detected.

B: The analyte was found in the laboratory blank.

NA: Not analyzed.

[ ]: Value exceeds NYSDEC Part 375 Commercial Use Soil Cleanup Objectives.

TABLE 3
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SURFACE SOIL SAMPLING RESULTS
ASBESTOS BY PLM/DS AND TEM

Sample ID	**GCSS-03**	**GCSS-04**	**GCSS-09**	**GCSS-10**	**GCSS-11**
Sampling Date	5/8/2008	5/8/2008	7/31/2008	7/31/2008	7/31/2008
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Asbestos by PLM/DS	Positive	Positive	NA	NA	NA
Asbestos by TEM	NA	NA	Positive	Positive	Positive

Notes:
PLM/DS: Polarized light microscopy with dispersion staining.
TEM: Transmission Electron Microscopy.
NA: Not analyzed.

TABLE 4
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID	**GCSB-01 (2 to 4)**		**GCSB-02 (2 to 4)**		**GCSB-03 (2 to 4)**		**GCSB-04 (2 to 4)**		**Restricted Use Commercial Soil Cleanup Objectives ug/Kg**
Sampling Date	5/8/2008		5/8/2008		5/8/2008		5/8/2008		
Matrix	SOIL		SOIL		SOIL		SOIL		
Dilution Factor	1.0		1.0		1.0		1.0		
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Dichlorodifluoromethane		U		U		U		U	--
Chloromethane		U		U		U		U	--
Vinyl Chloride		U		U		U		U	13,000
Bromomethane		U		U		U		U	--
Chloroethane		U		U		U		U	--
Trichlorofluoromethane		U		U		U		U	--
1,1-Dichloroethene		U		U		U		U	500,000
Acetone	58.0		17.0		16.0			U	500,000
Iodomethane		U		U		U		U	--
Carbon Disulfide		U		U		U		U	--
Methylene Chloride	3.1	BJ	1.8	BJ	2.4	BJ	2.6	BJ	500,000
trans-1,2-Dichloroethene		U		U		U		U	500,000
Methyl tert-butyl Ether		U		U		U		U	500,000
1,1-Dichloroethane		U		U		U		U	240,000
Vinyl Acetate		U		U		U		U	--
2-Butanone	11.0			U		U		U	500,000
cis-1,2-Dichloroethene		U		U		U		U	500,000
2,2-Dichloropropane		U		U		U		U	--
Bromochloromethane		U		U		U		U	--
Chloroform		U		U		U		U	350,000
1,1,1-Trichloroethane		U		U		U		U	500,000
1,1-Dichloropropene		U		U		U		U	--
Carbon Tetrachloride		U		U		U		U	22,000
1,2-Dichloroethane		U		U		U		U	30,000
Benzene		U		U		U		U	44,000
Trichloroethene		U		U		U		U	200,000
1,2-Dichloropropane		U		U		U		U	--
Dibromochloromethane		U		U		U		U	--
Bromodichloromethane		U		U		U		U	--
cis-1,3-Dichloropropene		U		U		U		U	--
4-Methyl-2-Pentanone		U		U		U		U	--
Toluene		U		U		U		U	500,000
t-1,3-Dichloropropene		U		U		U		U	--
1,1,2-Trichloroethane		U		U		U		U	--
1,3-Dichloropropane		U		U		U		U	--

Notes:
U: The compound was not detected.
J: The concentration given is an approximate value.
B: The analyte was found in the laboratory blank.
--: Not established.

TABLE 4 (continued)
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID	**GCSB-01 (2 to 4)**	**GCSB-02 (2 to 4)**	**GCSB-03 (2 to 4)**	**GCSB-04 (2 to 4)**	**Restricted Use Commercial Soil Cleanup Objectives ug/Kg**
Sampling Date	5/8/2008	5/8/2008	5/8/2008	5/8/2008	
Matrix	SOIL	SOIL	SOIL	SOIL	
Dilution Factor	1.0	1.0	1.0	1.0	
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Tetrachloroethene	U	U	U	U	150,000
2-Hexanone	U	U	U	U	--
Dibromochloromethane	U	U	U	U	--
1,2-Dibromoethane	U	U	U	U	--
Chlorobenzene	U	U	U	U	500,000
1,1,1,2-Tetrachloroethane	U	U	U	U	--
Ethyl Benzene	U	U	U	U	390,000
m/p-Xylenes	U	U	U	U	500,000*
o-Xylene	U	U	U	U	500,000*
Xylene (Total)	U	U	U	U	500,000
Methyl Acetate	U	U	U	U	--
Styrene	U	U	U	U	--
Bromoform	U	U	U	U	--
Isopropylbenzene	U	U	U	U	--
1,1,2,2-Tetrachloroethane	U	U	U	U	--
Bromobenzene	U	U	U	U	--
1,2,3-Trichloropropane	U	U	U	U	--
n-Propylbenzene	U	U	U	U	500,000
2-Chlorotoluene	U	U	U	U	--
1,3,5-Trimethylbenzene	U	U	U	U	190,000
4-Chlorotoluene	U	U	U	U	--
tert-butylbenzene	U	U	U	U	500,000
1,2,4-Trimethylbenzene	U	U	U	U	190,000
sec-Butylbenzene	U	U	U	U	500,000
4-Isopropyltoluene	U	U	U	U	--
1,3-Dichlorobenzene	U	U	U	U	280,000
1,4-Dichlorobenzene	U	U	U	U	130,000
n-Butylbenzene	U	U	U	U	500,000
1,2-Dichlorobenzene	U	U	U	U	500,000
1,2-Dibromo-3-Chloropropane	U	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	U	--
Hexachlorobutadiene	U	U	U	U	--
1,2,3-Trichlorobenzene	U	U	U	U	--
Napthalene	17.0	1.5 J	U	U	--
Total BTEX	0.0	0.0	0.0	0.0	--
Total VOCs	89.1	20.3	18.4	2.6	--

Notes:
U: The compound was not detected.
J: The concentration given is an approximate value.
B: The analyte was found in the laboratory blank.
--: Not established.

TABLE 5
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE SOIL SAMPLING RESULTS
POLYCYCLIC AROMATIC HYDROCARBONS

Sample ID	**GCSB-01 (2 to 4)**		**GCSB-02 (2 to 4)**		**GCSB-03 (2 to 4)**		**GCSB-04 (2 to 4)**		**Restricted Use Commercial Soil Cleanup Objectives ug/Kg**
Sampling Date	5/8/2008		5/8/2008		5/8/2008		5/8/2008		
Matrix	SOIL		SOIL		SOIL		SOIL		
Dilution Factor	1.0		1.0		1.0		1.0		
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		
Naphthalene	120	J	200	J		U		U	500,000
2-Methylnaphthalene		U		U		U		U	--
Acenaphthylene		U		U		U		U	500,000
Acenaphthene	280	J	310	J		U		U	500,000
Fluorene	250	J	150	J		U		U	500,000
Phenanthrene	1,200		410			U	100	J	500,000
Anthracene	260	J	99	J		U		U	500,000
Fluoranthene	1,300		460			U	200	J	500,000
Pyrene	910		390			U	160	J	500,000
Benzo(a)anthracene	420		210	J		U	100	J	5,600
Chrysene	450		210	J		U	120	J	56,000
Benzo(b)fluoranthene	460		350	J		U	150	J	5,600
Benzo(k)fluoranthene	190		120	J		U		U	56,000
Benzo(a)pyrene	290	J	240	J		U		U	1,000
Indeno(1,2,3-cd)pyrene	190	J	180	J		U		U	5,600
Dibenz(a,h)anthracene		U		U		U		U	560
Benzo(g,h,i)perylene	190	J	190	J		U		U	500,000
Total PAHs	6,510		3,519		0		830		--

Notes:
U: The compound was not detected.
J: The concentration given is an approximate value.
--: Not established.

TABLE 6
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE SOIL SAMPLING RESULTS
RCRA METALS

Sample ID	**GCSB-01 (2 to 4)**	**GCSB-02 (2 to 4)**	**GCSB-03 (2 to 4)**	**GCSB-04 (2 to 4)**	**GCSB-05 (2 to 3)**	**Restricted Use Commercial Soil Cleanup Objectives mg/Kg**
Sampling Date	5/8/2008	5/8/2008	5/8/2008	5/8/2008	7/31/2008	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Arsenic	**28.4**	6.5	2.8	5.6	8.6	16.0
Barium	**680**	54.0	87.4	71.8	113	400
Cadmium	2.8	0.58	U	0.25 B	NA	9.3
Chromium	83.4	20.3	27.8	18.1	NA	400
Lead	192	56.7	17.2	127	NA	1,000
Mercury	0.44	0.067	0.019	0.035	NA	2.8
Selenium	4.3	0.56 B	0.84 U	0.53 B	NA	1,500
Silver	5.4	1.2 B	U	0.46 B	NA	1,500

Sample ID	**GCSB-06 (2 to 4)**	**GCSB-06 (4 to 5)**	**GCSB-07 (2 to 4)**	**GCSB-07 (4 to 5)**		**Restricted Use Commercial Soil Cleanup Objectives mg/Kg**
Sampling Date	7/31/2008	7/31/2008	7/31/2008	7/31/2008		
Matrix	SOIL	SOIL	SOIL	SOIL		
Dilution Factor	1.0	1.0	1.0	1.0		
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg		
Arsenic	10.4	10.3	4.0	5.6		16.0
Barium	69.5	67.8	76.6	53.5		400
Cadmium	NA	NA	NA	NA		9.3
Chromium	NA	NA	NA	NA		400
Lead	NA	NA	NA	NA		1,000
Mercury	NA	NA	NA	NA		2.8
Selenium	NA	NA	NA	NA		1,500
Silver	NA	NA	NA	NA		1,500

Notes:
U: The compound was not detected.
J: The concentration given is an approximate value.
B: The analyte was found in the laboratory blank.
NA: Not analyzed.
: Value exceeds NYSDEC Part 375.
Commercial Use Soil Cleanup Objectives

TABLE 7
URBITRAN - URBAN PLANNING AND LANDSCAPE DESIGN
GLEN COVE FERRY TERMINAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE SOIL SAMPLING RESULTS
ASBESTOS BY TEM

Sample ID	**GCSB-09 (1-2)**	**GCSB-10 (1-2)**	**GCSB-11 (1-2)**
Sampling Date	7/31/2008	7/31/2008	7/31/2008
Matrix	SOIL	SOIL	SOIL
Units	ug/Kg	ug/Kg	ug/Kg
Asbestos by TEM	Positive	Negative	Negative

Notes:
TEM: Transmission Electron Microscopy.

Appendix C

Gamma Survey Method for Soil Screening

Appendix C

Gamma Survey Method for Soil Screening

The following method is appropriate for use with a Survey Meter/Scaler such as the Ludlum™ 2221 and a two-by-two inch sodium iodide detector. This method is intended to be used for a bucket of soil or dredge materials of up to a maximum of five cubic yards.

1. Determine the battery condition using the check mode. The batteries should be >60% of initial voltage.

2. The sodium iodide detector and Ludlum 2221TM (or equivalent) should be source checked daily before use, and the resulting count rate should be recorded in counts per minute (cpm).

3. Each bucket of excavated materials will be placed on the ground surface and allowed to spread out.

4. Perform a surface scan of soil by holding the detector about 1 to 3 inches above the soil surface and moving it at a rate of about 0.5 meters per second (m/s).

5. If the instrument count rate reaches two times background, stop the scan and position the detector near the location that resulted in high count rate, and remain stationary until a steady reading is obtained, generally 10-15 seconds.

6. Upon completion of the survey for the area of soil, record the results on a survey form with the following information, as a minimum:

    a) Individual performing the survey;

    b) Survey meter and detector (with serial numbers);

    c) Date;

    d) Background count rate (cpm);

    e) Average count rate (cpm) in the bucket; and,

    f) Indications of count rates greater than two times background.

Appendix D

Project Storm Water Pollution Prevention Plan (SWPPP)

GLEN COVE FERRY TERMINAL PROJECT
STORM WATER POLLUTION PREVENTION PLAN

Site Location:

Garvies Point Road
Glen Cove, NY 11542

Operator(s):

City of Glen Cove
Industrial Development Agency
Kelly Morris
9 Glen Street
Glen Cove, NY 11542
Phone: (516) 676–1625 Ext. 100
Fax: (516) 759–8389

Storm Water Manager and SWPPP Contact(s):

City of Glen Cove
Industrial Development Agency
Kelly Morris
9 Glen Street
Glen Cove, NY 11542
Phone: (516) 676–1625 Ext. 100
Fax: (516) 759–8389

SWPPP Preparation Date:

NOVEMBER 2009
REVISED MAY 2010

Estimated Project Dates:

Start of Construction: 06 / 01 / 2010
Completion of Construction: 06 / 28 / 2011

SPDES Project Number:

"_____"

GLEN COVE FERRY TERMINAL PROJECT
STORM WATER POLLUTION PREVENTION PLAN

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1.0 PROJECT AND SITE DESCRIPTION

1.1 Site Information

Project Name:

Glen Cove Ferry Terminal

Project Location:

Street: South of Garvies Point Road
City: Glen Cove County: Nassau
State: NY Zip Code: 11542

Nearest Cross Street:

Name: Herb Hill Road
Distance: 1492 ft. to the East

Geographic Coordinates (NYTM):

X Coordinates (Easting): 614277
Y Coordinates (Northing): 4523936

Tax Map Numbers:

Section: 21 Block: 259 Parcel: 1

See Appendix A for location and site maps.

1.2 Contact Information/Responsible Parties

OWNER(S)/OPERATOR(S)	
Contact Information	*Responsibilities*
Name: Glen Cove Industrial Development Agency Address: 9 Glen Street Address 2: Glen Cove, NY 11542-2798 Office Phone: 516-676-1625 ext. 100 Office Fax: 516-759-8389 Site Phone:	General oversight of the project.

CONTRACTOR/SUBCONTRACTOR(S)	
Contact Information	*Responsibilities*
Name: Address: Address 2: Office Phone: Office Fax: Site Phone:	• Responsible for installing, constructing, repairing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for the construction of all post-construction storm water management practices included in the SWPPP. • Identify at least one trained individual from their company that will be responsible for implementation of the SWPPP. The Contractor shall ensure that at least one trained individual is on site on a daily basis when soil disturbance activities are being performed

SWPPP CONTACT(S)	
Contact Information	*Responsibilities*
Name: Address: Address 2: Office Phone: Office Fax: Site Phone:	Site compliance with the SWPPP and the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001).

SWPPP PREPARER	
Contact Information	*Responsibilities*
Name: Dvirka and Bartilucci Consulting Engineers Address: 330 Crossways Park Drive Address 2: Woodbury, NY 11797 Office Phone: 516-364-9890 Office Fax: 516-364-9045 Site Phone:	D&B was contacted by the Glen Cove IDA to develop this SWPPP.

1.3 Existing Site Conditions

1.3.1 Soil Types

Percentage of the Hydrologic Soil Group(HSG) at the project site:

A: 0 % B: 100 % C: 0 % D: 0 %

The soil is primarily silt based compacted fill. The National Resources Conservation Service - Soil Survey Geographic Database classifies the site as Udorthents, refuse substratum. The inventory classifies the Udorthents, refuse substratum component as making up 85 percent of the soil on site. Slopes are 0 to 15 percent. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during January, February, March, April, May, November, and December.

A detailed subsurface investigation is planned to be performed as part of the preliminary design stage. The site, similar to much of the north shore of Long Island, likely consists of glacial till above deeply-buried bedrock. The till consist of sand, clay, gravel, cobbles, and boulders. The bedrock at the site is approximately 400 feet below mean sea level. The site was also likely built up in elevation in the past, by placing fill material above the natural soil. This layer of fill is likely between 10 and 15 feet thick. The quality of this fill material is likely highly variable, ranging from clean sand to inorganic silty material and construction debris.

The general soil mapping unit that composes the project site, as well as the surrounding adjacent area for the separately planned proposed mixed-use waterfront development is from the Urban Land-Montauk-Riverhead Association. This mapping unit is dominated by urban areas and very deep soils that are nearly level to strongly sloping, well drained, medium-textured to moderately coarse textured, and found on low hills. The steeper areas of the unit occur along side-slopes or the sides of drainage-ways while the nearly level or undulating areas occur on foot

slopes. A few short, intermittent streams drain some parts of this unit. Slopes for this unit generally range from zero to 15 percent. The Montauk soils are layered such that the surface layer is dark grayish brown silt loam, the subsoil is yellowish brown gravelly loam or sandy loam, and the substratum is light yellowish brown, firm gravelly loamy sand. Water through the substratum generally moves slowly or moderately slowly.

The project site for the proposed ferry terminal and boat basin generally contains the following specific soils type: Udorthents, refuse substratum (Uf). Udorthents, refuse substratum, consists of nearly level to steep, sandy soils in sanitary landfills that have been reworked by earth-moving and grading equipment to bury trash and other refuse. In some instances, the garbage is partly covered or mixed with the sandy fill material. The sides of most areas are steep with the tops nearly level to gently sloping. Slopes range from zero to 35 percent and are smooth or convex. Older or abandoned landfills have varying amounts of grasses, weeds, and shrubs as is the case with the former Glen Cove landfill (also known locally as the Captain's Cove property). Settling of the underlying material together with its instability cause major limitations of the soil for most types of development as well as local roads and streets. Landscaping is limited by the droughtness and low natural fertility of this soil type, making the use of topsoil, fertilizers, and irrigation necessary.

1.3.2 Slopes

The existing project area is flat and slopes evenly from the north at Garvies Point Road to the south at the bulkhead adjacent to Glen Cove Creek. The topography of the project area has grades ranging from 13 feet above sea level at its access point on Garvies Point Road to 9 feet above sea level at the edge of the bulkhead abutting Glen Cove Creek. The slopes will be maintained after development.

1.3.3 Current Drainage Patterns

As the proposed ferry terminal site is undeveloped (with the exception of the existing waterfront esplanade), there are no existing on-site drainage systems other than those constructed

for the esplanade. The general direction of surface run-off during rain events is from the northwest to the southwest, discharging to Glen Cove Creek.

1.3.4 Vegetation

The total project site area is located on cleared land that is absent of trees or understory scrub. The majority of the site (80 percent) consists of gravel and dirt, with a lesser amount (15 percent) covert with grass. The remaining portion of the site is covered by asphalt and brick pavement associated with the existing esplanade.

1.4 Receiving Waters

Storm water runoff from the project site is discharged to Glen Cove Creek, which is immediately adjacent to the south side of the site. Glen Cove Creek is part of the 10-mile shoreline within the City of Glen Cove on the north shore of Long Island in Nassau County, adjacent to Hempstead Harbor and Long Island Sound. Glen Cove Creek is a 1.1 mile-long, 8 foot-deep federal navigational channel of variable width extending from Mill Pond to Hempstead Harbor. Most of the existing edge of Glen Cove Creek is retained by a combination of bulkhead and riprap. The channel was created as a result of extensive man-made alterations of a tidal estuary by the USACOE. Prior to the building of the channel, the site was an estuarine environment. Glen Cove Creek has been identified as a 303(d) segment impaired by pollutants related to construction activity (i.e., silt, sediment or nutrients) in Appendix B of GP-0-10-001.

1.5 Site Features and Sensitive Areas to Be Protected

A field delineation walk-over was conducted on March 4, 2008 to evaluate and demarcate any wetlands present on the site utilizing both New York State and Federal wetland identifying methodologies. The NYSDEC Tidal Wetland Map No. 614-522 was also utilized to aid in the demarcation process. Upon review of the site, it was determined that all intertidal lands seaward of the east end of the on-site bulkhead constitute tidal wetlands (see Appendix A for the Tidal Wetlands Map). No terrestrial or aquatic species were observed during the field delineation.

The protection afforded by the jutting bulkhead immediately to the west, combined with limited human activity during the winter, would appear to make this area available to wintering waterfowl. However, the area is not optimal habitat due to the historical and existing intense commercial and industrial land uses in the project area, the high incidence of boat traffic in the adjacent marina, the historical dredging and shoreline development (i.e., bulkhead), and the site formerly being a part of a Federal Superfund Clean-up site.

In order to preserve this small marsh area, the proposed new bulkhead segment adjacent to the small intertidal marsh on the east end of the current bulkhead will be installed landward of the existing bulkhead.

1.6 Construction Site Estimates

The following are estimates of the construction site:

Total project site area:	1.6 acres
Construction site area to be disturbed:	1.6 acres
Existing impervious area within disturbed:	0.2 acres
Future impervious area within disturbed:	1.4 acres

See Appendix C for the construction site plans and drawings.

1.7 Nature and Sequence of Construction Activity

The Glen Cove Ferry Terminal is a Federal funded project administered by the New York State Department of Transportation to provide commuter oriented ferry service. The project entails the design and construction of a ferry terminal building, marine and waterside improvements, public access, pedestrian spaces, and parking facility.

The goal is to create a great public amenity for the City of Glen Cove that links the City to the regional marketplace, removes cars from regional roadway system, and establishes a unique public realm on the waterfront that serves to anchor the redevelopment of the area.

The primary purpose of the proposed Ferry Terminal is to provide commuter access to the Manhattan employment market and eventually other areas of interest such as LaGuardia Airport and Connecticut. In addition, the long range goal is to attract recreational visitors to Glen Cove as it redevelops its waterfront and downtown. The marine improvements to the project will also accommodate leisure vessels for special recreational excursions.

The project is planned as a landmark in public transportation facility design, with an iconic ferry building that can be used for public events, a dramatic landscaped waterfront space, and the incorporation of the most progressive sustainable and LEED design principles. The project also takes into consideration alternative clean fuels and high speed ferries.

Nature of construction project: Redevelopment with increase in imperviousness

Post-development land use: Transportation (Commuter Ferry Terminal)

Estimated Start Date: 06-01-2010

Estimated Completion Date: 06-28-2011

TIMELINE OF CONSTRUCTION ACTIVITY	
Estimated Dates	*Construction Activity and BMP Descriptions*
TBD	Before Any Site Grading Activities Begin • Install perimeter soil erosion and sediment controls
TBD	Site Clearing and Grubbing • Install staging and storage areas
TBD	Site Excavation and Grading • Protect stockpiles created
TBD	Bulkhead Removal • Install turbidity curtain
TBD	Infrastructure and Utility Installation
TBD	Bulkhead Construction
TBD	Building Construction
TBD	Final Stabilization and Landscaping

TIMELINE OF CONSTRUCTION ACTIVITY	
Estimated Dates	*Construction Activity and BMP Descriptions*
	• Remove soil erosion and sediment controls

1.8 Potential Sources of Pollution

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clearing and grubbing operations
- Grading and site excavation operations
- Bulkhead removal
- Soil import operations
- Utility excavation operations
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping operations

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff.

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphaltic emulsions associated with asphalt-concrete paving operations
- Cement materials associated with concrete paving operations
- Base and subbase material
- Joint and curing compounds
- Concrete curing compounds

- Paints
- Solvents, thinners, acids
- Sandblasting materials
- Mortar mix
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, mulch, pesticides)
- Treated lumber (materials and waste)
- Rubble
- Sanitary facilities
- General litter

2.0 EROSION AND SEDIMENT CONTROL BMPS

Erosion and sediment control practices have been designed and will be implemented, inspected and maintained in accordance with the most current version of the technical standard, New York Standards and Specifications for Erosion and Sediment Control. Refer to the technical standard, the construction site plans and drawings in Appendix C, and the BMP specifications and details in Appendix D for further details.

2.1 Construction Site Management

2.1.1 Minimize Disturbed Areas and Protect Natural Features

BMP Description: The limits of land disturbance will be physically marked with tape, signs and/or orange construction fence so that workers can clearly see the areas to be disturbed and protected. Only the land that is required for immediate construction activity will be cleared. The small marsh area seaward of the east end of the on-site bulkhead will be clearly marked and protected. Construction equipment, debris, materials and discharges will not be allowed to enter this area during any phase of construction.

Installation Schedule: Limits of land disturbance will be marked before clearing operations begin at the construction site.

Maintenance and Inspection: Tape, signs and fencing will be routinely inspected during the general construction site inspection described in Section 5.1.2 and repaired as necessary.

2.1.2 Stockpiles

BMP Description: Topsoil stripped from the immediate construction area will be stockpiled as identified on the site drawings. The stockpile will be in an area that will not interfere with the construction phases and at least 15 feet away from areas of concentrated flow or pavement. Stockpile areas will be surrounded by a perimeter sediment control system

consisting of hay bales or silt fences. The slopes of the stockpile will not exceed 2:1 to prevent erosion. Erodible materials that are stockpiled for extended periods of time will be seeded and mulched.

Installation Schedule: Topsoil stockpiles will be established during grading activities. Temporary stabilization will be applied immediately after the slopes of the stockpile have been graded and construction equipment transverses the slopes.

Maintenance and Inspection: The area will be inspected weekly during the general construction site inspection described in Section 5.1.2 for erosion and immediately after storm events. Areas on or around the stockpile that have eroded will be stabilized immediately with erosion controls. Maintenance and inspection procedures for the silt fence are described below.

2.2 Phase Construction Activity

BMP Description: No more than 2 acres will be cleared at a time. To minimize potential erosion from the site, only areas necessary to construct the sediment trap, perimeter dike/swale, and stabilized construction entrance and roads will be disturbed initially. All areas of the construction site will be stabilized if site work is not planned for more than 14 days.

Installation Schedule: See Section 1.0 for a timeline of construction activity.

Maintenance and Inspection: N/A

2.3 Control Storm Water Flowing onto and through the Project

2.3.1 Perimeter Dike/Swale

BMP Description: The perimeter dike/swale will be constructed to prevent off-site storm water runoff from entering and to prevent sediment laden storm runoff from leaving the construction site. The perimeter dike/swale will convey storm water to a sediment trap with a

stone outlet located in the northwest portion of the site. A mountable section of the temporary earth dike will be provided for. The top of the berm will be continued to match the existing grade. The perimeter dike/swale will the constructed on top of rubble or well graded gravel. The height of the perimeter dike/swale will be 24 inches from the bottom of the swale to the top of the dike and evenly divided between dike height and swale depth. The bottom width of the dike will be at least 2 feet. The top of the swale will be 2 feet wide. The perimeter dike/swale will have an uninterrupted positive drainage (sufficient grade to drain) to the sediment trap, but will not exceed 8 percent. The disturbed area of the dike and swale will be stabilized within 7 days of installation, in accordance with the standard and specifications for temporary swales. The perimeter dike/swale will not be removed until permanent stabilization is established.

Installation Schedule: The perimeter dike/swale will be installed before site grading operations begin at the construction site.

Maintenance and Inspection: Periodic inspection during the general construction site inspection described in Section 5.1.2 and after each rain event will be conducted. Removal of debris and sediment, and repair of erosion and embankments will be conducted immediately.

2.4 Protect Storm Drain Inlets

BMP Description: A temporary, somewhat permeable barrier will be installed around all storm drain receiving runoff from the construction site to trap and settle water and thereby reduce the sediment content of the runoff.

Installation Schedule: Temporary storm drain inlet barriers will be installed before construction activities begin onsite.

Maintenance and Inspection: The temporary storm drain inlet barriers will be inspected during the general construction site inspection described in Section 5.1.2 and immediately after storm events. The barriers will be repaired, removed, replaced and/or cleaned as necessary per the manufacturer's recommendations.

2.5 Establish Perimeter Controls and Sediment Barriers

2.5.1 Silt Fence

BMP Description: Silt fences will be installed onsite to reduce runoff velocity and effect deposition of transported sediment load. All silt fences will be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence will be undisturbed or stabilized. The ends of the filter cloth will be overlapped, folded and stapled to prevent sediment bypass. Silt fences will be installed by excavating a minimum of 12-inch-deep trench along the line of proposed installation. Posts supporting the silt fence will be spaced a maximum of 10 feet apart and driven securely into the ground. The silt fence will be fastened securely to the posts with ties spaced every 24 inches at the top and mid section. The bottom edge of the silt fence will extend across the bottom of the trench and the trench will be backfilled and compacted to prevent storm water and sediment from discharging underneath the silt fence.

Installation Schedule: The silt fences will be installed before construction begins at the site and around topsoil stockpiles once they have been established.

Maintenance and Inspection: Silt fences will be inspected during the general construction site inspection described in Section 5.1.2 and immediately after storm events to ensure it is intact and that there are no gaps where the fence meets the ground or tears along the length of the fence. If gaps or tears are found during the inspection, the fabric will be repaired or replaced immediately. Accumulated sediment will be removed when "bulges" develop in the silt fence. Before the fence is removed from the project area, the sediment will be removed.

2.5.2 Turbidity Curtain

BMP Description: A turbidity curtain will be installed to prevent the migration of silt from the work site in Glen Cove Creek. The turbidity curtain will be located beyond the lateral

limits of the construction site and firmly anchored in place. The alignment will be set as close to the work area as possible but not so close as to be disturbed by applicable construction equipment. The area of proposed installation of the curtain will be inspected for obstacles and impediments that could damage the curtain or impair its effectiveness to retain sediment.

Installation Schedule: The turbidity curtain will be installed before construction begins at the site.

Maintenance and Inspection: The turbidity curtain will be inspected daily and repaired or replaced immediately. It is not normally necessary to remove sediment deposited behind the curtain; but, when necessary, removal will be done by hand prior to removal of the barrier. All removed silt will be stabilized away from Glen Cove Creek. The barrier will be removed by carefully pulling it toward the construction site to minimize the release of attached sediment. Any floating construction or natural debris will be immediately removed to prevent damage to the curtain. Frequent checks of the anchorage will be made.

2.6 Retain Sediment On-Site

2.6.1 Sediment Trap

BMP Description: A stone outlet sediment trap will be constructed in the northwest portion of the construction site to intercept sediment-laden runoff and trap the sediment conveyed by the perimeter dike/swale in order to protect the drainage, properties, and rights-of-way below the sediment trap from sedimentation. The sediment trap will be constructed of crushed stone surrounding bales of hay or straw. The sediment traps will not be located any closer than 20 feet from a proposed building foundation. All embankments for the sediment trap will not exceed 5 feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments will have a minimum 4 foot wide top and side slopes of 2:1 or flatter. The embankment will be compacted by traversing with equipment while it is being constructed. The embankment will be stabilized with seed and mulch as soon as it is completed. The elevation of the top of any dike directing water to the sediment trap will equal or

exceed the maximum height of the outlet structure along the entire length of the trap. Excavated portions of the sediment trap will have 1:1 or flatter slopes. The outlet of the sediment trap will be over a stone section placed on level ground. The outlet crest (top of stone in weir section) will be level, at least 12 inches below the top of the embankment and no more than 12 inches above ground beneath the outlet. The stone used in the outlet will be small riprap (4 in. x 8 in.). The stone outfall sediment trap will be removed and the area stabilized when the drainage area has been properly stabilized.

Installation Schedule: The stone outlet sediment trap will be installed prior to site grading or filling.

Maintenance and Inspection: The stone outlet sediment trap will be inspected weekly during the general construction site inspection described in Section 5.1.2 and after each rain. The stone outlet sediment trap will be checked for signs of erosion, seepage, structural damage, and obstructions. Any damage present will be repaired and obstructions removed. Sediment will be removed and the trap restored to the original dimensions when the sediment has accumulated to ½ of the design depth of the trap. Sediment removed from the trap will be deposited in a protected area and in such a manner that it will not erode. The outlet will be maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

2.7 Establish Stabilized Construction Vehicle Routes

2.7.1 Stabilized Construction Entrance

BMP Description: The stabilized construction entrance will be installed at the construction entrance on Garvies Point Road to prevent the off-site transport of sediment by construction vehicles. The stabilized construction entrance will be at least 50-feet long and a minimum of 16-feet wide and will consist of a layer of 3-inch clean stone or recycled concrete equivalent at least 12-inches thick. The stone or recycled concrete equivalent will be placed over filter fabric to reduce the mitigation of sediment from the underlying soil. Orange-colored

plastic mesh fence will be installed along the length of the construction exit to keep construction vehicles and equipment on the stabilized construction entrance. All surface water flowing or diverted toward the stabilized construction entrance will be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.

Installation Schedule: The stabilized construction entrance will be installed before construction begins on the site. The stabilized construction entrance will remain until all areas of the site have been stabilized. Upon completion of the construction activities, the area used for the stabilized construction entrance will be returned to elevations and conditions which existed prior to the start of construction.

Maintenance and Inspection: Weekly inspection during the general construction site inspection described in Section 5.1.2 and needed maintenance will be provided after each rain event or heavy use. The stabilized construction entrance will be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-ways. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto the public right-of-way will be removed immediately. Prior to entering the public right-of-way, wheels will be cleaned to remove sediment on an area stabilized with stone and which drains to an approved sediment trapping device. All sediment will be prevented from entering storm drains, ditches, or watercourses.

2.7.2 Stabilized Construction Roads

BMP Description: The stabilization of temporary construction access routes, on-site vehicle transportation routes and construction parking areas will be installed to control erosion on-site. Construction roads will be located to reduce erosion potential, minimize impact on existing site resources, and maintain operations in a safe manner. Parking areas will be located on naturally flat areas. Highly erosive soils, wet or rocky areas and steep slopes will be avoided. Roads will be routed where seasonal water tables are deeper than 18 inches. Stabilized construction roads will be composed of a 6-inch layer of New York State Department of

Transportation (NYSDOT) sub-base Types 1, 2, 3, 4 or equivalent, at least 14-feet wide for one-way traffic, at least 24-feet wide for two-way traffic, and have a maximum grade of 12% or up to a grade of 15% for short distances. The stabilized construction roads will have a side slope of road embankment of 2:1 or flatter. On-site roadside ditch and culvert capacities will be the 10 year peak runoff. Grades will be sufficient for drainage, but no more than 2 to 3 percent. Surface drainage and excess runoff will be diverted to stabilized areas.

Installation Schedule: The stabilized construction roads will be installed before construction begins on the site. Areas used for construction roads will be stabilized with vegetation as soon as grading is accomplished.

Maintenance and Inspection: Construction roads and parking areas will be inspected during the general construction site inspection described in Section 5.1.2 for condition of surface. The area will be top dressed with new gravel as needed. Ditches will be checked for erosion and sedimentation after rainfall events. Areas producing sediment will be treated immediately.

3.0 POLLUTION PREVENTION AND GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES

3.1 Material Management

3.1.1 Material Delivery and Storage

BMP Description: Material delivery and storage area is designated as far away as possible from Glen Cove Creek at the construction site. The perimeter of the material delivery and storage area will be designated by berms. Water will be prevented from ponding in material storage areas. Materials will be stored indoors or under cover to the maximum extent practicable. A watertight container will be used to store small construction materials and tools such as hand tools and small parts. Non-hazardous building materials such as packaging material (wood, plastic, glass) and construction scrap material (brick, wood, steel, metal, pipe cuttings) will be stored in a separate covered storage facility. Large items such as framing materials and stockpiled lumber will be stored in the open in the designated materials storage area. Such materials will be elevated on wood blocks to minimize contact with storm water runoff. In addition, drums, bagged and boxed materials will be stored on pallets or in secondary containment. All containers will have secure lids. To reduce corrosion from ponding of rainwater all drums stored in the open will either be stored at a slight angle or be equipped with a domed plastic cover. Uncovered empty drums will be stored on their sides to prevent precipitation from collecting. Manufacturer instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals will be followed.

Installation Schedule: The material delivery and storage areas will be installed after site grading and before infrastructure construction.

Maintenance and Inspection: The material delivery and storage areas will routinely inspected during the general construction site inspection described in Section 5.1.2 and after storm events. An inventory of all materials, including hazardous materials, delivered and stored onsite will be kept up-to-date. Material Safety Data Sheets will be obtained from the supplier or vendor for any chemical used. Original product labels will be maintained on containers in

legible condition and replaced immediately if damage occurs. Material delivery and storage areas will be kept clean, organized and equipped with cleanup supplies as appropriate for the materials being stored. Containers, perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function. Replaced containers will be made of compatible materials and labeled with all product information. Outdated products and chemicals will be properly disposed of or returned to the vendor if possible. All spills will be cleaned up immediately according to the material labeling and spill kit instructions.

3.1.2 Stockpile Management

BMP Description: Stockpiles will be protected during the entire construction period. Stockpiles will be located in designated areas at least 50 feet away from Glen Cove Creek, concentrated flows of storm water, drainage courses, and inlets. A temporary perimeter sediment barrier will be installed around stockpiles. If necessary, coverings of appropriate size, shape and material for the stockpile will be provided.

Installation Schedule: Stockpile management will begin at the start of the project.

Maintenance and Inspection: Stockpiles will be routinely inspected during the general construction site inspection described in Section 5.1.2 and after storm events. The repair and/or replacement of perimeter controls and covers will be conducted as needed to keep them in functioning condition.

3.1.3 Materials Over Water

BMP Description: Watertight curbs or toe boards will be provided to contain spills and prevent materials, tools, and debris from leaving the barge, platform, dock, etc. Drip pans will be placed under all vehicles and equipment placed on the dock and dredging barges when the vehicle or equipment is expected to be idle for more than 1 hour. All materials will be secured to prevent discharges to receiving waters via wind.

Installation Schedule: Over water materials management will begin at the start of the project.

Maintenance and Inspection: Controls will be inspected routinely inspected during the general construction site inspection described in Section 5.1.2, after storm events and during non-storm water discharge events. The repair and/or replacement of controls and covers will be conducted as needed to keep them in functioning condition.

3.2 Waste Management

3.2.1 Waste Management

BMP Description: All waste materials will be collected and disposed of into trash dumpsters in a designated area. Dumpsters will have a secure watertight lid, be placed away from storm water conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpsters. No construction materials will be buried on-site. Wood pallets, cardboard boxes, and other recyclable construction scraps will be disposed of in a designated dumpster for recycling. All personnel will be instructed regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted.

Installation Schedule: Trash and recycling dumpsters will be installed once the materials storage area has been established.

Maintenance and Inspection: The dumpsters will be inspected routinely inspected during the general construction site inspection described in Section 5.1.2 and immediately after storm events. Dumpsters will be inspected for leaks, damaged covers or covers left open, and wastes or other materials around or under the container. Any garbage, debris or sediment that has accumulated under or behind the dumpster will be collected or swept up. The trash dumpster will be emptied as necessary and taken to the landfill. The recycling dumpster will be emptied as

necessary and taken to an approved recycling center. If trash and construction debris are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.

3.2.2 Hazardous Waste Management

BMP Description: Hazardous materials will be handled as infrequently as possible. All hazardous waste materials such as oil filters, petroleum products, and equipment maintenance fluids will be stored in structurally sound and sealed containers under cover within the designated hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be disposed of in accordance with federal, state, and municipal regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed regarding proper procedures for hazardous waste disposal. Notices that state these procedures will be posted.

Installation Schedule: Containers used to store hazardous waste materials will be installed once the site materials storage area has been installed.

Maintenance and Inspection: Hazardous waste will be regularly collected. Hazardous waste storage area will be inspected routinely inspected during the general construction site inspection described in Section 5.1.2. The hazardous waste storage areas will be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function. Hazardous spills will be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS).

3.2.3 Sanitary/Septic Waste Management

BMP Description: Sanitary and septic waste disposal from temporary/portable systems will be handled by the contracted local facility supplier. If high winds are expected, portable sanitary facilities will be secured with spikes or weighed down to prevent over turning.

Installation Schedule: Management of the temporary/portable waste systems will begin at the start of the project.

Maintenance and Inspection: Employees and subcontractors will be educated on the potential dangers and identification of sanitary and septic waste during regular safety meetings. Temporary/portable systems will be routinely inspected during the general construction site inspection described in Section 5.1.2 weekly and after storm events for damage and leaks. Waste collection will be regularly scheduled with the facility supplier.

3.2.4 Concrete Truck Washout Areas

BMP Description: A designated temporary, above-grade concrete washout area will be constructed. The temporary concrete washout area will be constructed with a recommended minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The washout area will be lined with plastic sheeting at least 10 mils thick and free of any holes or tears. Signs will be posted marking the location of the washout area to ensure that concrete equipment operators use the proper facility. Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized.

Installation Schedule: The washout area will be constructed before concrete pours occur at the site.

Maintenance and Inspection: The washout areas will be inspected daily to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75% of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to the chosen landfill for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.

3.3 Equipment/Vehicle Management

3.3.1 Equipment/Vehicle Maintenance

BMP Description: Several types of vehicles and equipment will be used on-site throughout the project. All major equipment/vehicle maintenance will be performed off-site when possible. Only minor equipment maintenance will occur on-site in a designated area. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight. The collected drips and spills will be disposed, reused or recycled properly. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area.

Installation Schedule: BMPs implemented for equipment and vehicle maintenance activities will begin at the start of the project.

Maintenance and Inspection: Vehicles and equipment will be inspected each day of use. The designated maintenance area will be inspected routinely inspected during the general construction site inspection described in Section 5.1.2 and after each storm event. Water will not be used to wash down the maintenance area. Leaks will be repaired immediately, or the problem

vehicle(s) or equipment will be removed from the project site. An ample supply of spill-cleanup materials will be kept on-site. Spills will be cleaned up immediately and properly disposed of.

3.3.2 Equipment/Vehicle Fueling

BMP Description: All major equipment/vehicle fueling will be performed off-site. When vehicle fueling must occur on-site, the fueling activity will occur in the designated staging area. Signs will be posted in this area to discourage "topping-off" of fuel tanks. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area.

Installation Schedule: BMPs implemented for equipment and vehicle fueling activities will begin at the start of the project.

Maintenance and Inspection: The designated fueling area will be routinely cleaned using a damp cloth on the pumps and a damp mop on the pavement. Litter or debris will be swept up. Water will not be used to wash down the fueling area. The fueling area will be inspected weekly and after storm events. The fueling area will be routinely inspected during the general construction site inspection described in Section 5.1.2 for corrosion, leaks, cracks, scratches, or other physical damage that may weaken the tank or container system. Leaks will be repaired and spills will be cleaned up immediately and properly.

3.3.3 Equipment/Vehicle Washing

BMP Description: Vehicles and equipment clean will be kept clean to prevent excessive build-up of oil and grease. Prior to entering the public right-of-way, wheels will be cleaned to remove sediment on an area stabilized with stone and which drains to an approved sediment trapping device. All major equipment and vehicle washing will be performed off-site.

Installation Schedule: N/A

Maintenance and Inspection: N/A

3.4 Spill Prevention and Control Plan

3.4.1 Spill Prevention

BMP Description: Employee Training: All employees will be trained via tailgate sessions, as detailed in the training section of this document. Vehicles and equipment will be maintained off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluids will not be allowed on-site. Drip pans will be placed under all vehicles and equipment that are parked overnight. Hazardous materials will be stored in accordance with federal, state and municipal regulations. Material safety data sheets, a material inventory, and emergency contact information will be maintained on-site.

Installation Schedule: The spill prevention procedures will be implemented once construction begins on-site.

Maintenance and Inspection: All personnel will be instructed regarding the correct procedures for spill prevention and control. Notices that state these practices will be posted.

3.4.2 Spill Response

BMP Description: Spill kits with an amply supply of clean up materials will be within the materials storage area and concrete washout areas. If a spill is discovered, the operation will be immediately stopped, the safety of the situation will be assessed and the spill kit will be obtained. If it is safe to do so, the spilled material will be contained and the nearby storm drains will be blocked. Leaks, drips and spills will be immediately cleaned up using rag, damp cloth or absorbent materials for general cleanup of liquids and brooms or shovels for the general cleanup of dry materials. Spills will be cleaned up without water whenever possible. If water is used for cleanup, it will be collected and properly disposed of. Wash water cannot be allowed to enter

storm drains. Waste materials and spent absorbent materials and rags will be hauled off-site immediately after the spill is cleaned up for disposal.

If the material is unknown or hazardous, emergency authorities will be contacted to contain and clean up the spill. Significant spills will be reported to the NYSDEC Bureau of Spills Management at 631-444-0320 or the NYSDEC Division of Spills Management Hotline at 1-800-457-7362. Spills large enough to discharge to surface water will be reported to the National Response Center (NRC) at 1-800-424-8802.

Installation Schedule: The spill response procedures will be implemented once construction begins on-site.

Maintenance and Inspection: All personnel will be instructed regarding the correct procedures for spill control. Notices that state these practices will be posted. A record of all spills, the containment and cleanup will be kept.

3.5 Dust Control

BMP Description: Dirt haul roads will be sprinkled with water or given a surface of crushed stones or woodchips as required. Vehicles will be cleaned, as necessary, prior to using pubic streets. Paved roads will be sprinkled with water.

Installation Schedule: Dust control will be implemented as needed once site grading has been initiated and during windy conditions (forecasted or actual wind conditions of 20 mph or greater) while site grading is occurring. Spraying of potable water will be performed no more than three times a day during the months of May–September and once per day during the months of October–April or whenever the dryness of the soil warrants it.

Maintenance and Inspection: Construction roads and parking areas will be inspected during the general construction site inspection described in Section 5.1.2 for condition. See Section 3 for vehicle and equipment maintenance practices.

4.0 POST-CONSTRUCTION STORM WATER MANAGEMENT

The post-construction storm water management practice has been designed and will be implemented, inspected and maintained in accordance with the most current version of the technical standard, *New York State Storm Water Management Design Manual* ("the manual"), the construction site plans and drawings in Appendix C, and the BMP specifications and details in Appendix D.

4.1 Water Quantity Goals

With respect to NYSDEC water quality requirements, the project is exempt from the channel protection, overbank flood control and extreme flood control requirements stipulated by the manual because the site discharges directly to a tidal body of water.

4.2 Water Quality Goals

The *New York State Storm Water Management Design Manual* provides guidance for sizing permanent storm water controls to ensure adequate containment and conveyance of storm water resulting from the proposed development. The manual states that storm water management practices should be designed to capture and treat 90% of the average annual storm (90% Rule). The Water Quality Volume (WQ_V) sizing criteria is given below:

<u>Formula:</u> $$WQ_V = \frac{(P)(R_V)(A)}{12}$$

<u>Key:</u>

WQ_V = water quality volume (in acre feet)
P = 90% rainfall event number
R_V = 0.05 + 0.009 (I), where I = percent impervious cover
A = site area in acres

Proposed Project:

$$WQv = \frac{(1.25)\,(0.86)\,(1.6)}{12} = 0.143 \text{ acres ft.}$$

$$WQv = 6{,}229 \text{ cubic feet}$$

Key:

$P = 1.25$

$R_V = 0.05 + 0.009\,(90) = 0.225$

$A = 1.6$

BMP Description: An underground sand filter will be constructed in the southwest portion of the site to control storm water runoff from the site. The multi-chamber structure is designed to treat storm water runoff through filtration, using a sediment forebay, a primary filter media and an underdrain collection system. Storm water collected from the storm drains on-site will be directed towards the 18-inch diameter HDPE inlet pipe in the underground sand filter. The chambers of the underground sand filter will be accessible through three manholes. The 18-inch diameter HDPE outlet pipe will discharge to an outfall on Glen Cove Creek.

Maintenance and Inspection: The City of Glen Cove will be responsible for long-term maintenance of the sand filter. Sediment will be cleaned out of the underground sand filter sedimentation chamber when it reaches more than 6 inches in depth. Sediment within the sedimentation chamber shall be limited to a height of 18 inches. The sediment chamber will be cleaned out if drawdowns exceed 36 hours. Trash and debris will be removed as necessary. Silt/sediment will be removed from filter bed after it reaches 1 inch. If water ponds on the filter bed for more than 48 hours, the filter material will be removed and replaced. The removed sediment shall be disposed of in an acceptable manner (i.e., landfill).

4.3 Hydraulic Analysis

The hydraulic analysis of the drainage system for the Glen Cove Ferry Terminal was conducted using the storm drain modeling software StormCAD. Based on the results of the model, the inlet pipe leading to the sand filtration chamber will be able to deliver the storm water quality volume for up to a 10-year storm event. The internal weir and outlet pipe have also been sized with this intention. Flow rates exceeding this capacity will naturally be diverted in the bypass structure to the direct pipeline to the discharge point.

5.0 INSPECTIONS AND MAINTENANCE

5.1 Inspections

5.1.1 Qualified Inspection Personnel

(Insert Inspector#1 Name/Title) is responsible for site compliance with the SWPPP and the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity. He/she will conduct inspections for all areas of the site disturbed by construction activities, areas used for storage materials that are exposed to precipitation, discharge points and construction exits.

(Insert Inspector#1 Name) qualifications include:

-
-
-

In the absence of (Insert Inspector#1 Name), (Insert Inspector#2 Name/Title) will conduct inspections.

(Insert Inspector#2 Name) qualifications include:

-
-
-

5.1.2 General Construction Site Inspection Schedule

At a minimum, the qualified inspectors identified above will inspect all erosion and sediment control practices described in Section 2.0 to ensure integrity and effectiveness, the underground sand filter described in Section 4.0 under construction to ensure that it is constructed in conformance with the most current version of the technical standard, all areas of disturbance that have not achieved final stabilization, and all points of discharge from the construction site. Unless otherwise notified by NYSDEC, the at least one of the qualified inspectors identified above will conduct site inspections as follows:

At least once every 7 calendar days while soil disturbance activities are ongoing.

At least once every 30 calendar days while soil disturbance activities have been temporarily suspended and temporary stabilization measures have been applied to all disturbed areas. The storm water contact person at the NYSDEC Region 1 Office will be notified in writing prior to reducing the frequency of inspections. Inspections will resume to at least once every 7 calendar days as soon as soil disturbance activities resume.

Inspections will be ceased when soil disturbance activities have been shut down. Inspection will also cease in the case where partial project completion exists and all areas disturbed as of the project shutdown date have achieved final stabilization and the underground sand filter has been constructed and is operational. The storm water contact person at the NYSDEC Region 1 Office will be notified in writing prior to reducing the frequency of inspections. If soil disturbance activities are not resumed within 2 years from the date of shutdown, at least one of the one of the qualified inspectors identified above will perform a final inspection and certify that all disturbed areas have achieved final stabilization, all temporary, structural erosion and sediment control measures have been removed, and the underground sand filter has been constructed in conformance with the most current version of the technical standard. The qualified inspector will sign the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the Notice of Termination (NOT).

5.1.3 BMP Construction Site Inspection Schedule

Inspections will be conducted to ensure that all BMPs identified in Section 3.0 and 7.0 of this SWPPP are maintained in effective operating condition in accordance with the requirements in the most current version of the technical standard at all times. In addition to the general construction site inspection schedule, the turbidity curtain and the concrete truck washout areas will be inspected informally daily and the following BMPs will be inspected informally after every storm event and/or heavy use:

- Stockpiles
- Perimeter dike/swale
- Soil stabilization matting
- Storm drain inlets
- Silt fences
- Sediment trap
- Stabilized construction entrance
- Stabilized construction roads
- Seeded areas
- Material delivery and storage areas
- Hazardous waste storage area
- Controls for material use over water
- Trash and recycling dumpsters
- Temporary/portable sanitary facilities
- Equipment/vehicle maintenance area
- Equipment/vehicle fueling area

5.1.4 General Construction Site Inspection Reporting

At least one of the qualified inspectors identified above will prepare an inspection report subsequent to each and every general construction site inspection described in Section 5.1.2. The inspection reports are provided in Appendix E. All inspection reports will be signed by the qualified inspector and be maintained onsite with the SWPPP in Appendix E.

5.2 Corrective Actions

If corrective actions are identified by at least one of the qualified inspectors identified above during the general construction site inspection or informal inspections, he/she will prepare and submit a copy of the inspection report to the owner or operator and appropriate contractor or subcontractor identified in the most current version of the SWPPP within one business day. The contractor (or subcontractor) will begin implementing the corrective actions within one business day of this notification and will complete the corrective actions in a reasonable time frame. Corrective actions will be logged in the form provide in Appendix F.

6.0 RECORDKEEPING AND TRAINING

6.1 Recordkeeping

The SWPPP will be kept current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction storm water management practices that will be constructed on the site.

Unless otherwise notified by NYSDEC, a copy of the following documents will be retained for a period of at least five years from the date that the site achieves final stabilization:

- The complete amended SWPPP
- Notice of Intent (NOI) in Appendix G
- NOI Acknowledgment Letter from NYSDEC in Appendix G
- All inspection reports in Appendix E

6.2 Log of Changes to the SWPPP

See Appendix H for the log of changes and updates to the SWPPP.

6.3 Training

[Insert Name/Title of Individual(s) Responsible for Training] will conduct training as follows:

- Onsite general storm water and BMP awareness training for staff and subcontractors. The training will be conducted primarily via tailgate sessions and will focus on avoiding damage to storm water BMPs and preventing illicit discharges. The tailgate sessions will be conducted biweekly and will address the following topics: erosion control BMPs, sediment control BMPs, pollution prevention and good housekeeping BMPs, and emergency procedures specific to the construction site. See Appendix I for the SWPPP Training Log.

- Formal training for all staff and subcontractors with specific storm water responsibilities, such as installing and maintaining BMPs. The formal training will cover all design and construction specifications for installing the BMPs and proper procedures for maintaining each BMP. Formal training will occur before any BMPs are installed on the site. See Appendix I for the SWPPP Training Log.

7.0 TEMPORARY AND PERMANENT STABILIZATION PLAN

All major grading activities, temporary stabilization activities and permanent stabilization activities will be implemented in accordance with the requirements of the most current version of the technical standard, New York Standards and Specifications for Erosion and Sediment Control, and recorded in the Grading and Stabilization Activities Log in Appendix J.

7.1 Temporary Stabilization

BMP Description: Soils will be stabilized as soon as possible after construction of the area/phase of the project is complete. Temporary seedings will be necessary where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The area must be rough graded and slopes physically stable. Large debris and rocks will be removed. The seedbed will be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding. Fertilizer or lime will not be used for temporary seedings. The area will be seeded with ryegrass (annual or perennial) at 30 lbs. per acre during the spring, summer and early fall. The area will be seeded with Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre during late fall or early winter. A seeding method that will provide uniform application of seed to the area and result in relatively good soil to seed contact will be used. The area will be mulched with hay or straw at 2 tons/acre.

Installation Schedule: Portions of the site where construction activities will temporarily cease for more than 14 days will be stabilized. Winter stabilization will occur between November 15th and March 15.

Maintenance and Inspection: Stabilized areas will be inspected during the general construction site inspection described in Section 5.1.2. If washout, breakage, or erosion occurs, the surface will be repaired, and the damaged areas will be restabilized.

7.2 Permanent Stabilization

BMP Description: Permanent stabilization will be applied to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. All water control measures will be installed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12". The seedbed will be prepared with adequate soil moisture and to allow good soil to seed contact, with the soil not too soft and not too compact. If surface is powder dry or sticky wet, operations will be postponed until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification will not be needed. All stones and other debris will be removed from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance. Soil amendments will be incorporated into the upper 2 inches of soil when feasible. The soil will be tested to determine the amounts of amendments needed. Ground agricultural limestone will be applied to attain a pH of 6.0 in the upper 2 inches of soil. The soil will be tested to determine fertilizer needs. If necessary, commercial fertilizer will be applied at 600 lbs. per acre of 5-10-10 or equivalent. The optimum timing is early spring. However, permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods of seeding. Mulching will be used to obtain a uniform stand of seeded plants. Small grain straw will be applied at a rate of 2 tons per acre, and anchored with a netting or tackifier.

Installation Schedule: Portions of the site where construction activities have permanently ceased will be stabilized, as soon as possible but no later than 14 days after construction ceases.

Maintenance and Inspection: All seeded areas will be inspected weekly during the general construction site inspection described in Section 5.1.2 and after storm events for failure until a dense cover of vegetation has been established. If failure is noticed at the seeded area, the area will be reseeded, fertilized, and mulched immediately. After construction is completed at the site, permanently stabilized areas will be monitored until final stabilization is reached.

7.3 Mulching

BMP Description: Mulching will be done to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch will be used for temporary stabilization in nongrowing months. The site will be sloped, graded and smoothed to fit needs of selected mulch products. All undesirable stones and other debris will be removed. Mulch will be applied after soil amendments and planting is accomplished. The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

Installation Schedule: Portions of the site where seeding or shrub plantings are being established will be mulched.

Maintenance and Inspection: Mulched areas will be inspected during the general construction site inspection described in Section 5.1.2. If erosion occurs, the surface will be re-mulched.

7.4 Topsoiling

BMP Description: Topsoiling will be done to provide acceptable plant cover growing conditions, to reduce irrigation water needs and to reduce the need for nitrogen fertilizer application. Existing topsoil will be preserved in place where possible. The complete rough grading and final grade will allow for depth of topsoil to be added. All compact, slowly permeable, medium and fine textured subsoil areas will be scarified. Areas that have been overly compacted will be decompacted to a minimum depth of 12 inches with a deep ripper or chisel plow prior to topsoiling. Refuse, woody plant parts, stones over 3 inches in diameter, and other litter will be removed. The topsoil will have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. The topsoil will have not less than 20 percent

fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay. The topsoil will be relatively free of stones over 1 ½ inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel. The topsoil will be distributed to a uniform depth over the area. It will not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.

Installation Schedule: Topsoil will be applied after the final grade is achieved.

Maintenance and Inspection: Topsoiled areas will be inspected during the general construction site inspection described in Section 5.1.2.

7.5 Sodding

BMP Description: Sodding will be done to stabilize the soil, reduce damage from sediment and runoff and enhance natural beauty. Sod will be bluegrass or a bluegrass/red fescue mixture or a perennial ryegrass for average sites. Turf type cultivars of tall fescue will be used for shady, droughty, or otherwise more critical areas. Sod will be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch. Standard size sections of sod will be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section. Sod will be free of weeds and undesirable coarse weedy grasses. Wild native or pasture grass sod will not be used. Sod will not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival. Sod will be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period will be inspected and approved by the contracting officer or his designated representative prior to its installation. Soil amendments application rates will be determined by soil tests. Prior to sodding, the surface will be smoothed and cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations. Soil will be moist prior to sodding. Temporary storage of sod will be provided for to keep it shaded and cool. For the operation of laying, tamping, and irrigating for any areas, sod will be completed within eight hours. During periods of excessively high temperature, the soil will be lightly moistened immediately prior to laying the sod. The first row

of sod will be laid in a straight line with subsequent rows placed parallel to, and tightly wedged against, each other. Lateral joints will be staggered to promote more uniform growth and strength. Sod will not be stretched or overlapped and all joints will be butted tight in order to prevent voids which would cause air drying of the roots. The sod will be secured by tamping and pegging, or other approved methods. As sodding is completed in any one section, the entire area will be rolled or tamped to ensure solid contact of roots with the soil surface. The sod will be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The sod will be kept moist for at least two weeks.

Installation Schedule:

Maintenance and Inspection: Sod will be inspected regularly. In the absence of adequate rainfall, watering will be performed daily, or as often as deemed necessary by the inspector, during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering will be done in the morning. Excessive watering will be avoided. After the first week, the sod will be watered as necessary to maintain adequate moisture and ensure establishment. The first mowing will not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf will be removed by the initial cutting or subsequent cuttings. Grass height will be maintained between 2 and 3 inches. Heavy mowing equipment will be avoided for several weeks to prevent rutting.

8.0 CONTRACTOR/SUBCONTRACTOR CERTIFICATION AND NOTIFICATION

GLEN COVE FERRY TERMINAL PROJECT
STORM WATER POLLUTION PREVENTION PLAN

CONTRACTOR/SUBCONTRACTOR CERTIFICATION STATEMENT

As a contractor/subcontractor, you are required to comply with the Storm Water Pollution Prevention Plan (SWPPP) for any work that you perform for the Glen Cove Ferry Terminal Project. The project site is located south of Garvies Point Road and north of Glen Cove Creek in the City of Glen Cove, Nassau County, New York. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review.

The contractor(s) and subcontractor(s) responsible for installing, constructing, repairing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for the construction of all post-construction storm water management practices included in the SWPPP must be identified and sign the following certification statement:

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

This certification is hereby signed in reference to the above named project:

Company: _____ Telephone #: _____

Address: _____

Service to be provided: _____

_____

Name(s) and title(s) of the trained individual(s) responsible for SWPPP implementation:

_____

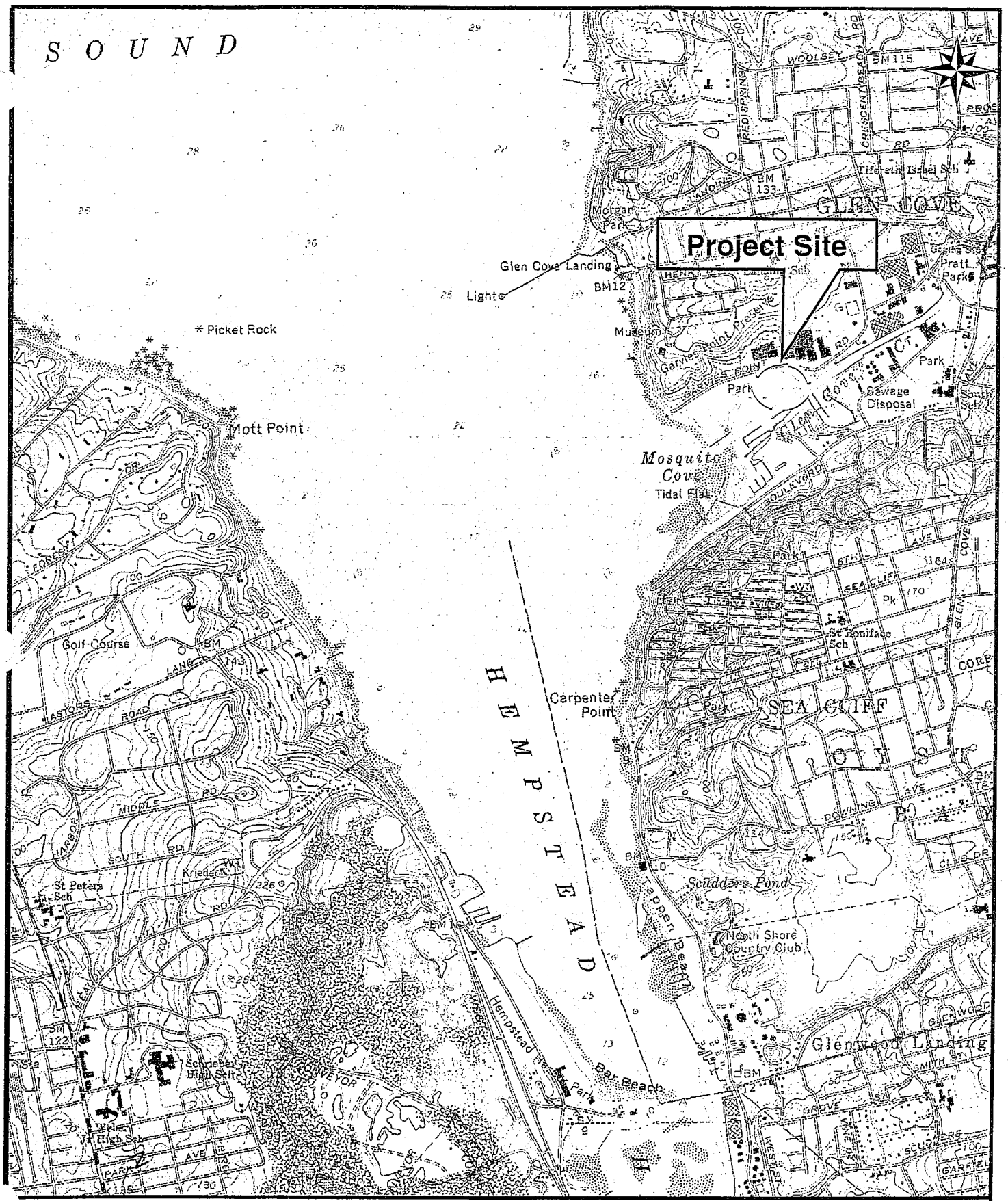
_____

Print Name: _____ Title: _____

Signature: _____ Date: _____

APPENDIX A

LOCATION AND SITE MAPS



Source: USGS Sea Cliff Quad

GLEN COVE FERRY TERMINAL

GENERAL LOCATION MAP

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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Source: Google Earth

GLEN COVE FERRY TERMINAL

VICINITY AERIAL MAP

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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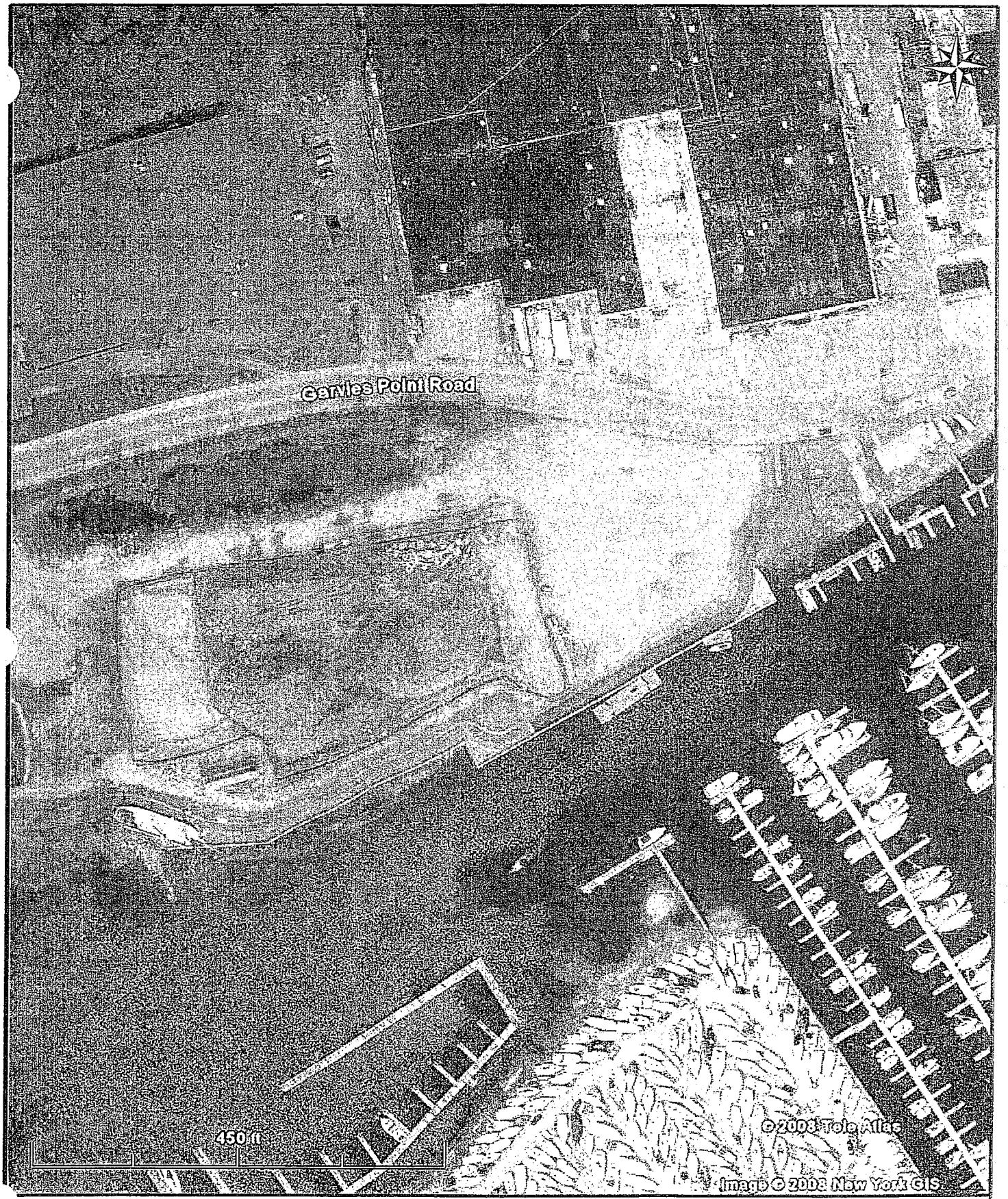

Source: Google Earth

GLEN COVE FERRY TERMINAL

SITE AERIAL VIEW

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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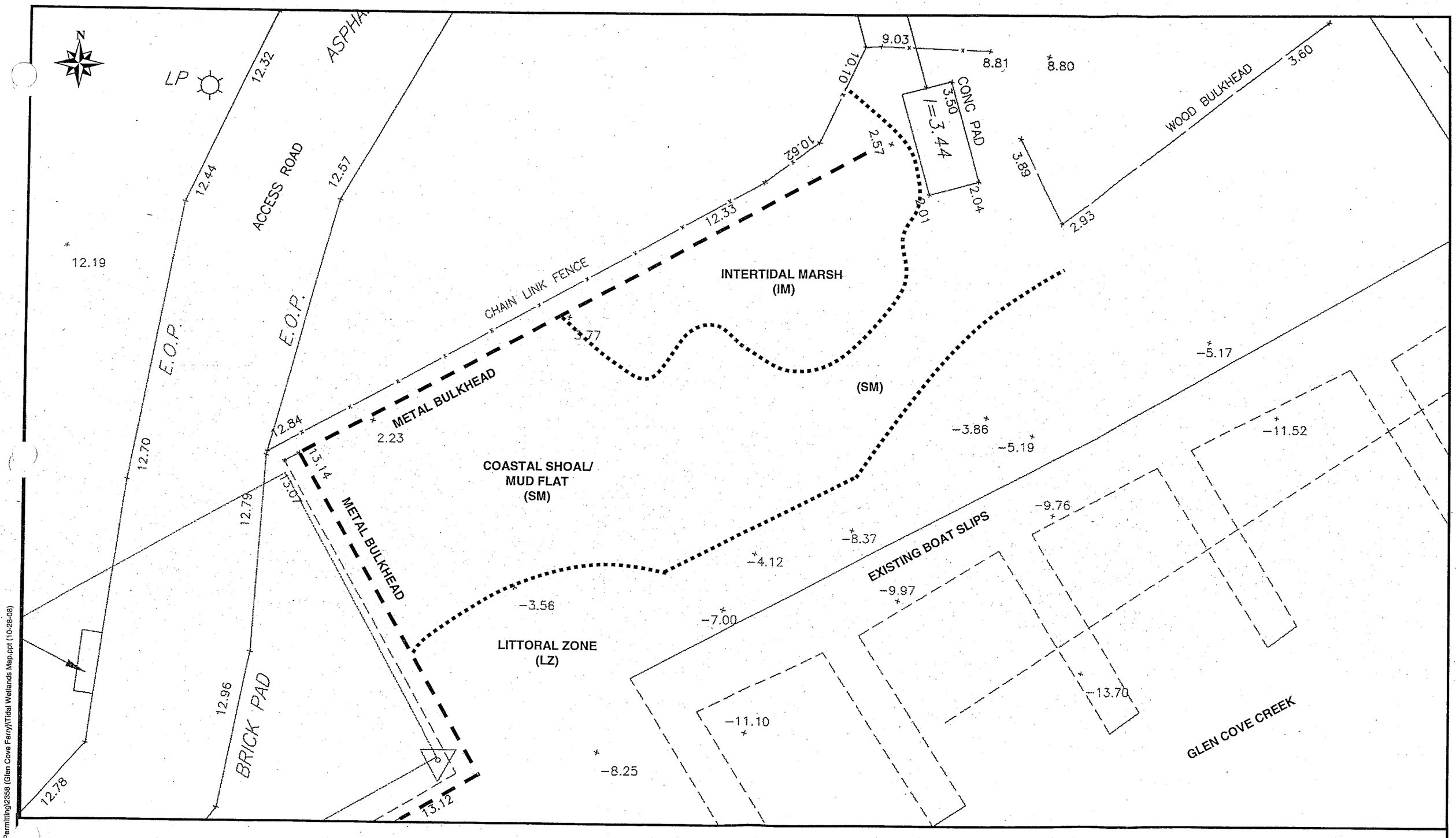

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GLEN COVE FERRY TERMINAL

TIDAL WETLANDS MAP

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APPENDIX B

CONSTRUCTION GENERAL PERMIT

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-0-10-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2010 Expiration Date: January 28, 2015

William R. Adriance
Chief Permit Administrator

William R. Adriance January 28, 2010
Authorized Signature Date

Address: NYS DEC
Div. Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York's *State Pollutant Discharge Elimination System ("SPDES")* is a NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law ("ECL")*.

This general permit ("permit") is issued pursuant to Article 17, Titles 7, 8 and Article 70 of the ECL. An *owner or operator* may obtain coverage under this permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this permit and the NOI for New York are available by calling (518) 402-8109 or at any New York State Department of Environmental Conservation ("the Department") regional office (see Appendix G).They are also available on the Department's website at:

http://www.dec.ny.gov/

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a point source and therefore, pursuant to Article 17-0505 of the ECL, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. They cannot wait until there is an actual *discharge* from the construction site to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES

FROM CONSTRUCTION ACTIVITIES

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Part I. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application - This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

B. Maintaining Water Quality - It shall be a violation of this permit and the *ECL* for any *discharge* to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

C. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph D. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater discharges from *construction activities.*

(Part I. C)

3. Notwithstanding paragraphs C.1 and C.2 above, the following non-stormwater *discharges* may be authorized by this permit: discharges from fire fighting activities; fire hydrant flushings; waters to which cleansers or other components have not been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated groundwater or spring water; uncontaminated discharges from construction site de-watering operations; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this permit, and who discharge as noted in this paragraph, and with the exception of flows from fire fighting activities, these discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with water quality standards in Part I.B.

D. <u>Activities Which Are Ineligible for Coverage Under This General Permit</u> - All of the following are **<u>not</u>** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection C.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII, subparagraph K of this permit;

4. *Discharges* from *construction activities* that adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects that:

    a. are tributary to waters of the state classified as AA or AA-s; and

(Part I. D. 6)

b. disturb one or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.

7. *Construction activities* for linear transportation projects and linear utility projects that:
   a. are tributary to waters of the state classified as AA or AA-s; and

   b. disturb two or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.

8. *Construction activities* that adversely affect a property that is listed or is eligible for listing on the State or National Register of Historic Places (Note: includes Archeological sites), unless there are written agreements in place with the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) or other governmental agencies to mitigate the effects, or there are local land use approvals evidencing the same.

Part II. OBTAINING PERMIT COVERAGE

A. Notice of Intent (NOI) Submittal

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a *regulated, traditional land use control MS4* must first develop a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the address below in order to be authorized to *discharge* under this permit. The NOI form shall be one which is associated with this permit, signed in accordance with Part VII.H. of this permit.

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first develop a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the *MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person, and then submit that form along with the NOI to the address referenced under "Notice of Intent (NOI) Submittal".

(Part II. A.2)

This requirement does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.E. (Change of Owner or Operator).

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

B. <u>Permit Authorization</u>

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied <u>all</u> of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act (SEQRA) have been satisfied, when SEQRA is applicable,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act (UPA)* (see 6 NYCRR Part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits must submit a preliminary SWPPP to the appropriate DEC Regional Office in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

   c. the final SWPPP has been prepared, and

   d. an NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.B.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

(Part II. B. 3)

a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

   i. Five (5) business days from the date the Department receives a complete NOI for *construction activities* with a SWPPP that has been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 and/or 3, or

   ii. Sixty (60) business days from the date the Department receives a complete NOI for *construction activities* with a SWPPP that has not been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 or 3.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

   i. Five (5) business days from the date the Department receives a complete NOI and signed "MS4 SWPPP Acceptance" form,

4. The Department may suspend or deny an *owner's or operator's* coverage under this permit if the Department determines that the SWPPP does not meet the permit requirements.

5. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department.

C. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (NOT) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-10-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form and inspection reports at the construction site until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department.

(Part II. C. 2)

The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the MS4 (provided the MS4 is not the *owner or operator* of the construction activity). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

    a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

    b. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.

    c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

    d. The *owner or operator* shall install any additional site specific practices needed to protect water quality.

    e. The *owner or operator* shall include the requirements above in their SWPPP.

4. The Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements.

(Part II. C)

5. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4,* the *owner or operator* shall notify the *MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *MS4,* the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *MS4* prior to commencing construction of the post-construction stormwater management practice.

D. Permit Coverage for Discharges Authorized Under GP-0-08-001

1. Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-08-001), a*n owner or operator* of *construction activity* with coverage under GP-0-08-001, as of the effective date of GP-0-10-001, shall be authorized to *discharge* in accordance with GP-0-10-001 unless otherwise notified by the Department.

E. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.1.. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

   Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or operator* was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity.*

(Part III. A)

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP:

    a. whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater *discharges* from the site;

    b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and

    c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority.

5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP.

(Part III. A. 6)

The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

> "I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings. "

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

8. The SWPPP must include documentation supporting the determination of permit eligibility with regard to Part I.D.8. (Historic Places or Archeological Resource). At a minimum, the supporting documentation shall include the following:

(Part III. A. 8)

a. Information on whether the stormwater discharge or *construction activities* would have an effect on a property (historic or archeological resource) that is listed or eligible for listing on the State or National Register of Historic Places;

b. Results of historic resources screening determinations conducted. Information regarding the location of historic places listed, or eligible for listing, on the State or National Registers of Historic Places and areas of archeological sensitivity that may indicate the need for a survey can be obtained online by viewing the New York State Office of Parks, Recreation and Historic Places (OPRHP) online resources located on their web site at: http://nysparks.state.ny.us/shpo/online-tools/ (using The Geographic Information System for Archeology and National Register). OPRHP can also be contacted at: NYS OPRHP, State Historic Preservation Office, Peebles Island Resources Center, P.O. Box 189, Waterford, NY 12188-0189, phone: 518-237-8643;

c. A description of measures necessary to avoid or minimize adverse impacts on places listed, or eligible for listing, on the State or National Register of Historic Places. If the *owner or operator* fails to describe and implement such measures, the stormwater *discharge* is ineligible for coverage under this permit; and

d. Where adverse effects may occur, any written agreements in place with OPRHP or other governmental agency to mitigate those effects, or local land use approvals evidencing the same.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Where erosion and sediment control practices are not designed in conformance with this technical standard, the *owner or operator* must demonstrate equivalence to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

    a. Background information about the scope of the project, including the location, type and size of project;

(Part III. B. 1)

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater discharge(s);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each construction activity that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of final stabilization;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

(Part III. B. 1)

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6., to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the construction site; and

l. Identification of any elements of the design that are not in conformance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards.

2. Post-construction stormwater management practice component - All construction projects identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). If the Design Manual is revised during the term of this permit, an *owner or operator* must begin using the revised version of the Design Manual to prepare their SWPPP six (6) months from the final revision date of the Design Manual.

   Where post-construction stormwater management practices are not designed in conformance with this technical standard, the *owner or operator* must demonstrate equivalence to the technical standard.

   At a minimum, the post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project;

b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. The dimensions, material specifications and installation details for each post-construction stormwater management practice;

d. Identification of any elements of the design that are not in conformance with the Design Manual. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards;

e. A hydrologic and hydraulic analysis for all structural components of the stormwater management control system;

f. A detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. At a minimum, the summary shall address the required design criteria from the applicable chapter of the Design Manual; including the identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required based on the design criteria or waiver criteria included in the Design Manual; and

g. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.g. above.

(Part III. C)

C. Required SWPPP Components by Project Type - Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. Owner or Operator Maintenance Inspection Requirements

1. The *owner or operator* shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the *owner or operator* can stop conducting the maintenance inspections. The *owner or operator* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *owner or operator* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

(Part IV. C)

C. <u>Qualified Inspector Inspection Requirements</u> - The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- Licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or
- Someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, <u>with the exception of</u>:

    a. the construction of a single family residential subdivision with 25% or less impervious cover at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E;

    b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E;

    c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

    d. construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

    a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

(Part IV. C. 2)

b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the MS4 (provided the MS4 is not the *owner or operator* of the construction activity) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* <u>and</u> all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the MS4 (provided the MS4 is not the *owner or operator* of the construction activity). in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* <u>and</u> all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.A.1..

(Part IV. C. 3)

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

    a. Date and time of inspection;

    b. Name and title of person(s) performing inspection;

    c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

    d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

    e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

    f. Identification of all erosion and sediment control practices that need repair or maintenance;

    g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

    h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and

k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.C.2., the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.A.1. The NOT form shall be one which is associated with this general permit, signed in accordance with Part VII.H.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

(Part V. A. 2)

a. Total project completion - All construction activity identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.E.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT, certify that all disturbed areas have achieved *final stabilization;* and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall also have the MS4 sign the "MS4 Acceptance" statement on the NOT. The *owner or operator* shall have the principal executive officer, ranking elected official, or duly authorized representative from the *regulated, traditional land use control MS4*, sign the "MS4 Acceptance" statement. The MS4 official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The MS4 can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector's* final site inspection certification(s) required in Part V.3.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

(Part V. A. 5)

a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has modified their deed of record to include a deed covenant that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan,

d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION OF RECORDS

A. Record Retention - The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the site achieves *final stabilization*. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

B. Addresses - With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.A.1), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate Department Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply - The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied.

(Part VII. A)

The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

B. Continuation of the Expired General Permit - This permit expires five (5) years from the effective date. However, coverage may be obtained under the expired general permit, which will continue in force and effect, until a new general permit is issued. Unless otherwise notified by the Department in writing, an *owner or operator* seeking authorization under the new general permit must submit a new NOI in accordance with the terms of such new general permit.

C. Enforcement - Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense - It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate - The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to minimize or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information - The *owner or operator* shall make available to the Department for review and copying or furnish to the Department within five (5) business days of receipt of a Department request for such information, any information requested for the purpose of determining compliance with this permit. This can include, but is not limited to, the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, executed maintenance agreement, and inspection reports. Failure to provide information requested by the Department within the request timeframe shall be a violation of this permit.

The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review the NOI, SWPPP or inspection reports. Copying of documents will be done at the requester's expense.

G. Other Information - When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any other report, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s)

changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or impervious area), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

        ii. the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

    b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

    c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

        i. the chief executive officer of the agency, or

(Part VII. H. 1. c)

ii. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.H.1.;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

   c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. <u>Property Rights</u> - The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity.*

J. <u>Severability</u> - The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

(Part VII. K)
K. <u>Denial of Coverage Under This Permit</u>

1. At its sole discretion, the Department may require any *owner or operator* authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from *owner or operator* receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Regional Water Engineer, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. Any *owner or operator* authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit or another general permit. In such cases, the *owner or operator* shall submit an individual application or an alternative general permit application in accordance with the requirements of this general permit, 40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix F).The request may be granted by issuance of an individual permit or another general permit at the discretion of the Department.

3. When an individual SPDES permit is issued to a discharger authorized to discharge under a general SPDES permit for the same discharge(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. <u>Proper Operation and Maintenance</u> - The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. <u>Inspection and Entry</u> - The *owner or operator* shall allow the Department or an authorized representative of EPA, the State, or, in the case of a construction site which discharges through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

(Part VII. M)

1. Enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. Permit Actions - At the Department's sole discretion, this permit may, at any time, be modified, suspended, revoked, or renewed. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions - Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with *construction activity* covered by this permit, the *owner or operator* of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports – Article 17 of the ECL provides for a civil penalty of $37,500 per day per violation of this permit. Articles 175 and 210 of the New York State Penal Law provide for a criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

R. Other Permits – Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A

Definitions

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "Construction Activity(ies)" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a construction site by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a construction site to a separate storm sewer system and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or point source.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 authorizing a category of discharges.

Groundwater - means waters in the saturated zone. The saturated zone is a subsurface zone in

which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct construction activities are occurring, or will occur, under one plan. The term "plan" in "larger common plan of development or sale" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

i. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
ii. Designed or used for collecting or conveying stormwater;
iii. Which is not a *combined sewer*; and
iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from construction activity.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in Parts-700 et seq of this Title.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics in order to prepare a SWPPP that conforms to the Department's technical standard. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Routine Maintenance Activity - means construction activity that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Stream bank restoration projects (does not include the placement of spoil material),
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* will be responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B

Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix E • Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E • Construction of a barn or other agricultural building, silo, stock yard or pen.
The following construction activities that involve soil disturbances of one (1) or more acres of land: • Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects • Bike paths and trails • Sidewalk construction projects that are not part of a road/ highway construction or reconstruction project • Slope stabilization projects • Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics • Spoil areas that will be covered with vegetation • Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that *alter hydrology from pre to post development* conditions • Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions • Demolition project where vegetation will be established and no redevelopment is planned • Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover* • Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of less than five acres and construction activities that include the construction or reconstruction of impervious area
The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: • All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other agricultural building(e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project , wind-power project, cell tower project, oil or gas well drilling project or other linear utility project
- All other construction activities that include the construction or reconstruction of *impervious area* <u>and</u> *alter the hydrology from pre to post development* conditions, <u>and</u> are not listed in Table 1

APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Standards Are Required

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4

Figure 1 - New York City Watershed East of the Hudson

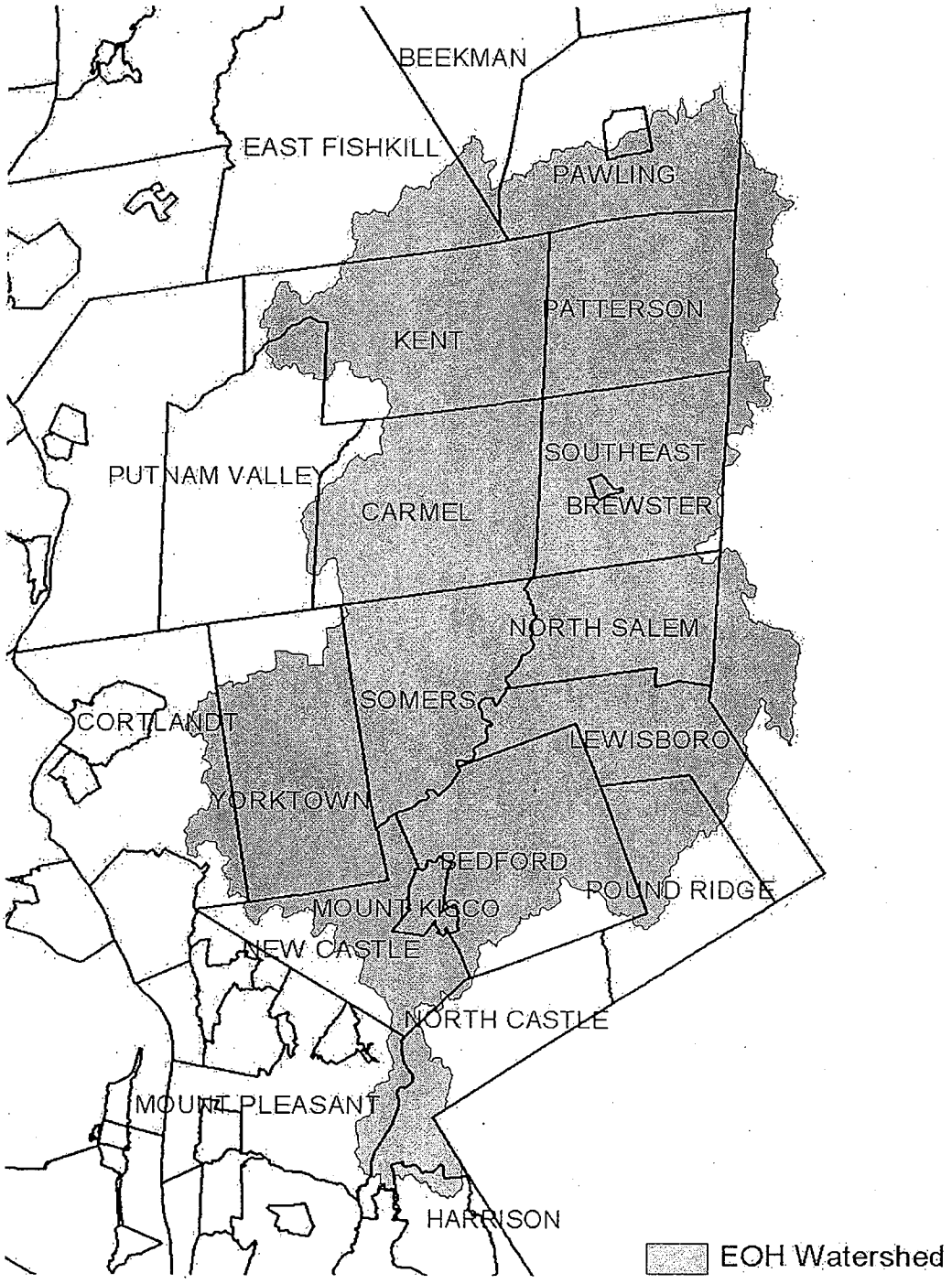


Figure 2 - Onondaga Lake Watershed

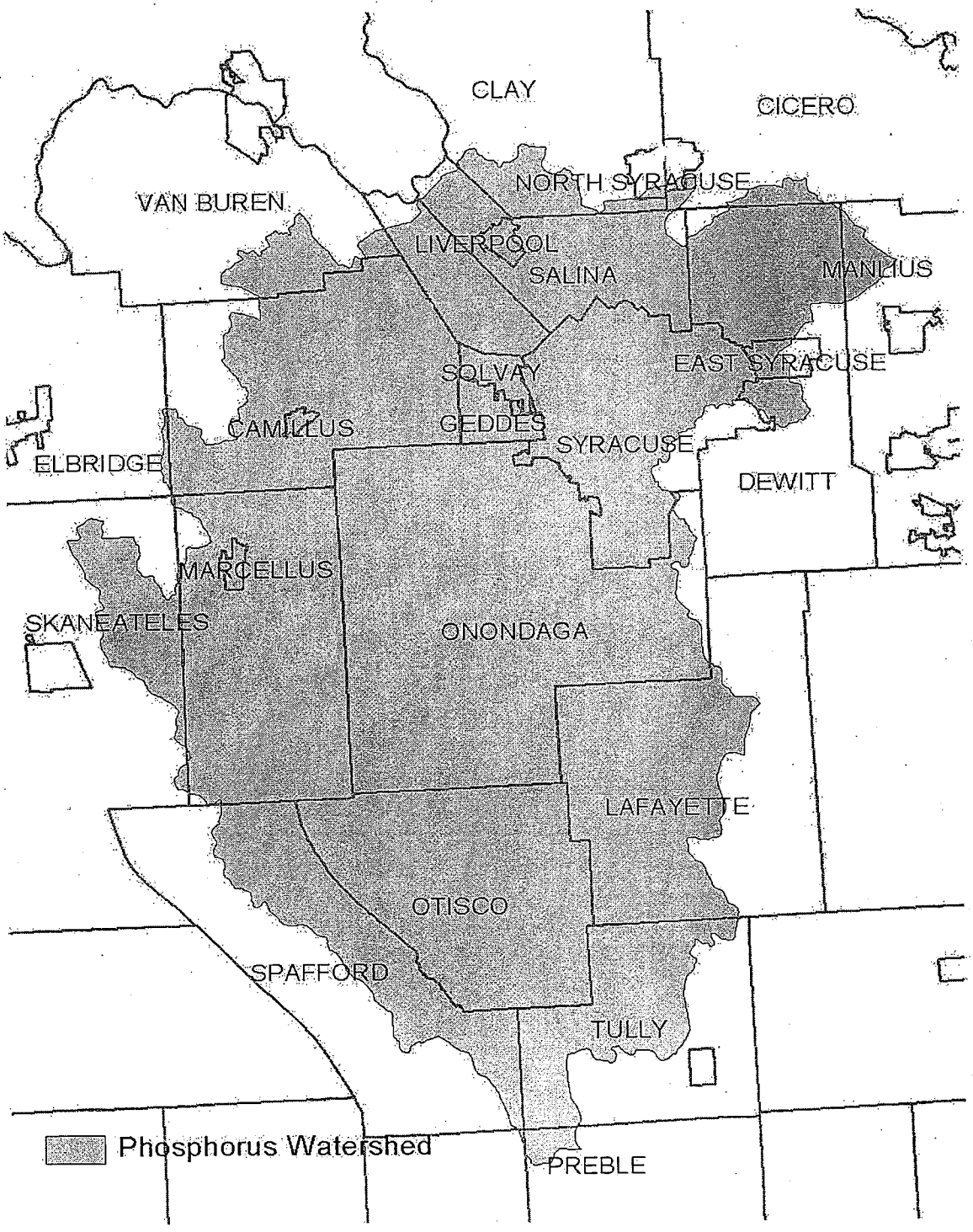


Figure 3 - Greenwood Lake Watershed

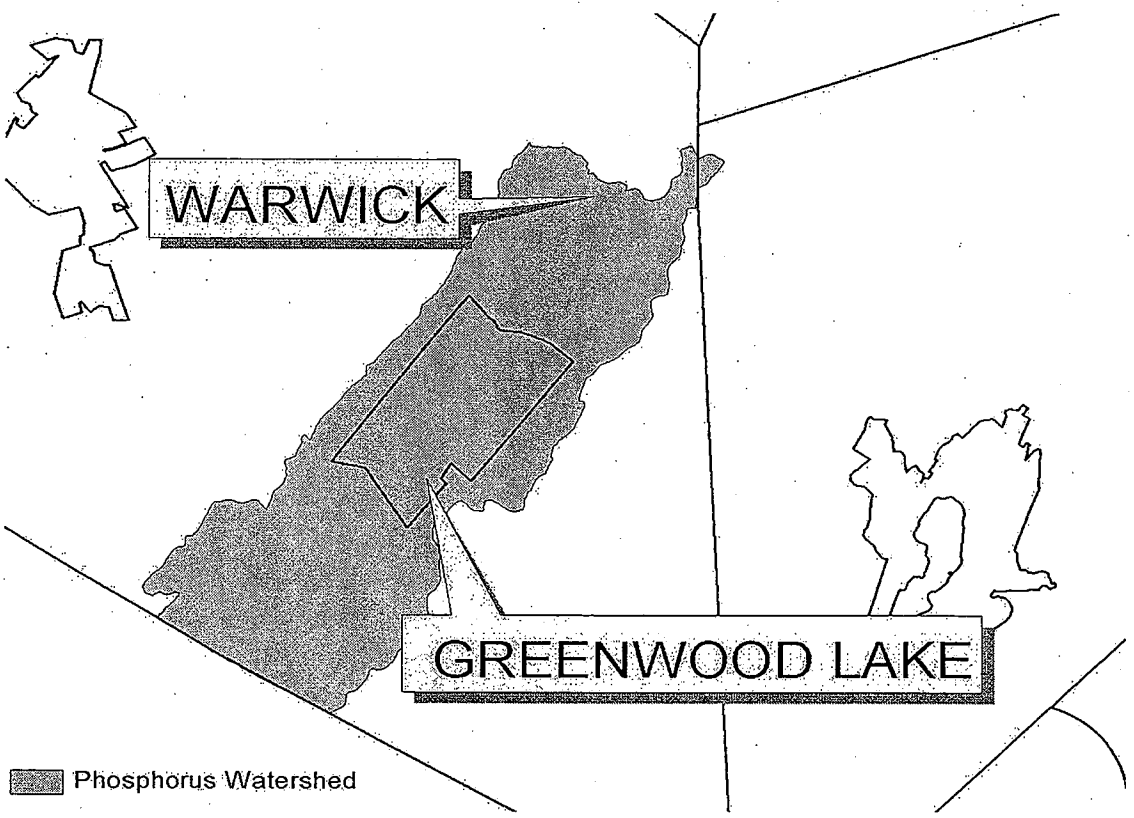
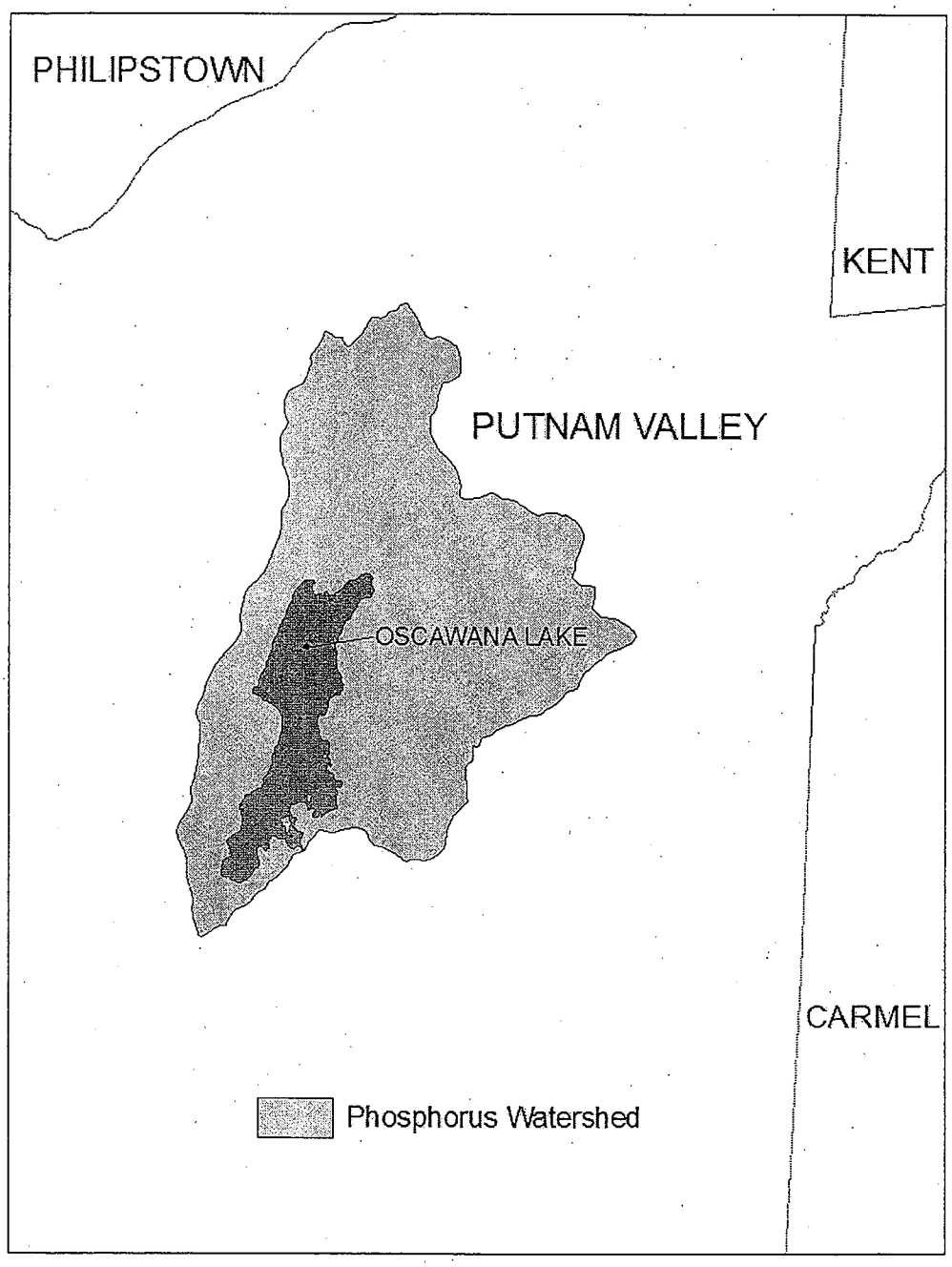


Figure 4 - Oscawana Lake Watershed



APPENDIX D

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity (e.g. silt, sediment or nutrients). *Owners or operators* of single family home and single family residential subdivision construction activities that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond
Albany	Basic Creek Reservoir
Bronx	Van Cortlandt Lake
Broome	Whitney Point Lake/Reservoir
Broome	Beaver Lake
Broome	White Birch Lake
Chautauqua	Chautauqua Lake, North
Chautauqua	Chautauqua Lake, South
Chautauqua	Bear Lake
Chautauqua	Chadakoin River and tribs
Chautauqua	Lower Cassadaga Lake
Chautauqua	Middle Cassadaga Lake
Chautauqua	Findley Lake
Clinton	Great Chazy River, Lower, Main Stem
Columbia	Kinderhook Lake
Columbia	Robinson Pond
Dutchess	Hillside Lake
Dutchess	Wappinger Lakes
Dutchess	Fall Kill and tribs
Dutchess	Rudd Pond
Erie	Rush Creek and tribs
Erie	Ellicott Creek, Lower, and tribs
Erie	Beeman Creek and tribs
Erie	Murder Creek, Lower, and tribs
Erie	South Branch Smoke Cr, Lower, and tribs
Erie	Little Sister Creek, Lower, and tribs
Essex	Lake George (primary county listed as Warren)
Genesee	Black Creek, Upper, and minor tribs
Genesee	Tonawanda Creek, Middle, Main Stem
Genesee	Tonawanda Creek, Upper, and minor tribs
Genesee	Little Tonawanda Creek, Lower, and tribs
Genesee	Oak Orchard Creek, Upper, and tribs
Genesee	Bowen Brook and tribs
Genesee	Bigelow Creek and tribs
Greene	Schoharie Reservoir
Greene	Sleepy Hollow Lake
Herkimer	Steele Creek tribs
Kings	Hendrix Creek
Lewis	Mill Creek/South Branch and tribs
Livingston	Conesus Lake
Livingston	Jaycox Creek and tribs
Livingston	Mill Creek and minor tribs
Monroe	Genesee River, Lower, Main Stem
Monroe	Genesee River, Middle, Main Stem
Monroe	Black Creek, Lower, and minor tribs
Monroe	Buck Pond
Monroe	Long Pond
Monroe	Cranberry Pond
Monroe	Mill Creek and tribs
Monroe	Shipbuilders Creek and tribs
Monroe	Minor tribs to Irondequoit Bay
Monroe	Thomas Creek/White Brook and tribs
Nassau	Glen Cove Creek, Lower, and tribs
Nassau	LI Tribs (fresh) to East Bay
Nassau	East Meadow Brook, Upper, and tribs
Nassau	Hempstead Bay
Nassau	Hempstead Lake
Nassau	Grant Park Pond
Niagara	Bergholtz Creek and tribs
Oneida	Ballou, Nail Creeks
Onondaga	Ley Creek and tribs
Onondaga	Onondaga Creek, Lower and tribs
Onondaga	Onondaga creek, Middle and tribs
Onondaga	Onondaga Creek, Upper, and minor tribs
Onondaga	Harbor Brook, Lower, and tribs
Onondaga	Ninemile Creek, Lower, and tribs
Onondaga	Minor tribs to Onondaga Lake
Ontario	Honeoye Lake
Ontario	Hemlock Lake Outlet and minor tribs
Ontario	Great Brook and minor tribs
Oswego	Lake Neatahwanta
Putnam	Oscawana Lake
Putnam	Lake Carmel
Queens	Jamaica Bay, Eastern, and tribs (Queens)
Queens	Bergen Basin
Queens	Shellbank Basin
Rensselaer	Snyders Lake
Richmond	Grasmere, Arbutus and Wolfes Lakes
Saratoga	Dwaas Kill and tribs
Saratoga	Tribs to Lake Lonely
Saratoga	Lake Lonely
Saratoga	Schuyler Creek and tribs
Schenectady	Collins Lake

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Schoharie	Engleville Pond		
Schoharie	Summit Lake		
St. Lawrence	Black Lake Outlet/Black Lake		
Steuben	Lake Salubria		
Steuben	Smith Pond		
Suffolk	Millers Pond		
Suffolk	Mattituck (Marratooka) Pond		
Suffolk	Tidal tribs to West Moriches Bay		
Suffolk	Canaan Lake		
Suffolk	Lake Ronkonkoma		
Tompkins	Cayuga Lake, Southern End		
Tompkins	Owasco Inlet, Upper, and tribs		
Ulster	Ashokan Reservoir		
Ulster	Esopus Creek, Upper, and minor tribs		
Warren	Lake George		
Warren	Tribs to L.George, Village of L George		
Warren	Huddle/Finkle Brooks and tribs		
Warren	Indian Brook and tribs		
Warren	Hague Brook and tribs		
Washington	Tribs to L.George, East Shore of Lake George		
Washington	Cossayuna Lake		
Wayne	Port Bay		
Wayne	Marbletown Creek and tribs		
Westchester	Peach Lake		
Westchester	Mamaroneck River, Lower		
Westchester	Mamaroneck River, Upper, and minor tribs		
Westchester	Sheldrake River and tribs		
Westchester	Blind Brook, Lower		
Westchester	Blind Brook, Upper, and tribs		
Westchester	Lake Lincolndale		
Westchester	Lake Meahaugh		
Wyoming	Java Lake		
Wyoming	Silver Lake		

Note: The list above identifies those waters from the final New York State "2008 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy", dated May 26, 2008, that are impaired by silt, sediment or nutrients.

APPENDIX F

LIST OF NYS DEC REGIONAL OFFICES

Region	COVERING THE FOLLOWING COUNTIES:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS	DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, PO BOX 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD, PO BOX 220 WARRENSBURG, NY 12885-0220 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

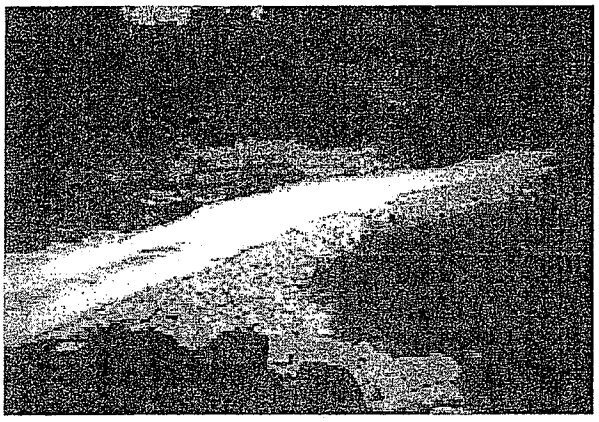
APPENDIX C

CONSTRUCTION PLANS/DRAWINGS

APPENDIX D

BMP SPECIFICATIONS AND DETAILS

STANDARD AND SPECIFICATIONS FOR CONSTRUCTION ROAD STABILIZATION



Definition

The stabilization of temporary construction access routes, on-site vehicle transportation routes, and construction parking areas.

Purpose

To control erosion on temporary construction routes and parking areas.

Condition Where Practice Applies

All traffic routes and parking areas for temporary use by construction traffic.

Design Criteria

Construction roads should be located to reduce erosion potential, minimize impact on existing site resources, and maintain operations in a safe manner. Highly erosive soils, wet or rocky areas, and steep slopes should be avoided. Roads should be routed where seasonal water tables are deeper than 18 inches. Surface runoff and control should be in accordance with other standards.

Road Grade – A maximum grade of 12% is recommended, although grades up to 15% are possible for short distances.

Road Width – 14 foot minimum for one-way traffic or 24 foot minimum for two-way traffic.

Side Slope of Road Embankment – 2:1 or flatter.

Ditch Capacity – On-site roadside ditch and culvert capacities shall be the 10 yr. peak runoff.

Composition – Use a 6-inch layer of NYS DOT sub-base Types 1,2,3, 4 or equivalent as specified in NYS – Standards and Specifications for Highways.

Construction Specifications

1. Clear and strip roadbed and parking areas of all vegetation, roots, and other objectionable material.
2. Locate parking areas on naturally flat areas as available. Keep grades sufficient for drainage, but not more than 2 to 3 percent.
3. Provide surface drainage and divert excess runoff to stabilized areas.
4. Maintain cut and fill slopes to 2:1 or flatter and stabilized with vegetation as soon as grading is accomplished.
5. Spread 6-inch layer of sub-base material evenly over the full width of the road and smooth to avoid depressions.
6. Provide appropriate sediment control measures to prevent offsite sedimentation.

Maintenance

Inspect construction roads and parking areas periodically for condition of surface. Topdress with new gravel as needed. Check ditches for erosion and sedimentation after rainfall events. Maintain vegetation in a health, vigorous condition. Areas producing sediment should be treated immediately.

STANDARD AND SPECIFICATIONS FOR PERIMETER DIKE/SWALE

Definition

A temporary ridge of soil excavated from an adjoining swale located along the perimeter of the site or disturbed area.

Purpose

The purpose of a perimeter dike/swale is to prevent off site storm runoff from entering a disturbed area and to prevent sediment laden storm runoff from leaving the construction site or disturbed area.

Conditions Where Practice Applies

Perimeter dike/swale is constructed to divert flows from entering a disturbed area, or along tops of slopes to prevent flows from eroding the slope, or along base of slopes to direct sediment laden flows to a trapping device.

The perimeter dike/swale shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 5A.3 on page 5A.8 for details.

The perimeter dike/swale shall not be constructed outside the property lines without obtaining legal easements from affected adjacent property owners. A design is not required for perimeter dike/swale. The following criteria shall be used:

Drainage area – Less than 2 acres (for drainage areas larger than 2 acres but less than 10 acres, see earth dike or temporary swale; for drainage areas larger than 10 acres, see standard and specifications for diversion).

Height – 18 inches minimum from bottom of swale to top of dike evenly divided between dike height and swale depth.

Bottom width of dike – 2 feet minimum.

Width of swale – 2 feet minimum.

Grade – Dependent upon topography, but shall have positive drainage (sufficient grade to drain) to an adequate outlet. Maximum allowable grade not to exceed 8 percent.

Stabilization – The disturbed area of the dike and swale shall be stabilized within 7 days of installation, in accordance with the standard and specifications for temporary swales.

Outlet

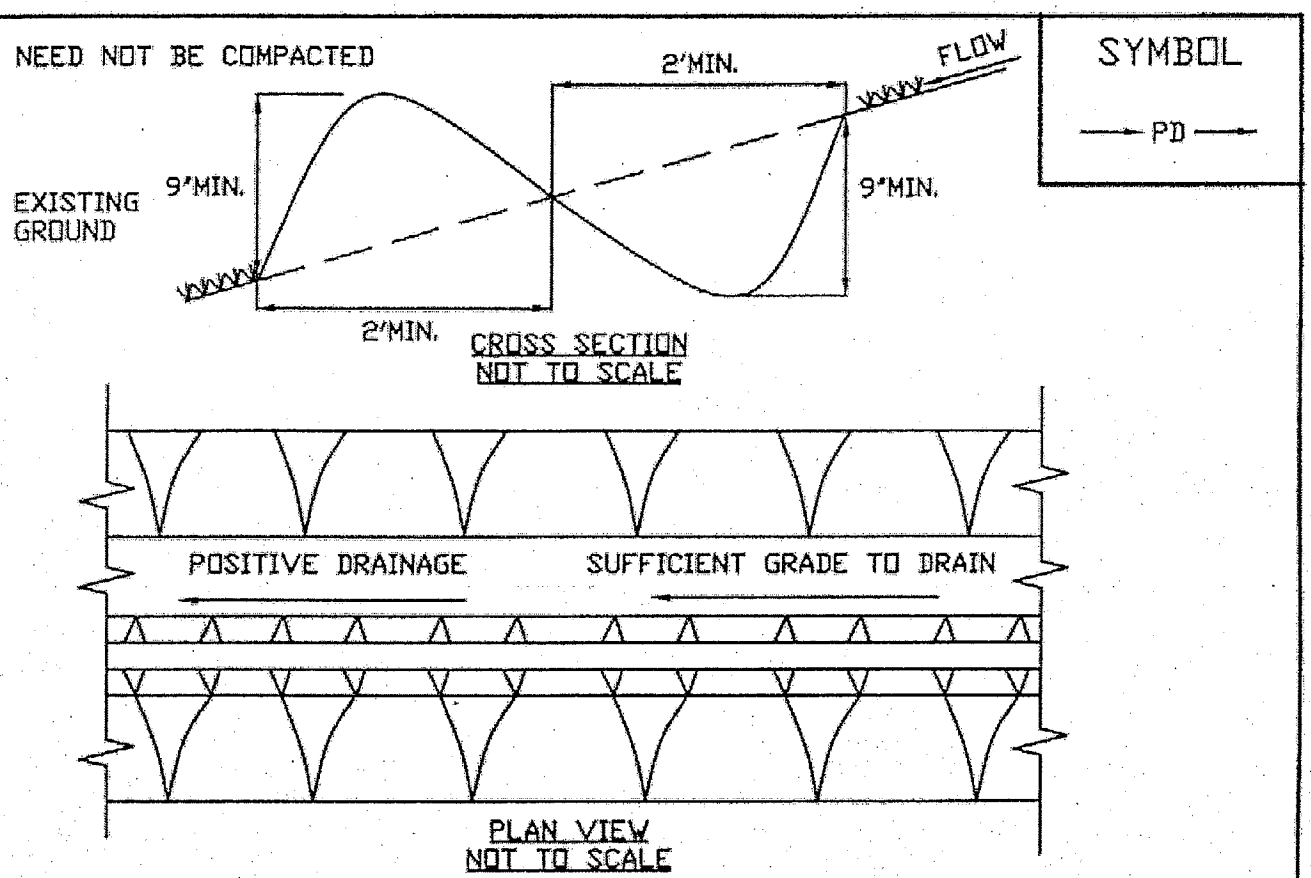
1. Perimeter dike/swale shall have a stabilized outlet.

2. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area.

3. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap, sediment basin, or to an area protected by any of these practices.

4. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

Figure 5A.3
Perimeter Dike/Swale



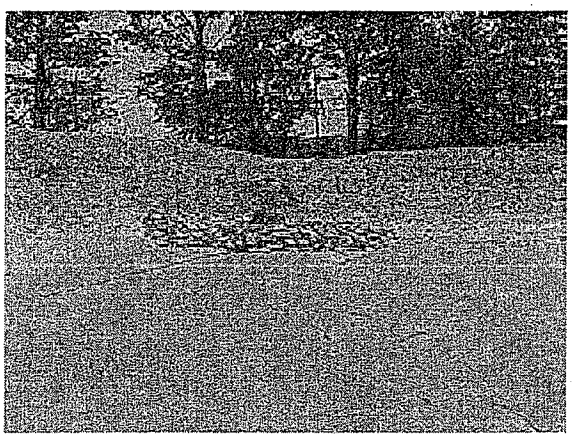
CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPECIFICATIONS FOR TEMPORARY SEEDING AND MULCHING, AND SHALL BE DONE WITHIN 10 DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

MAX. DRAINAGE AREA LIMIT: 2 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	PERIMETER DIKE OR SWALE

STANDARD AND SPECIFICATIONS FOR SEDIMENT TRAP



Definition

A temporary sediment control device formed by excavation and/or embankment to intercept sediment laden runoff and retain the sediment.

Purpose

The purpose of the structure is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties, and rights-of-way below the sediment trap from sedimentation.

Conditions Where Practice Applies

A sediment trap is usually installed in a drainage way, at a storm drain inlet, or other points of collection from a disturbed area.

Sediment traps should be used to artificially break up the natural drainage area into smaller sections where a larger device (sediment basin) would be less effective.

Design Criteria

If any of the design criteria presented here cannot be met, see Standard and Specification for Sediment Basin on page 5A.49.

Drainage Area

The drainage area for sediment traps shall be in accordance with the specific type of sediment trap used (Type I through V).

Location

Sediment traps shall be located so that they can be installed prior to grading or filling in the drainage area they are to protect. Traps must not be located any closer than 20 feet from a proposed building foundation if the trap is to function during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.

Trap Size

The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,600 cubic feet per acre of drainage area. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: Volume (cu.ft.) = 0.4 x surface area (sq.ft.) x maximum depth (ft.).

Trap Cleanout

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to ½ of the design depth of the trap. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.

Embankment

All embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed

The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.

Excavation

All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.

Outlet

The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distance between inlet and outlet should be maximized to the longest length practicable.

Trap Details Needed on Erosion and Sediment Control Plans

Each trap shall be delineated on the plans in such a manner that it will not be confused with any other features. Each trap on a plan shall indicate all the information necessary to properly construct and maintain the structure. If the drawings are such that this information cannot be delineated on the drawings, then a table shall be developed. If a table is developed, then each trap on a plan shall have a number and the numbers shall be consecutive.

The following information shall be shown for each trap in a summary table format on the plans.

1. Trap number
2. Type of trap
3. Drainage area
4. Storage required
5. Storage provided (if applicable)
6. Outlet length or pipe sizes
7. Storage depth below outlet or cleanout elevation
8. Embankment height and elevation (if applicable)

Type of Sediment Traps

There are five (5) specific types of sediment traps which vary according to their function, location, or drainage area.

I. Pipe Outlet Sediment Trap
II. Grass Outlet Sediment Trap
III. Catch Basin Sediment Trap
IV. Stone Outlet Sediment Trap
V. Riprap Outlet Sediment Trap

I. Pipe Outlet Sediment Trap

A Pipe Outlet Sediment Trap consists of a trap formed by embankment or excavation. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of steel, corrugated metal or other suitable material. The top of the embankment shall be at least 1 ½ feet above the crest of the riser. The top 2/3 of the riser shall be perforated with one (1) inch nominal diameter holes or slits spaced six (6) inches vertically and horizontally placed in the concave portion of the corrugated pipe.

No holes or slits will be allowed within six (6) inches of the top of the horizontal barrel. All pipe connections shall be watertight. The riser shall be wrapped with ½ to ¼ inch hardware cloth wire then wrapped with filter cloth with a mesh size between #40-80 and secured with strapping or connecting band at the top and bottom of the cloth. The cloth shall cover an area at least six (6) inches above the highest hole and six (6) inches below the lowest hole. The top of the riser pipe shall not be covered with filter cloth. The riser shall have a base with sufficient weight to prevent flotation of the riser. Two approved bases are:

1. A concrete base 12 in. thick with the riser embedded 9 in. into the concrete base, or

2. One quarter inch, minimum, thick steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or earth placed on it to prevent flotation. In either case, each side of the square base measurement shall be the riser diameter plus 24 inches.

Pipe outlet sediment traps shall be limited to a five (5) acre maximum drainage area. Pipe outlet sediment traps may be interchangeable in the field with stone outlet or riprap sediment traps provided that these sediment traps are constructed in accordance with the detail and specifications for that trap.

Select pipe diameter from the following table:

Minimum Sizes

Barrel Diameter[1] (in.)	Riser Diameter[1] (in.)	Maximum Drainage Area (ac.)
12	15	1
15	18	2
18	21	3
21	24	4
21	27	5

[1] Barrel diameter may be same size as riser diameter.

See details for Pipe Outlet Sediment Trap ST-I in Figure 5A.16 (1) and 5A.16 (2) on pages 5A.38 and 5A.39.

II. Grass Outlet Sediment Trap

A Grass Outlet Sediment Trap consists of a trap formed by excavating the earth to create a holding area. The trap has a discharge point over natural existing grass. The outlet crest width (feet) shall be equal to four (4) times the drainage area (acres) with a minimum width of four (4) feet. The outlet shall be free of any restrictions to flow. The outlet lip must remain undisturbed and level. The volume of this trap shall be computed at the elevation of the crest of the outlet. Grass outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Grass Outlet Sediment Trap ST-II in Figure 5A.17 on page 5A.40.

III. Catch Basin Sediment Trap

A Catch Basin Sediment Trap consists of a basin formed by excavation on natural ground that discharges through an opening in a storm drain inlet structure. This opening can either be the inlet opening or a temporary opening made by omitting bricks or blocks in the inlet.

A yard drain inlet or an inlet in the median strip of a dual highway could use the inlet opening for the type outlet. The trap should be out of the roadway so as not to interfere with future compaction or construction. Placing the trap on the opposite side of the opening and diverting water from the roadway to the trap is one means of doing this. Catch basin sediment traps shall be limited to a three (3) acre maximum drainage area. The volume of this trap is measured at the elevation of the crest of the outlet (invert of the inlet opening).

See details for Catch Basin Sediment Trap ST-III in Figure 5A.18 on page 5A.41.

IV. Stone Outlet Sediment Trap

A Stone Outlet Sediment Trap consists of a trap formed by an embankment or excavation. The outlet of this trap is over a stone section placed on level ground. The minimum length (feet) of the outlet shall be equal to four (4) times the drainage area (acres).

Required storage shall be 3,600 cubic feet per acre of drainage area.

The outlet crest (top of stone in weir section) shall be level, at least one (1) foot below top of embankment and no more than one (1) foot above ground beneath the outlet. Stone used in the outlet shall be small riprap (4 in. x 8 in.). To provide more efficient trapping effect, a layer of filter cloth should be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.

Stone Outlet Sediment Traps may be interchangeable in the field with pipe or riprap outlet sediment traps provided they are constructed in accordance with the detail and specifications for those traps. Stone outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Stone Outlet Sediment Trap ST-IV in Figure 5A.19 on page 5A.42.

V. Riprap Outlet Sediment Trap

A Riprap Outlet Sediment Trap consists of a trap formed by an excavation and embankment. The outlet for this trap shall be through a partially excavated channel lined with riprap. This outlet channel shall discharge onto a stabilized area or to a stable watercourse. The riprap outlet sediment trap may be used for drainage areas of up to a maximum of 15 acres.

Design Criteria for Riprap Outlet Sediment Trap

1. The total contributing drainage area (disturbed or undisturbed either on or off the developing property) shall not exceed 15 acres.
2. The storage needs for this trap shall be computed using 3600 cubic feet of required storage for each acre of drainage area. The storage volume provided can be figured by computing the volume of storage area available behind the outlet structure up to an elevation of one (1) foot below the level weir crest.
3. The maximum height of embankment shall not exceed five (5) feet.
4. The elevation of the top of any dike directing water to a riprap outlet sediment trap will equal or exceed the minimum elevation of the embankment along the entire length of this trap.

Riprap Outlet Sediment Trap ST-V
(for Stone Lined Channel)

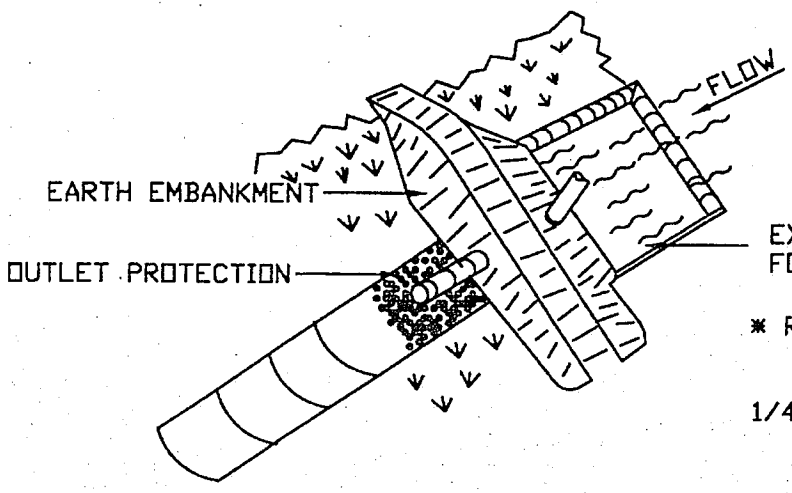
Contributing Drainage Area (ac.)	Depth of Channel (a) (ft.)	Length of Weir (b) (ft.)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0
11	2.0	14.0
12	2.0	14.0
13	2.0	16.0
14	2.0	16.0
15	2.0	18.0

See details for Riprap Outlet Sediment Trap ST-V on Figures 5A.20(1) and 5A.20(2) on pages 5A.43 and 5A.44.

Optional Dewatering Methods

Optional dewatering devices may be designed for use with sediment traps. Included are two methods, which may be used. See Figure 5A.21 on page 5A.45 for details.

Figure 5A.16(1)
Pipe Outlet Sediment Trap: ST-I

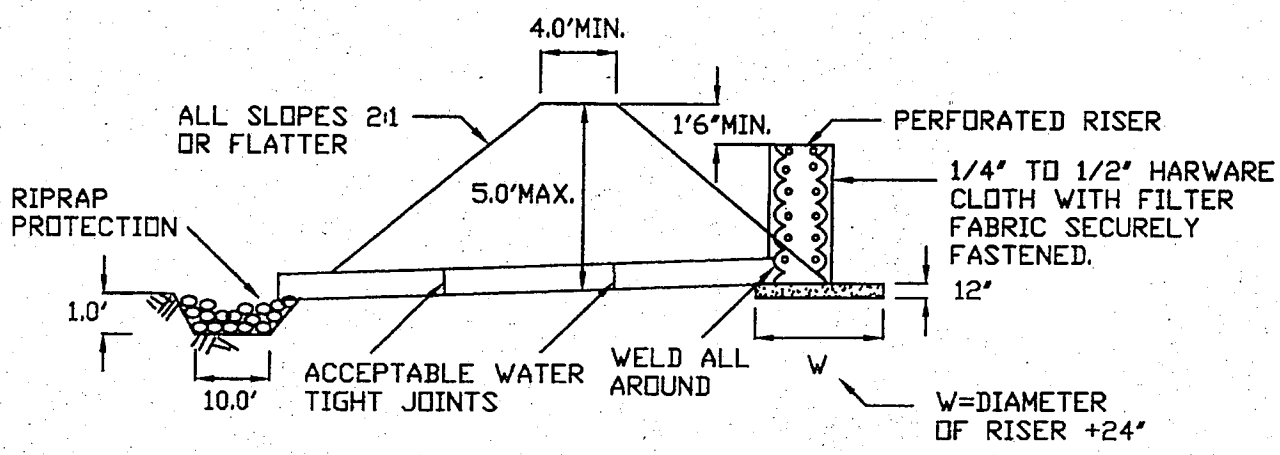


SYMBOL

EXCAVATE IF NECESSARY FOR STORAGE

* RISER EMBEDDED 9" INTO CONCRETE OR 1/4" METAL PLATE WELDED ALL AROUND.

DESIGN VOLUME IS _____ CU.FT.



EMBANKMENT SECTION THRU RISER

SIZES OF PIPE NEEDED:

BARREL DIAMETER: _____
RISER DIAMETER: _____

NOTE:
CONSTRUCTION SPECIFICATION SHOULD BE ATTACHED TO THIS DETAIL TO COMPLETE DESIGN.

MAXIMUM DRAINAGE AREA: 5 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	PIPE OUTLET SEDIMENT TRAP ST-I

Figure 5A.16(2)
Pipe Outlet Sediment Trap: ST-I—Construction Specifications

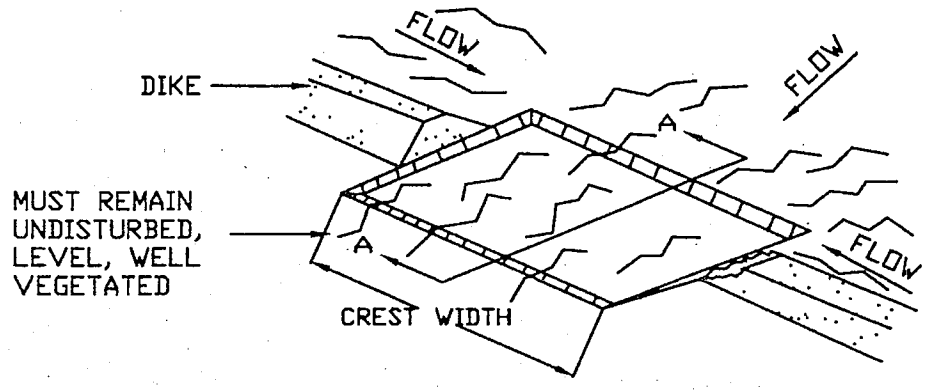
SYMBOL

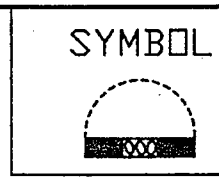
CONSTRUCTION SPECIFICATIONS

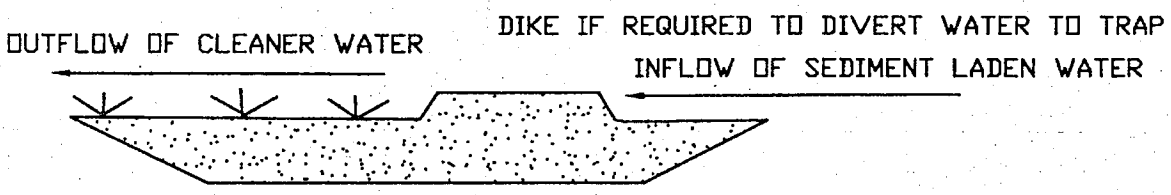
1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
4. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED.
5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH (HAVING AN EQUIVALENT SIEVE SIZE OF 40-80). THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVER-LAPPED, FOLDED AND STAPLED TO PREVENT BYPASS.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. FOR CONCRETE BASED THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY A CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL, OR TAMPED EARTH ON THE PLATE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	PIPE OUTLET SEDIMENT TRAP ST-I

Figure 5A.17
Grass Outlet Sediment Trap: ST-II







CREST WIDTH (FT)=4xDRAINAGE AREA (ACRES)

SECTION A - A
EXCAVATED GRASS OUTLET SEDIMENT TRAP

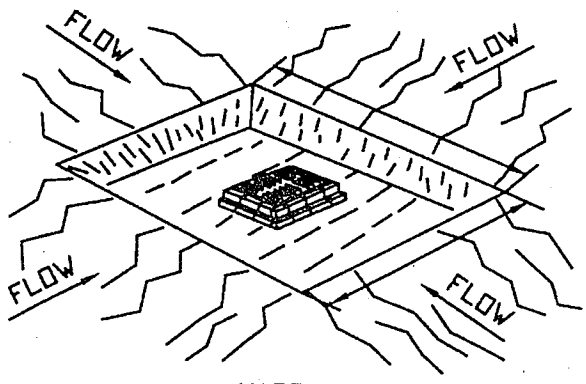
CONSTRUCTION SPECIFICATIONS

1. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE AREA.
2. MINIMUM CREST WIDTH SHALL BE 4 x DRAINAGE AREA
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
6. THE SEDIMENT TRAP SHALL BE REMOVED AND AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT SLOPES SHALL BE 1:1 OR FLATTER.

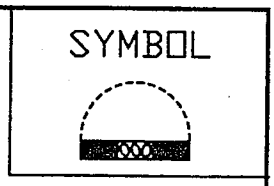
MAXIMUM DRAINAGE AREA: 5 ACRES

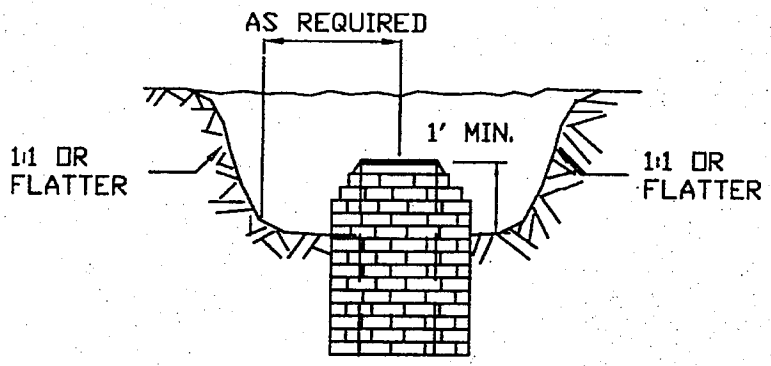
ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	GRASS OUTLET SEDIMENT TRAP ST-II

Figure 5A.18
Catch Basin Sediment Trap: ST-III



YARD DRAIN





CROSS SECTION

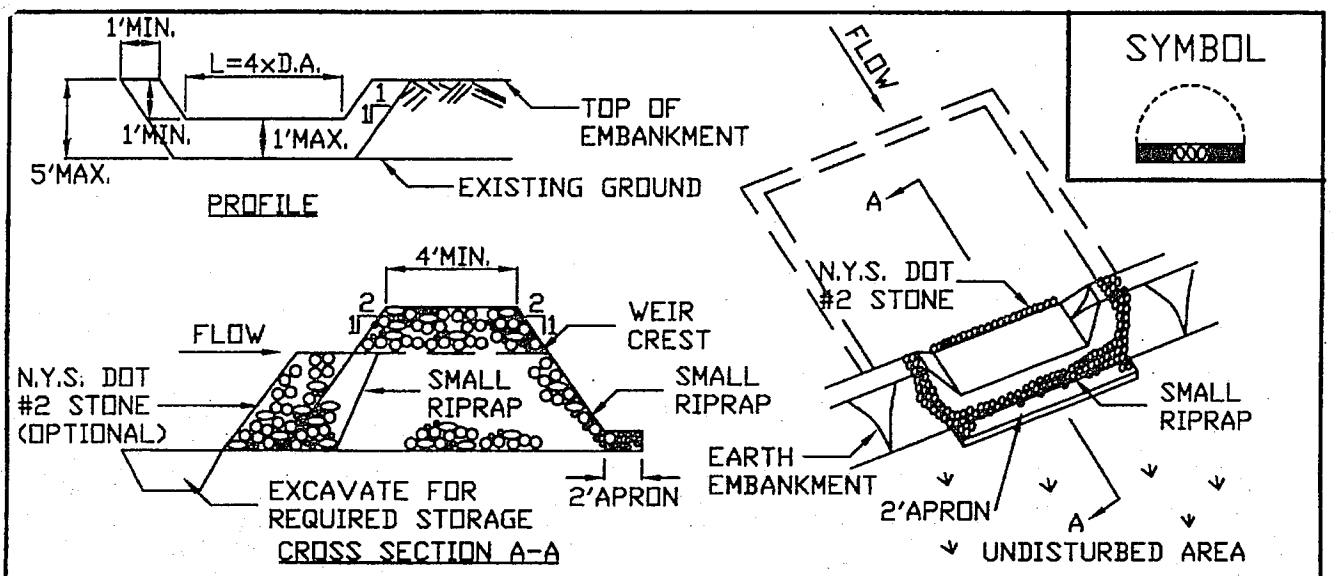
CONSTRUCTION SPECIFICATIONS

1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED.
2. THE VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
3. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
6. ALL CUT SLOPES SHALL BE 1:1 OR FLATTER.

MAXIMUM DRAINAGE AREA: 3 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	CATCH BASIN SEDIMENT TRAP ST-III

Figure 5A.19
Stone Outlet Sediment Trap: ST-IV



OPTION: A ONE FOOT LAYER OF N.Y.S. DOT #2 STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP INPLACE OF THE EMBEDDED FILTER CLOTH.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. IT SHALL BE PLACED ON SITE AND STABILIZED.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA 5 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STONE OUTLET SEDIMENT TRAP ST-IV

Figure 5A.20(1)
Riprap Outlet Sediment Trap: ST-V

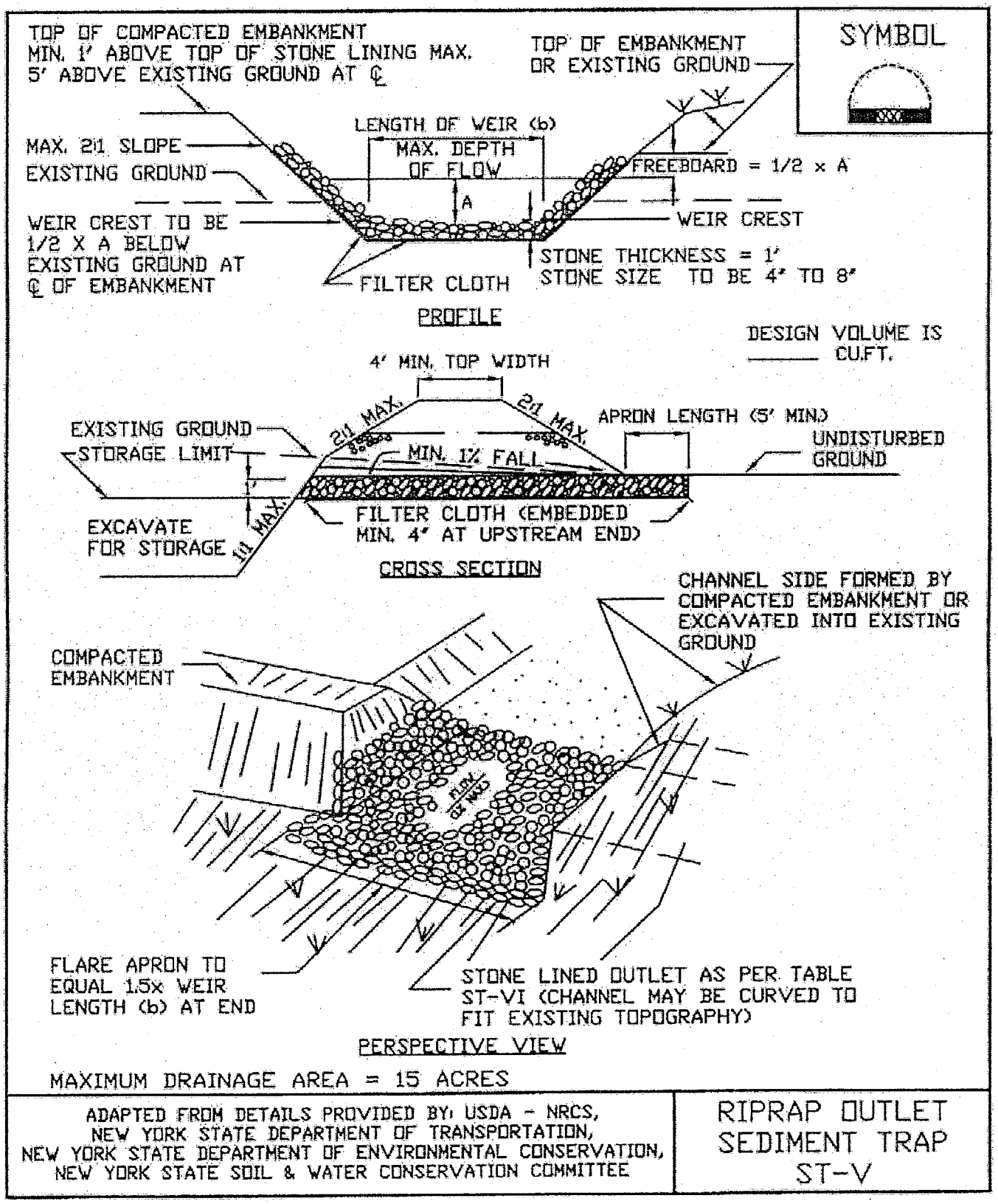


Figure 5A.202)
Riprap Outlet Sediment Trap: ST-V—Construction Specifications

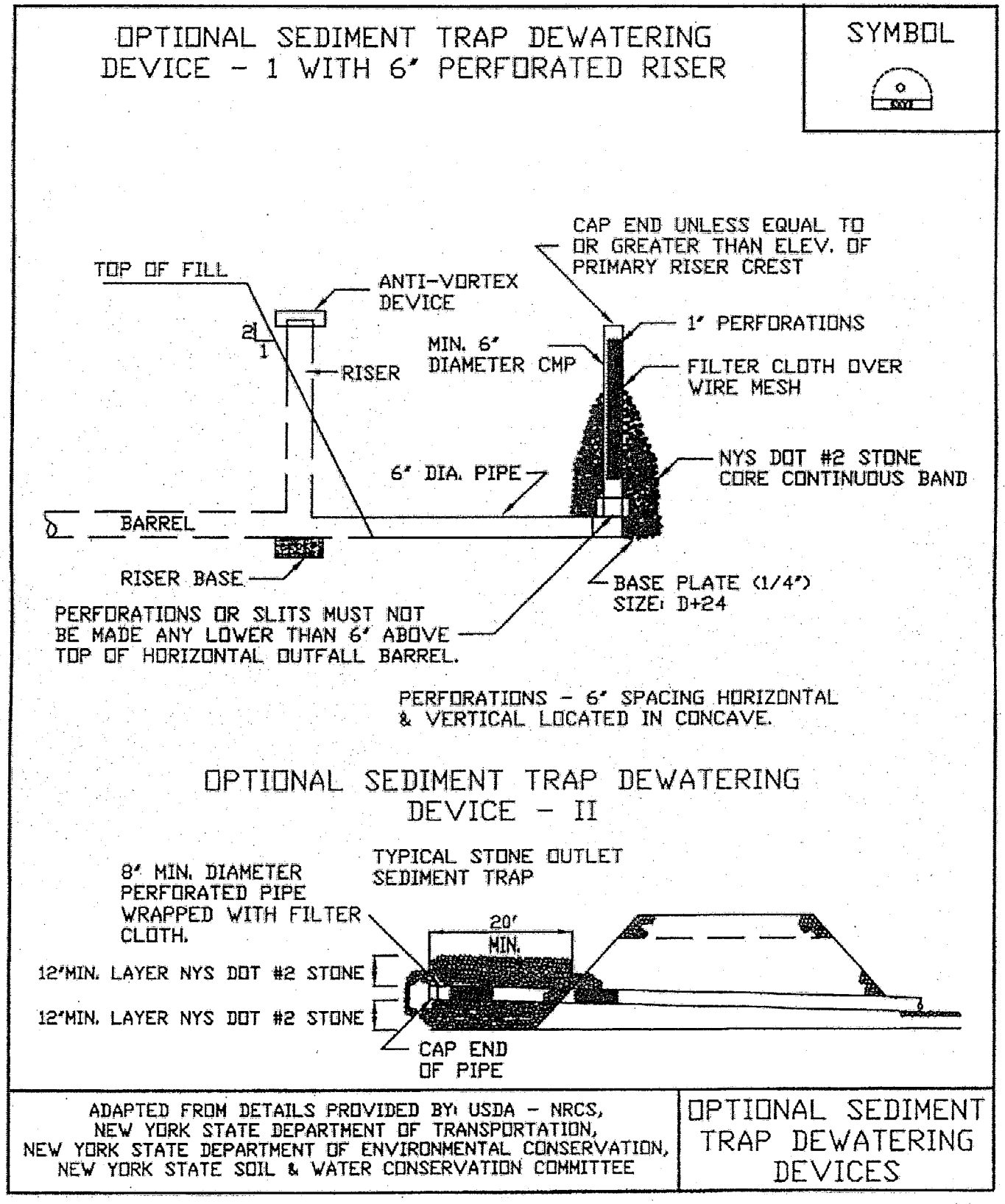
SYMBOL

CONSTRUCTION SPECIFICATIONS

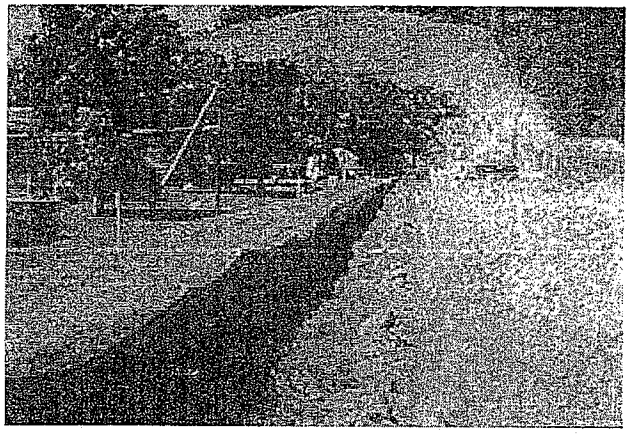
1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER, CUT SLOPES 1:1 OR FLATTER.
4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT.
5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE LEVEL WEIR CREST.
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OUTLET CHANNEL.
7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCH RIPRAP. TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES OR LESS.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	RIPRAP OUTLET SEDIMENT TRAP ST-V

Figure 5A.21
Optional Sediment Trap Dewatering Devices



STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence; and

3. Erosion would occur in the form of sheet erosion; and

4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.

Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. A detail of the silt fence shall be shown on the plan. See Figure 5A.8 on page 5A.21 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682

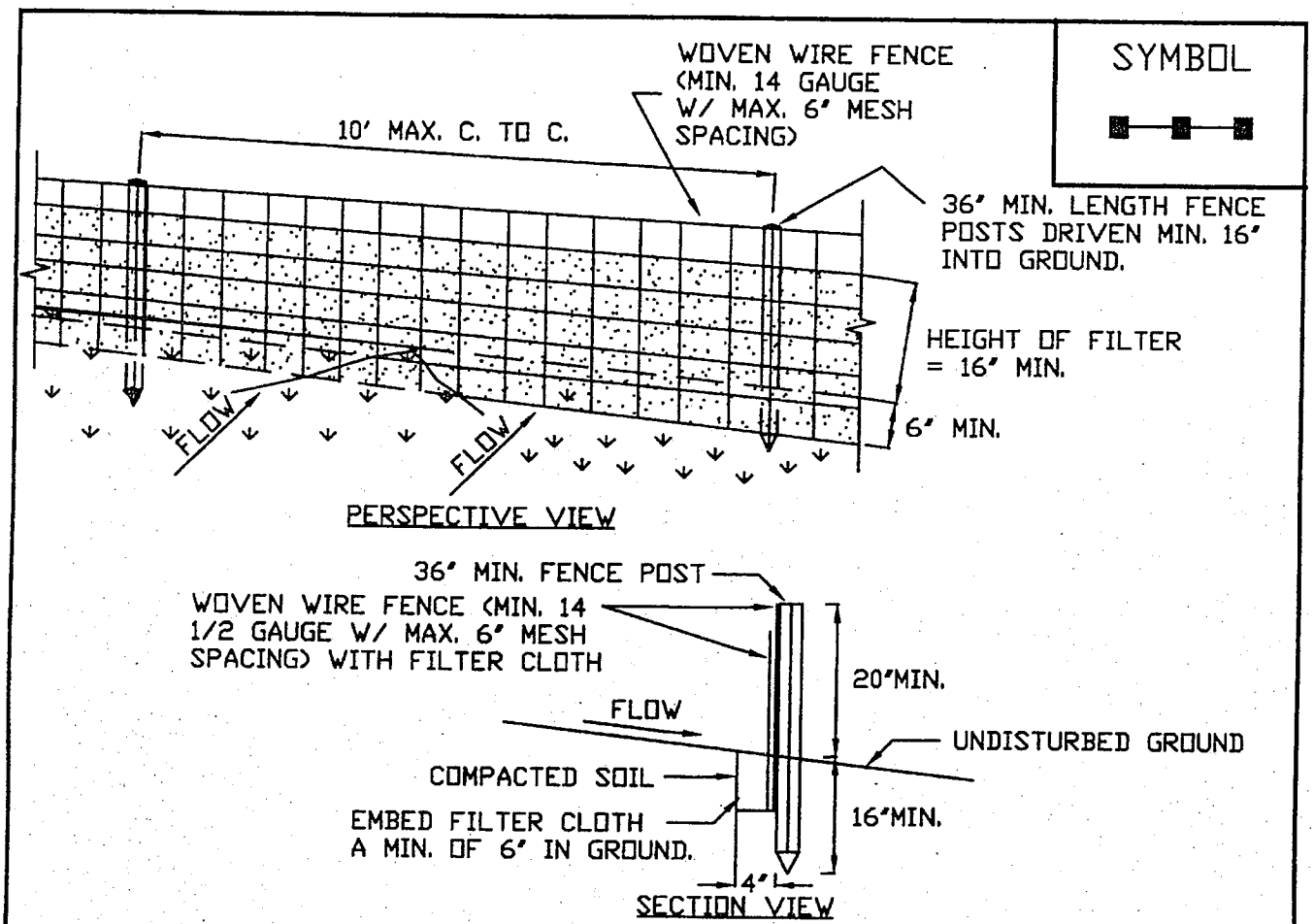
Mullen Burst Strength (PSI)	190	ASTM D3786
ıncture Strength (lbs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot.

3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated Units: Envirofence, Geofab, or approved equal, may be used in lieu of the above method providing the unit is installed per details shown in Figure 5A.8.

Figure 5A.8
Silt Fence

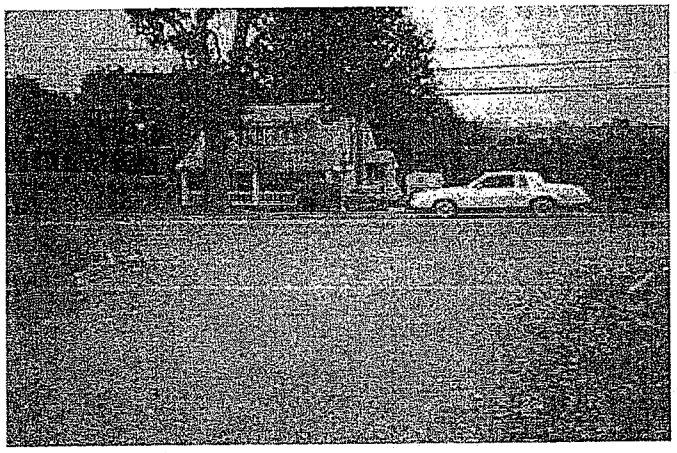


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE



Definition

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

Purpose

The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction entrance shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 5A.35 on page 5A.76 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile

The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Brust Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 modified
Equivalent Opening Size	40-80	40-80	US Std Sieve CW-02215
Aggregate Depth	6	10	--

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

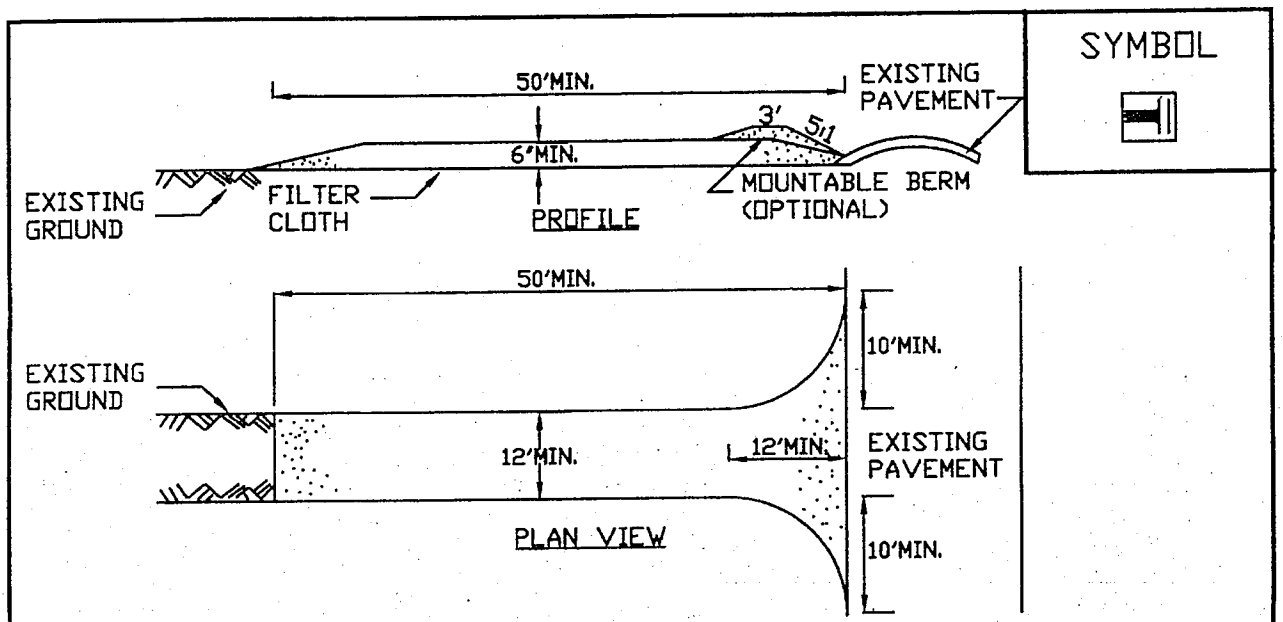
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 5A.35
Stabilized Construction Entrance

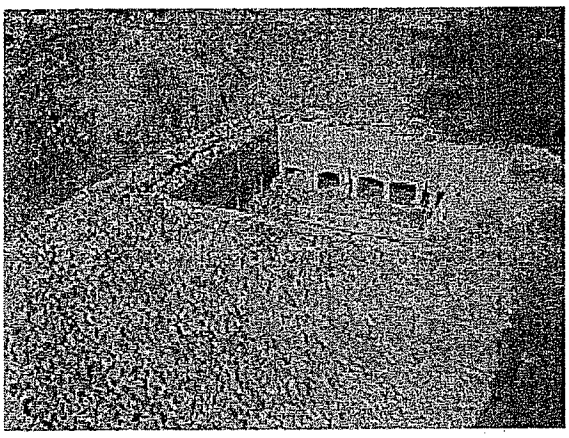


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - 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 BENEATH 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 A 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.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STABILIZED CONSTRUCTION ENTRANCE

STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition

A temporary, somewhat permeable barrier, installed around inlets in the form of a fence, berm or excavation around an opening, trapping water and thereby reducing the sediment content of sediment laden water by settling.

Purpose

To prevent heavily sediment laden water from entering a storm drain system through inlets.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are four (4) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

I. Excavated Drop Inlet Protection
II. Fabric Drop Inlet Protection
III. Stone & Block Drop Inlet Protection
IV. Curb Drop Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

See details for Excavated Drop Inlet Protection in Figure 5A.11 on page 5A.29.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection

See Figure 5A.12 for details on Filter Fabric Drop Inlet Protection on page 5A.30.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as

necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface. Straw bales will be replaced every 4 months until the area is stabilized.

Type III – Stone and Block Drop Inlet Protection

See Figure 5A.13 for details on Stone and Block Drop Inlet Protection on page 5A.31.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a row blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet ("doughnut"). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.

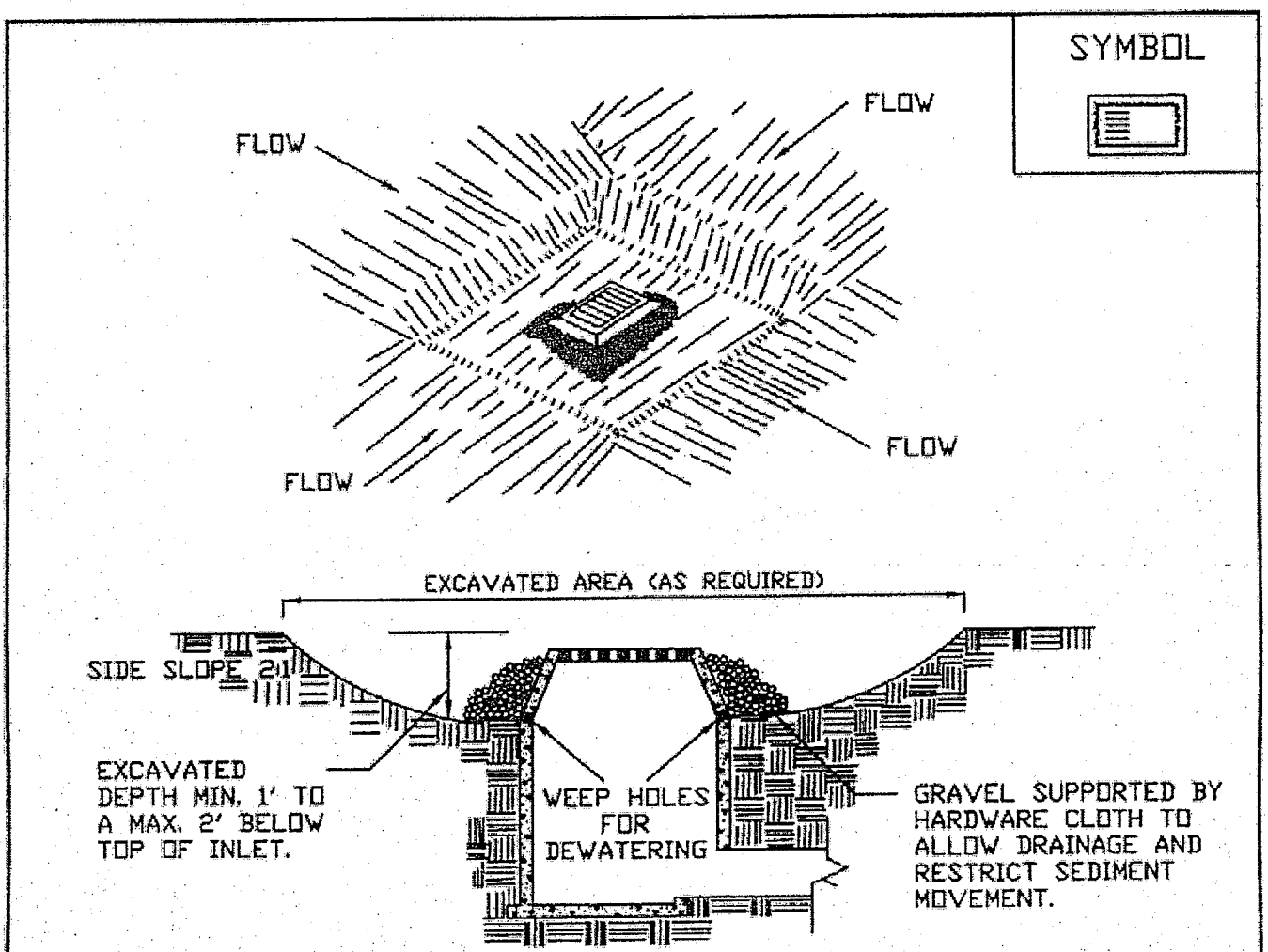
Type IV – Curb Drop Inlet Protection

See Figure 5A. 14 for details on Curb Drop Inlet Protection on page 5A.32.

The drainage area should be limited to 1 acre at the drop inlet. The wire mesh must be of sufficient strength to support the filter fabric and stone with the water fully impounded against it. Stone is to be 2 inches in size and clean. The filter fabric must be of a type approved for this purpose with an equivalent opening size (EOS) of 40-85. The protective structure will be constructed to extend beyond the inlet 2 feet in both directions. Assure that storm flow does not bypass the inlet by installing temporary dikes (such as sand bags) directing flow into the inlet. Make sure that the overflow weir is stable. Traffic safety shall be integrated with the use of this practice.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any stone missing should be replaced. Check materials for proper anchorage and secure as necessary.

Figure 5A.11
Excavated Drop Inlet Protection



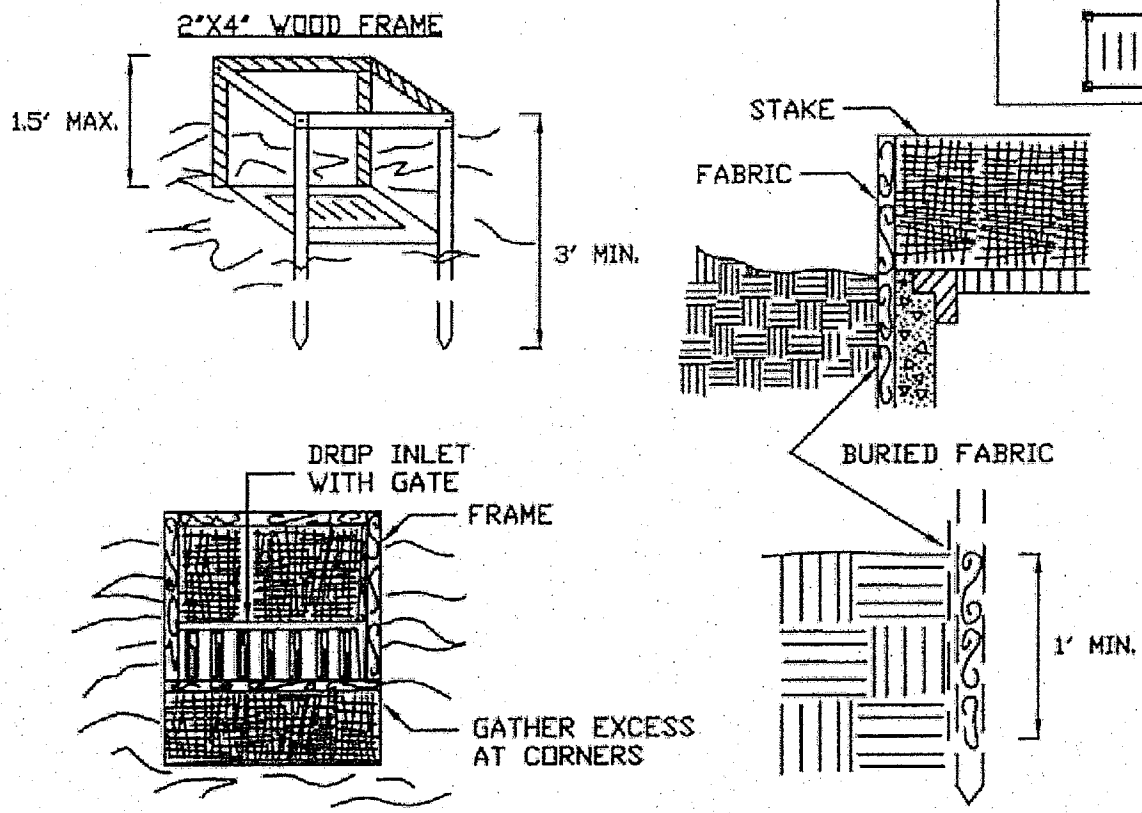
CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	EXCAVATED DROP INLET PROTECTION

Figure 5A.12
Filter Fabric Drop Inlet Protection



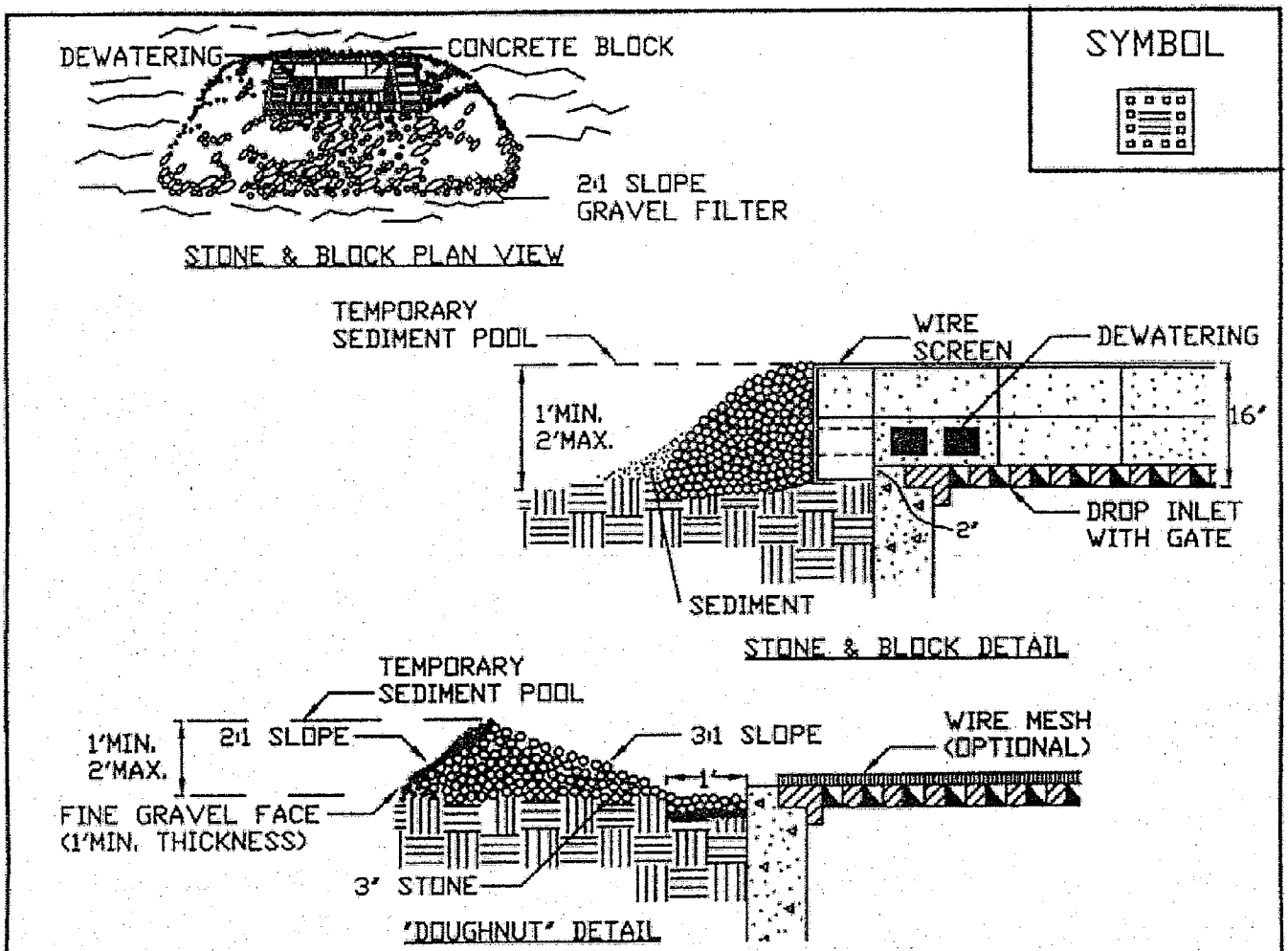
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT, METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	FILTER FABRIC DROP INLET PROTECTION

Figure 5A.13
Stone & Block Drop Inlet Protection



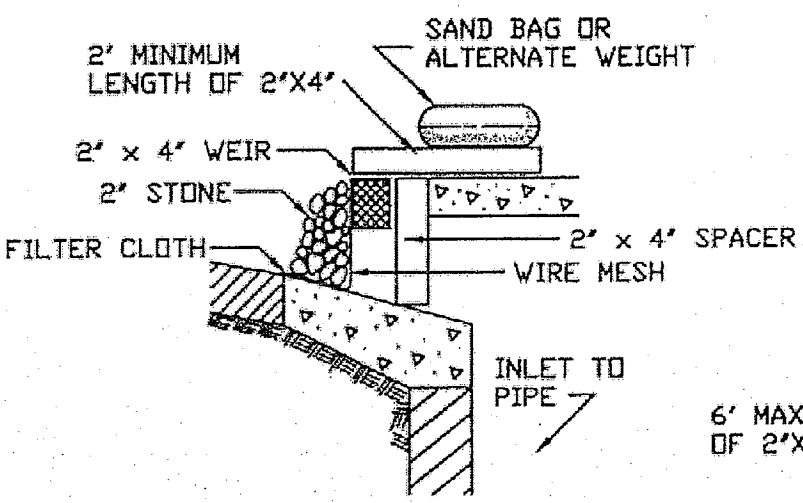
CONSTRUCTION SPECIFICATIONS

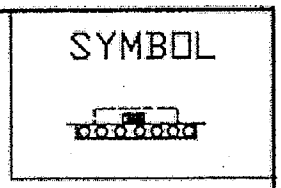
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

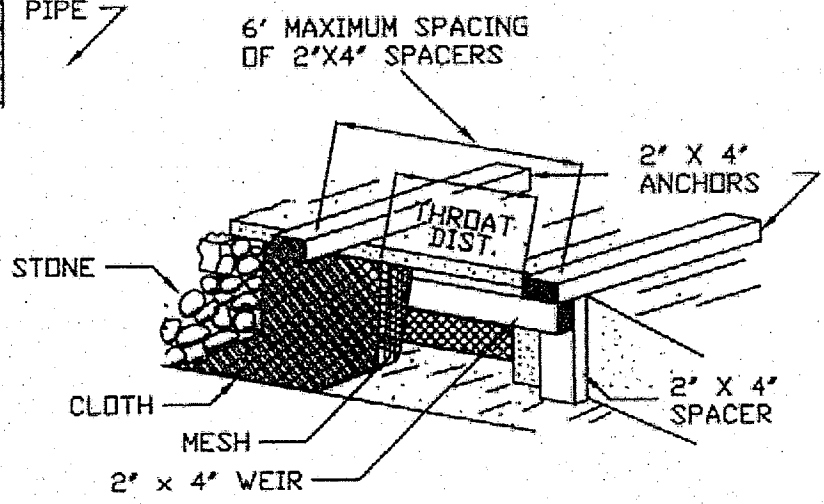
MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STONE & BLOCK DROP INLET PROTECTION

Figure 5A.14
Curb Drop Inlet Protection







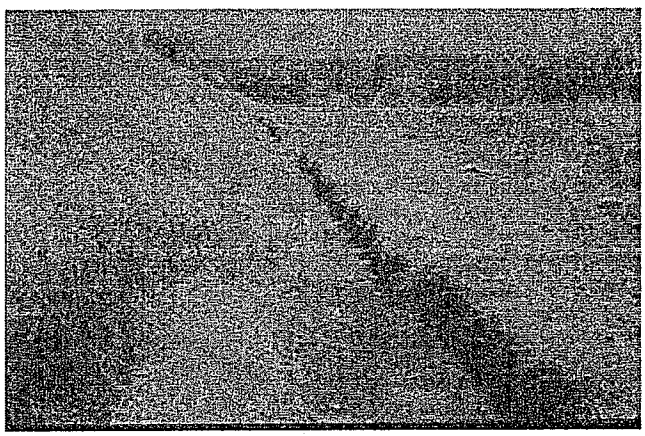
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN AOS OF 40-85.
2. WOODEN FRAME SHALL BE CONSTRUCTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
3. WIRE MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 30 INCH MINIMUM WIDTH WITH A LENGTH 4 FEET LONGER THAN THE THROAT. IT SHALL BE SHAPED AND SECURELY NAILED TO A 2" x 4" WEIR.
4. THE WEIR SHALL BE SECURELY NAILED TO 2" x 4" SPACERS 9 INCHES LONG SPACED NO MORE THAN 6 FEET APART.
5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2" x 4" ANCHORS 2 FEET LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	CURB DROP INLET PROTECTION

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE



Definition

A temporary barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits.

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

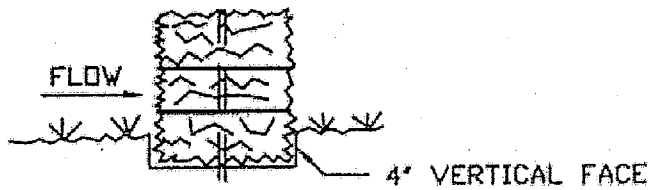
The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one quarter of an acre per 100 feet of fence and the length of slope above the dike shall be less than 200 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rainfall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5A.7 on page 5A.18 or details.

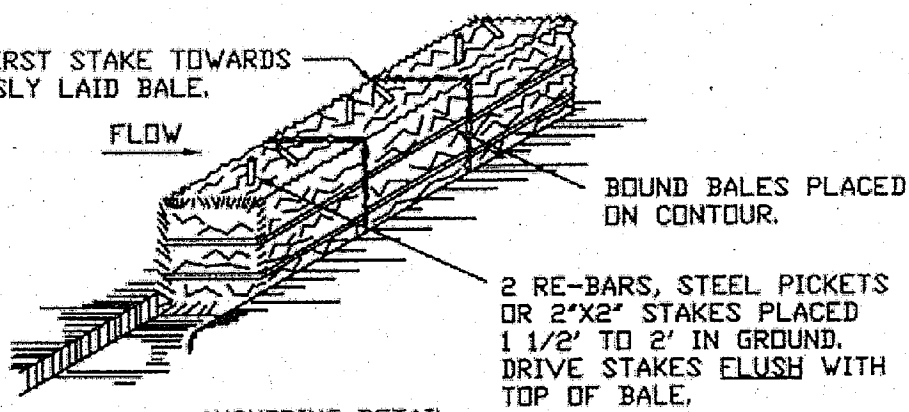
Figure 5A.7
Straw Bale Dike

SYMBOL



BEDDING DETAIL
NOT TO SCALE

DRAINAGE AREA NO MORE THAN 1/4 ACRE PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.



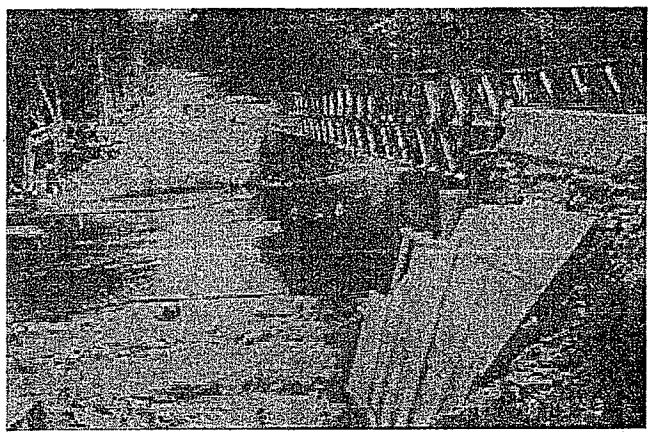
ANCHORING DETAIL
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STRAW BALE DIKE

STANDARD AND SPECIFICATIONS FOR TURBIDITY CURTAIN



Definition

A flexible, impenetrable barrier used to trap sediment in water bodies. This curtain is weighted at the bottom to achieve closure while supported at the top through a flotation system.

Purpose

To prevent the migration of silt from a work site in a water environment into the larger body of water.

Condition Where Practice Applies

A turbidity curtain is generally used when construction activity occurs within a waterbody or along its shoreline and is of short duration, generally less than one month. Curtains are used in calm water surfaces. **Turbidity curtains are not to be used across flowing watercourses.**

Design Criteria

The turbidity curtain shall be located beyond the lateral limits of the construction site and firmly anchored in place. The alignment should be set as close to the work area as possible but not so close as to be disturbed by applicable construction equipment. The height of the curtain shall be 20 percent greater than the depth of the water to allow for water level fluctuations. The area that the turbidity curtain protects shall not contain large culverts or drainage areas that if flows occur behind the curtain would cause a breach or lost contact at the bottom surface.

If water depths at the design alignment are minimal, the toe can be anchored in place by staking.

See Figure 5A.15 on page 5A.34.

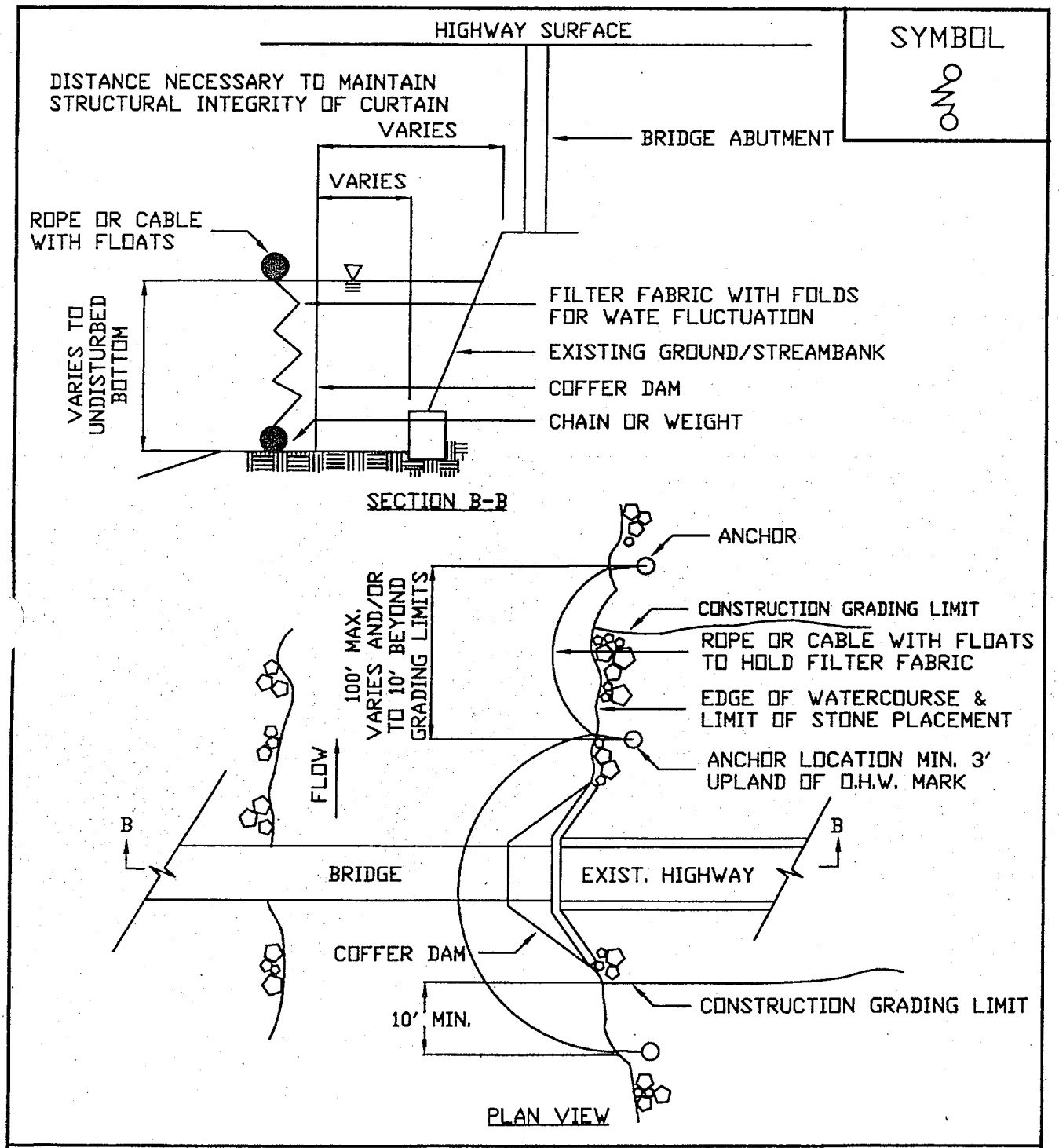
Construction Specifications

The area of proposed installation of the curtain shall be inspected for obstacles and impediments that could damage the curtain or impair its effectiveness to retain sediment. All materials shall be removed so they cannot enter the waterbody. Shallow installations can be made by securing the curtain by staking rather than using a flotation system. Supplemental anchors of the turbidity curtain toe shall be used, as needed, depending on water surface disturbances such as boats and wave action by winds.

Maintenance

The turbidity curtain shall be inspected daily and repaired or replaced immediately. It is not normally necessary to remove sediment deposited behind the curtain; but, when necessary, removal is usually done by hand prior to removal of the barrier. All removed silt is stabilized away from the waterbody. The barrier shall be removed by carefully pulling it toward the construction site to minimize the release of attached sediment. Any floating construction or natural debris shall be immediately removed to prevent damage to the curtain. If the curtain is oriented in a manner that faces the prevailing winds, frequent checks of the anchorage shall be made.

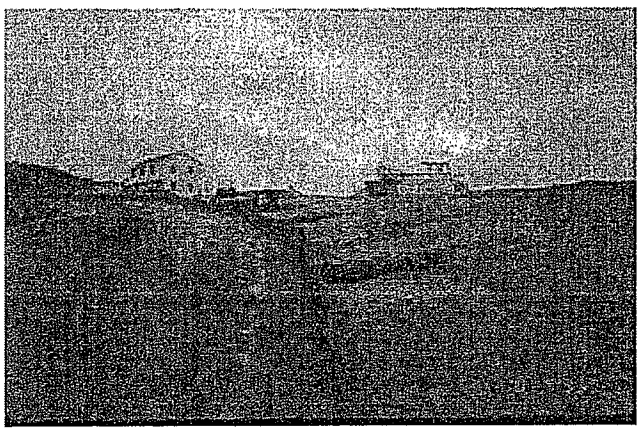
Figure 5A.15
Turbidity Curtain



ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

TURBIDITY CURTAIN

STANDARD AND SPECIFICATIONS FOR TEMPORARY CRITICAL AREA PLANTINGS



Definition

Providing erosion control protection to a critical area for an interim period. A critical area is any disturbed, denuded slope subject to erosion.

Purpose

To provide temporary erosion and sediment control. Temporary control is achieved by covering all bare ground areas that exist as a result of construction or a natural event.

Conditions Where Practice Applies

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

Criteria

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).
IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding.

Section 6.4 Stormwater Filtering Systems

Stormwater filtering systems capture and temporarily store the WQ_v and pass it through a filter bed of sand, organic matter, or soil. Filtered runoff may be collected and returned to the conveyance system, or allowed to partially exfiltrate into the soil. Design variants include:

F-1	Surface Sand Filter	(Figure 6.15)
F-2	Underground Sand Filter	(Figure 6.16)
F-3	Perimeter Sand Filter	(Figure 6.17)
F-4	Organic Filter	(Figure 6.18)
F-5	Bioretention	(Figure 6.19)

Treatment Suitability: Filtering systems should not be designed to provide stormwater detention (Q_p) or channel protection (Cp_v) except under extremely unusual conditions. Filtering practices shall generally be combined with a separate facility to provide those controls.

Figure 6.15 Surface Sand Filter (F-1)

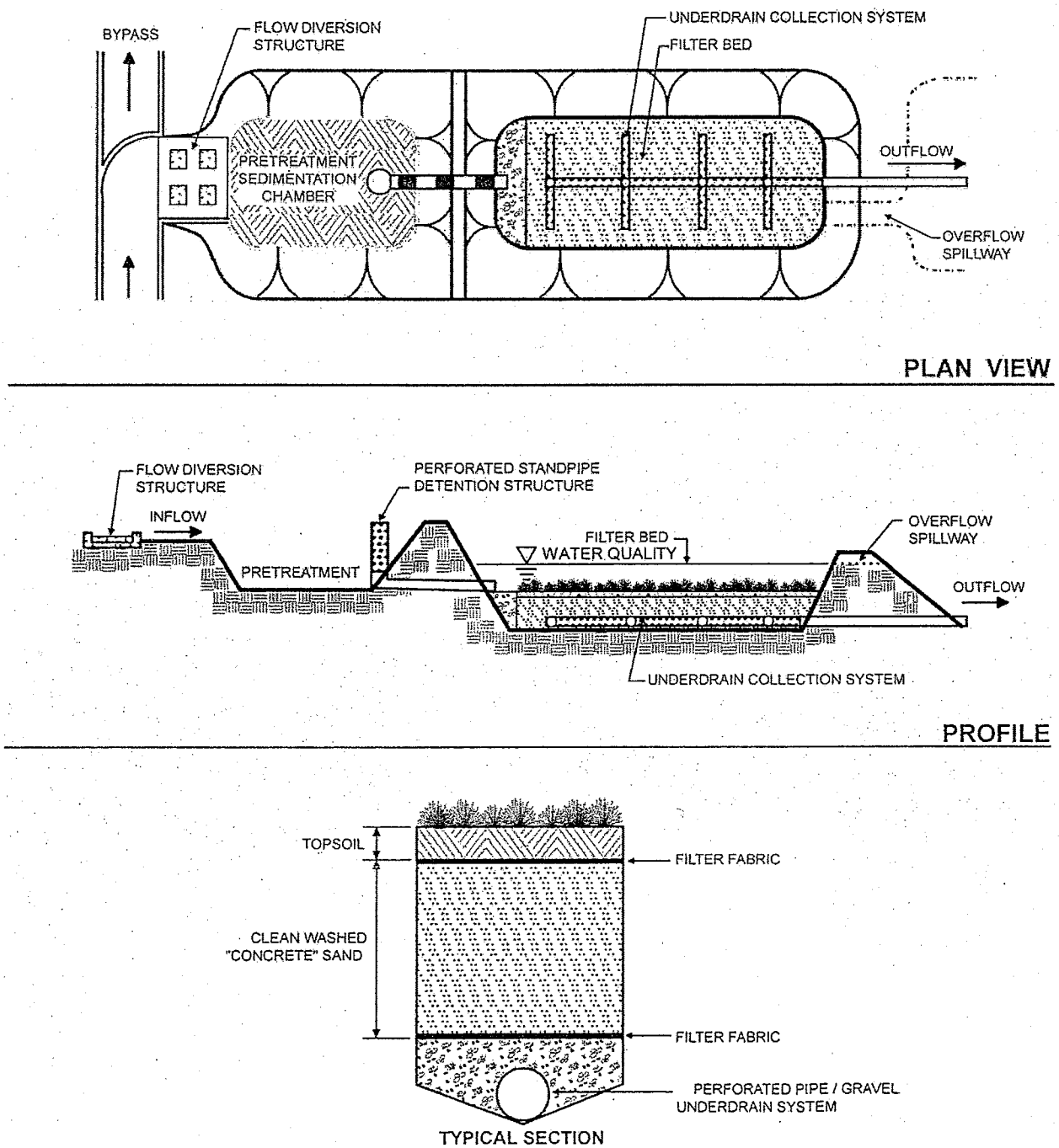


Figure 6.16 Underground Sand Filter (F-2)

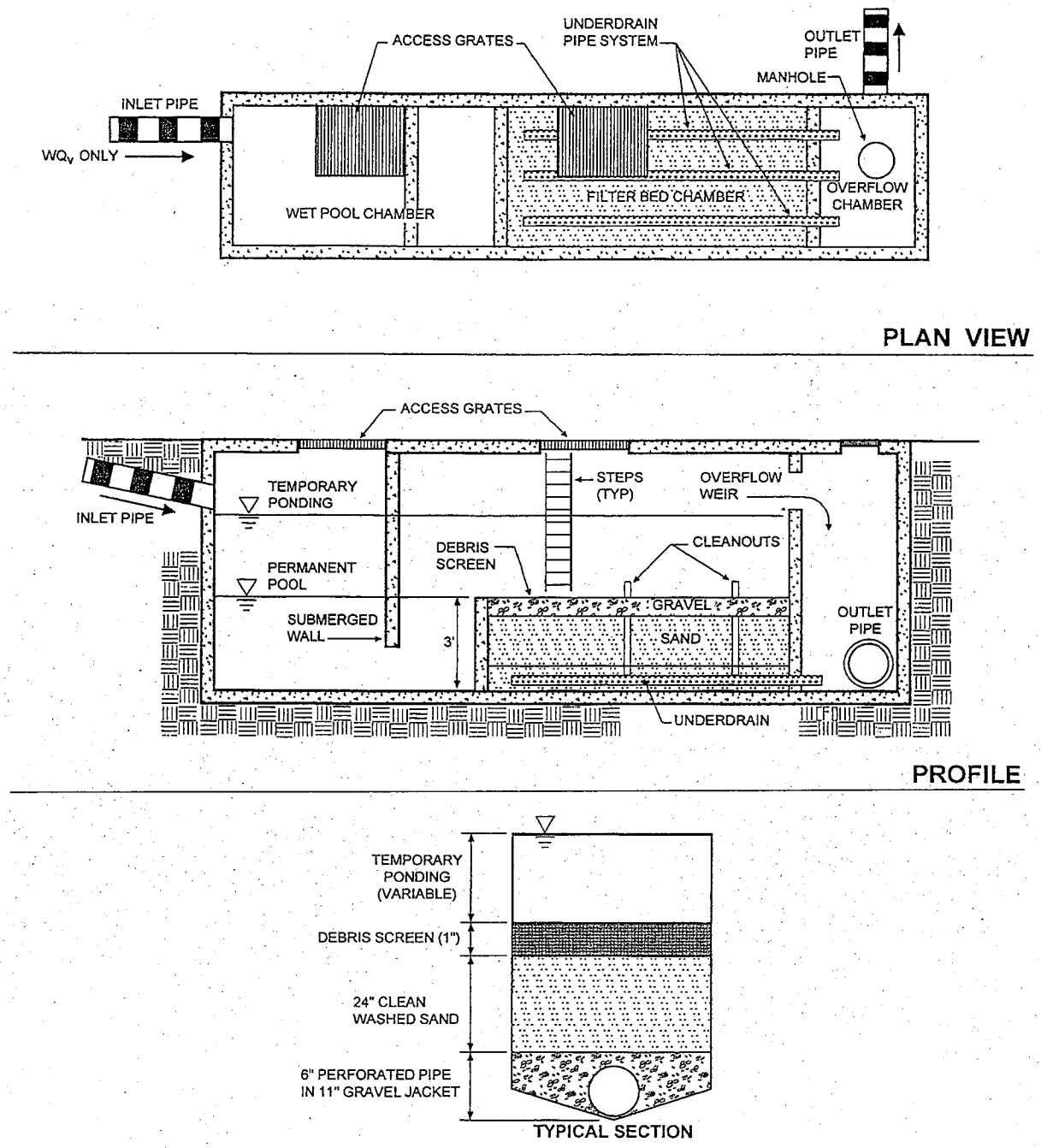


Figure 6.17 Perimeter Sand Filter (F-3)

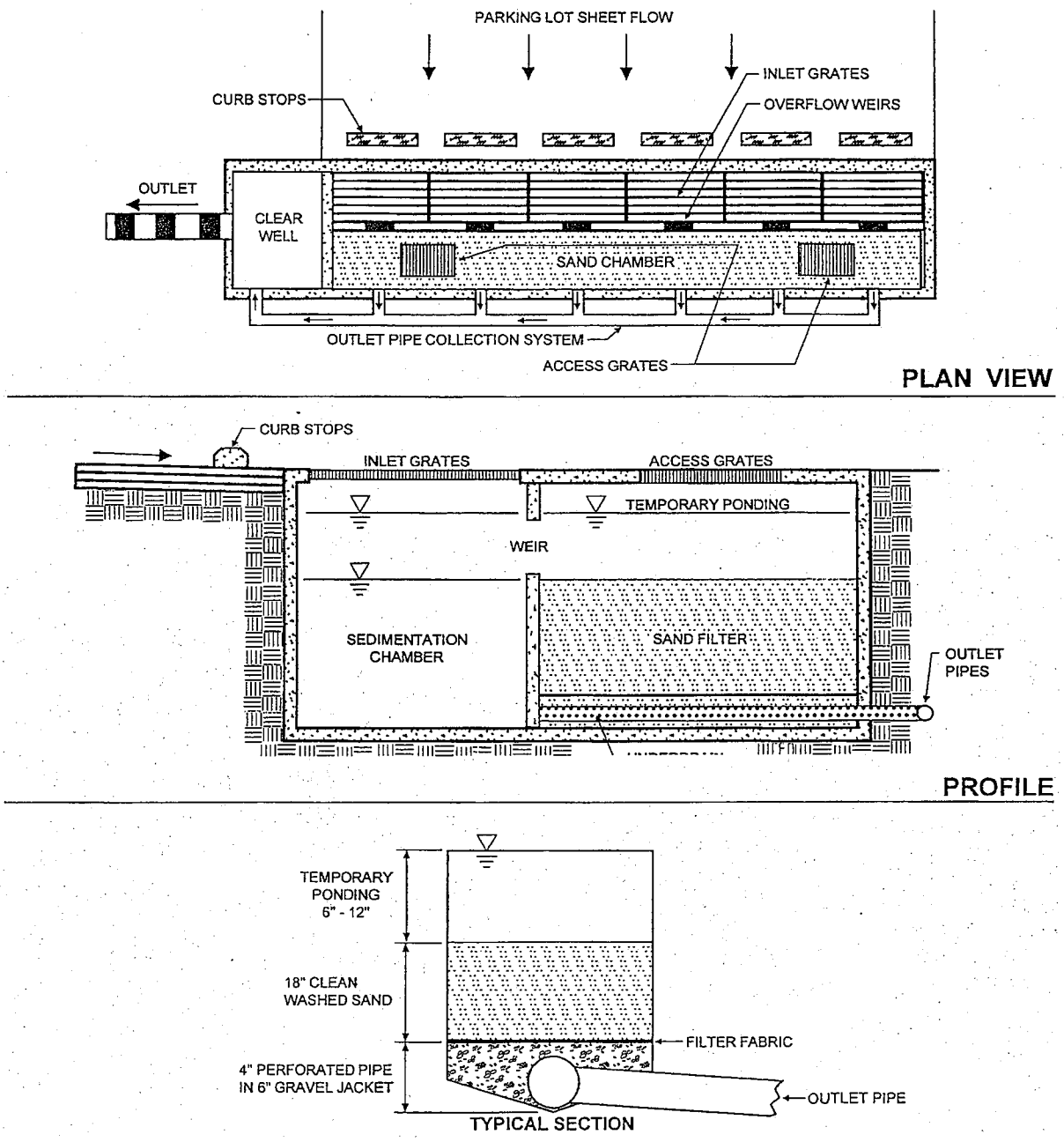


Figure 6.18 Organic Filter (F- 4)

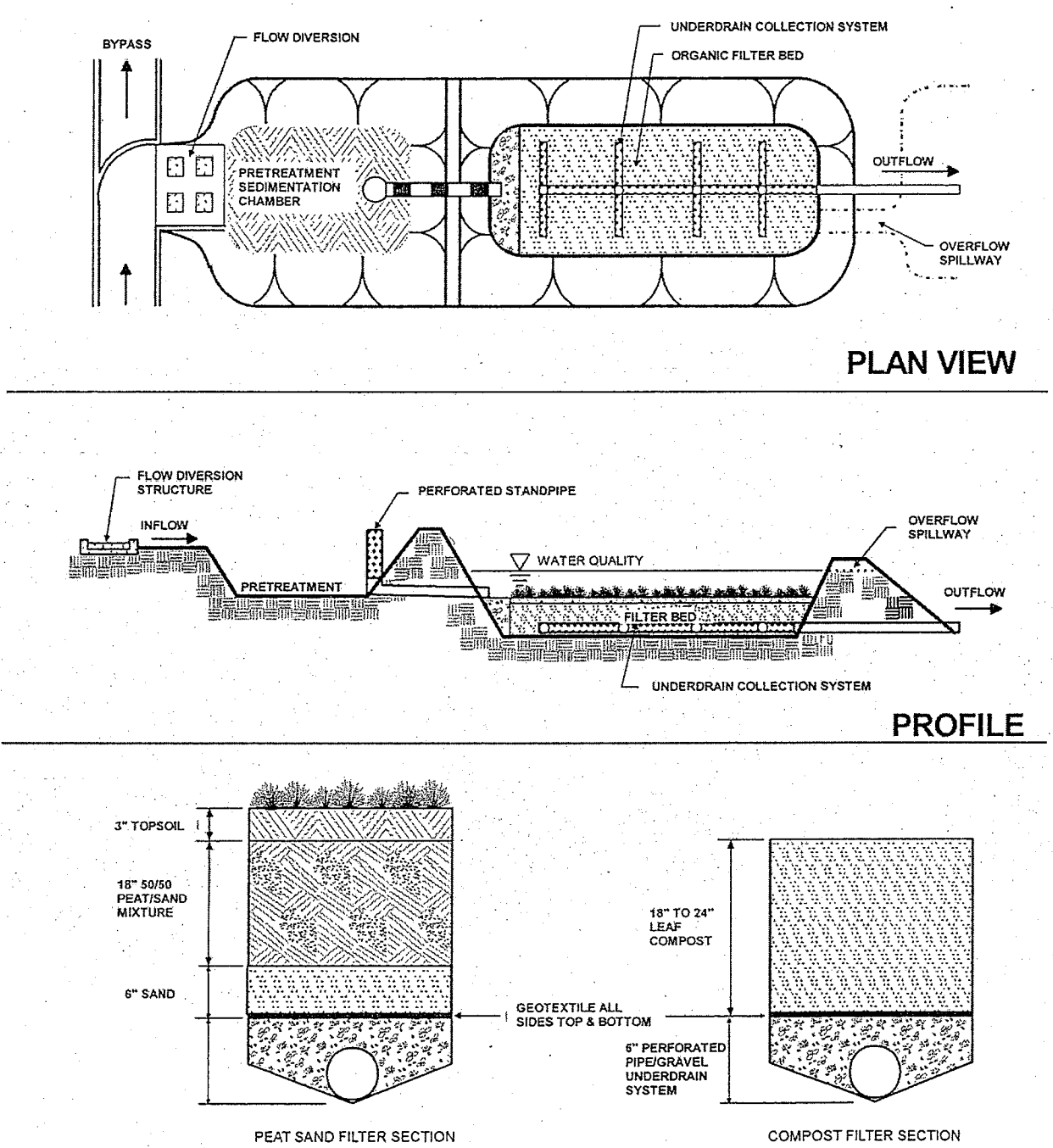
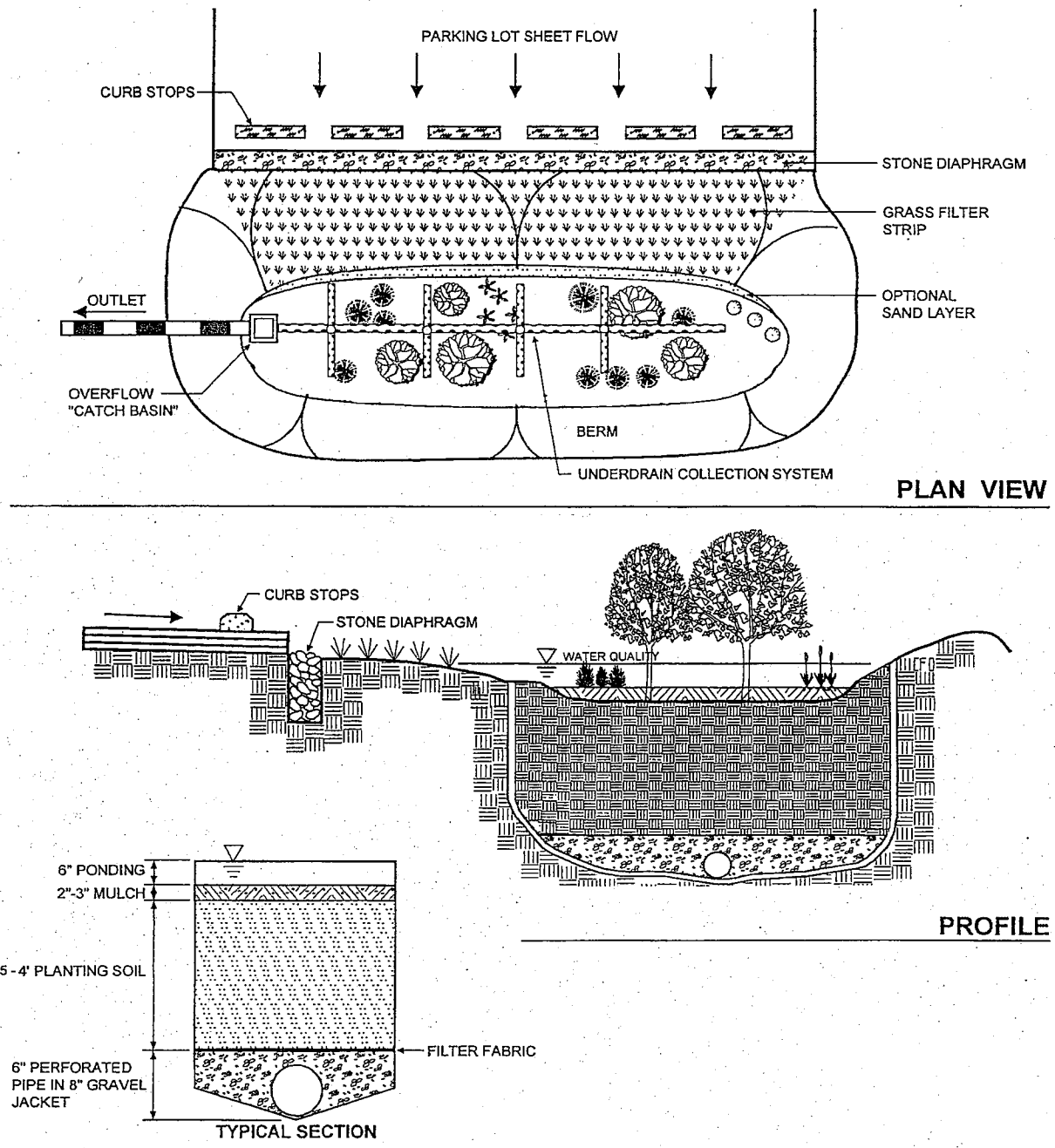


Figure 6.19 Bioretention (F-5)



6.4.1 Feasibility

Design Guidance

- Most stormwater filters require four to six feet of head, depending on site configuration and land area available. The perimeter sand filter (F-3), however, can be designed to function with as little as 18" to 24" of head.
- The recommended maximum contributing area to an individual stormwater filtering system is usually less than 10 acres. In some situations, larger areas may be acceptable.
- Sand and organic filtering systems are generally applied to land uses with a high percentage of impervious surfaces. Sites with imperviousness less than 75% will require full sedimentation pretreatment techniques.

6.4.2 Conveyance

Required Elements

- If runoff is delivered by a storm drain pipe or is along the main conveyance system, the filtering practice shall be designed off-line (see Appendix K).
- An overflow shall be provided within the practice to pass a percentage of the WQ_v to a stabilized water course. In addition, overflow for the ten-year storm shall be provided to a non-erosive outlet point (i.e., prevent downstream slope erosion).
- A flow regulator (or flow splitter diversion structure) shall be supplied to divert the WQ_v to the filtering practice, and allow larger flows to bypass the practice.
- Stormwater filters shall be equipped with a minimum 4" perforated pipe underdrain (6" is preferred) in a gravel layer. A permeable filter fabric shall be placed between the gravel layer and the filter media.
- Require a minimum 2' separation between the filter bottom and groundwater.

6.4.3 Pretreatment

Required Elements

- Dry or wet pretreatment shall be provided prior to filter media equivalent to at least 25% of the computed WQ_v. The typical method is a sedimentation basin that has a length to width ratio of 1.5:1. The Camp-Hazen equation is used to compute the required surface area for sand and organic filters requiring full sedimentation for pretreatment (WSDE, 1992) as follows:

- The required sedimentation basin area is computed using the following equation:

$$A_s = -(Qo/W) \cdot Ln\,(1-E)$$

where:

A_s = Sedimentation basin surface area (ft^2)
E = sediment trap efficiency (use 90%)
W = particle settling velocity (ft/sec)
use 0.0004 ft/sec for imperviousness (I) ≤75%
use 0.0033 ft/sec for I > 75%
Qo = Discharge rate from basin = (WQ_v/24 hr/3600s)
WQv=Water Quality Volume(cf)

This equation reduces to:

A_s = (0.066) (WQ_v) ft^2 for I ≤75%
A_s = (0.0081) (WQ_v) ft^2 for I > 75%

Design Guidance

- Adequate pretreatment for bioretention systems should incorporate all of the following: (a) grass filter strip below a level spreader or grass channel, (b) gravel diaphragm and (c) a mulch layer.
- The grass filter strip should be sized using the guidelines in Table 6.2.

Table 6.2 Guidelines for Filter Strip Pretreatment Sizing

Parameter	Impervious Parking Lots				Residential Lawns			
Maximum Inflow Approach Length (ft.)	35		75		75		150	
Filter Strip Slope	≤2%	≥2%	≤2%	≥2%	≤2%	≥2%	≤2%	≥2%
Filter Strip Minimum Length	10'	15'	20'	25'	10'	12'	15'	18'

- The grass channel should be sized using the following procedure:
  1- Determine the channel length needed to treat the WQ_v, using sizing techniques described in the Grass Channel Fact Sheet (Chapter 5).
  2- Determine the volume directed to the channel for pretreatment
  3- Determine the channel length by multiplying the length determined in step 1 above by the ratio of the volume in step 2 to the WQ_v.

6.4.4 Treatment

Required Elements

- The entire treatment system (including pretreatment) shall be sized to temporarily hold at least 75% of the WQ_v prior to filtration.
- The filter media shall consist of a medium sand (meeting ASTM C-33 concrete sand). Media used for organic filters may consist of peat/sand mix or leaf compost. Peat shall be a reed-sedge hemic peat.
- Bioretention systems shall consist of the following treatment components: A four foot deep planting soil bed, a surface mulch layer, and a six inch deep surface ponding area. Soils shall meet the design criteria outlined in Appendix H.

Design Guidance

- The filter bed typically has a minimum depth of 18". The perimeter filter may have a minimum filter bed depth of 12".
- The filter area for sand and organic filters should be sized based on the principles of Darcy's Law. A coefficient of permeability (k) should be used as follows:

Sand:	3.5 ft/day (City of Austin 1988)
Peat:	2.0 ft/day (Galli 1990)
Leaf compost:	8.7 ft/day (Claytor and Schueler, 1996)
Bioretention Soil:	0.5 ft/day (Claytor and Schueler, 1996)

The required filter bed area is computed using the following equation

$$A_f = (WQ_v)\,(d_f) \,/\, [\,(k)\,(h_f + d_f)\,(t_f)]$$

Where:

A_f = Surface area of filter bed (ft^2)
WQv=Water Quality Volume(cf)
d_f = Filter bed depth (ft)
k = Coefficient of permeability of filter media (ft/day)
h_f = Average height of water above filter bed (ft)
t_f = Design filter bed drain time (days)
(1.67 days or 40 hours is recommended maximum t_f for sand filters, two days for bioretention)

6.4.5 Landscaping

Required Elements

- A dense and vigorous vegetative cover shall be established over the contributing pervious drainage areas before runoff can be accepted into the facility.
- Landscaping is critical to the performance and function of bioretention areas. Therefore, a landscaping plan must be provided for bioretention areas.

Design Guidance

- Surface filters can have a grass cover to aid in pollutant adsorption. The grass should be capable of withstanding frequent periods of inundation and drought.

- Planting recommendations for bioretention facilities are as follows:
  - Native plant species should be specified over non-native species.
  - Vegetation should be selected based on a specified zone of hydric tolerance.
  - A selection of trees with an understory of shrubs and herbaceous materials should be provided.
  - Woody vegetation should not be specified at inflow locations.
  - Trees should be planted primarily along the perimeter of the facility.
  - A tree density of approximately one tree per 100 square feet (i.e., 10 feet on-center) is recommended. Shrubs and herbaceous vegetation should generally be planted at higher densities (five feet on-center and 2.5 feet on center, respectively).

6.4.6 Maintenance

Required Elements

- A legally binding and enforceable maintenance agreement shall be executed between the facility owner and the local review authority to ensure the following:

  - Sediment shall be cleaned out of the sedimentation chamber when it accumulates to a depth of more than six inches. Vegetation within the sedimentation chamber shall be limited to a height of 18 inches. The sediment chamber outlet devices shall be cleaned/repaired when drawdown times exceed 36 hours. Trash and debris shall be removed as necessary.

- Silt/sediment shall be removed from the filter bed when the accumulation exceeds one inch. When the filtering capacity of the filter diminishes substantially (i.e., when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments shall be disposed in an acceptable manner (i.e., landfill).

- A stone drop (pea gravel diaphragm) of at least six inches shall be provided at the inlet of bioretention facilities (F-6). Areas devoid of mulch shall be re-mulched on an annual basis. Dead or diseased plant material shall be replaced.

Design Guidance

- Organic filters or surface sand filters that have a grass cover should be mowed a minimum of three times per growing season to maintain maximum grass heights less than 12 inches.

6.4.7 Cold Climate Design Considerations

In cold climates, stormwater filtering systems need to be modified to protect the systems from freezing and frost heaving. The primary cold climate concerns to address with regards to filtering systems are:

- Freezing of the filter bed
- Pipe freezing
- Clogging of filter

NOTE

ALTHOUGH FILTERING SYSTEMS ARE NOT AS EFFECTIVE DURING THE WINTER, THEY ARE OFTEN EFFECTIVE AT TREATING STORM EVENTS IN AREAS WHERE OTHER SMPS ARE NOT PRACTICAL, SUCH AS IN HIGHLY URBANIZED REGIONS. THUS, THEY MAY BE A GOOD DESIGN OPTION, EVEN IF WINTER FLOWS CANNOT BE TREATED. IT IS ALSO IMPORTANT TO REMEMBER THAT THESE SMPS ARE DESIGNED FOR HIGHLY IMPERVIOUS AREAS. IF THE SNOW FROM THEIR CONTRIBUTING AREAS IS TRANSPORTED TO ANOTHER AREA, SUCH AS A PERVIOUS INFILTRATION AREA, A PRACTICE'S PERFORMANCE DURING THE WINTER SEASON MAY BE LESS CRITICAL TO OBTAIN WATER QUALITY GOALS.

Freezing of the Filter Bed

- Place filter beds for underground filter below the frost line to prevent the filtering medium from freezing during the winter.
- Discourage organic filters using peat and compost media, which are ineffective during the winter in cold climates. These organic filters retain water, and consequently can freeze solid and become completely impervious during the winter.
- Combine treatment with another SMP option that can be used as a backup to the filtering system to provide treatment during the winter when the filter is ineffective

Pipe Freezing

- Use a minimum 8" underdrain diameter in a 1' gravel bed. Increasing the diameter of the underdrain makes freezing less likely, and provides a greater capacity to drain standing water from the filter. The porous gravel bed prevents standing water in the system by promoting drainage. Gravel is also less susceptible to frost heaving than finer grained media.
- Replace standpipes with weirs, which can be "frost free." Although weir structures will not always provide detention, they can provide retention storage (i.e., storage with a permanent pool) in the pretreatment chamber.

Clogging of Filter with Excess Sand from Runoff

- If a filter is used to treat runoff from a parking lot or roadway that is frequently sanded during snow events, there is a high potential for clogging from sand in runoff. In these cases, the size of the pretreatment chamber should be increased to 40% of the treatment volume. For bioretention systems, a grass strip, such as a swale, of at least twenty-five feet in length should convey flow to the system.
- Filters should always be inspected for sand build-up in the filter chamber following the spring melt event.

APPENDIX E

INSPECTION REPORTS

STORM WATER POLLUTION PREVENTION PLAN

CONSTRUCTION SITE INSPECTION REPORT

INTRODUCTION

Prior to inspecting a construction site, the inspector should review the latest updated copy of the SWPPP; the state technical standards (i.e., New York State Standards and Specification for Erosion and Sediment Control and New York State Stormwater Management Design Manual); site plans; construction drawings; specifications and details; sequence of construction phases; limits of disturbance; number, location and control of BMPs; and any reports of non-compliance. Refer to the SWPPP and the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity for the schedule of required construction site inspections.

When entering a site to perform an inspection, the inspector should first stop at the field office, present appropriate identification and explain the purpose of the inspection. He/she should speak with the person in charge and ask to have that person accompany them on the inspection. The inspector should also ask to see copies of any previous inspection reports of the site that were conducted by other qualified inspectors engaged by the project applicant to assure that the applicant is complying with the terms of the SWPPP.

The qualified inspector should inspect all erosion and sediment control practices and all post-construction storm water management practice(s) under construction to ensure integrity, effectiveness and that they are constructed in conformance with the SWPPP and the most current versions of the technical standards.

The qualified inspector should inspect all areas of disturbance that have not achieved final stabilization and all points of discharge from the construction site. The inspector should first walk the perimeter of the site noting the installation perimeter controls and any problems with these controls. Inspections are best begun at the lowest point at the perimeter of the site, proceeding upgrade, which may help in determining if sediment is leaving the site and the source from which that sediment may be coming. If sediment is leaving the site, inspect far enough downstream, if possible, to determine the extent of the damage. Temporary or final stabilization measures should be in place in all disturbed areas that are not currently being worked on. Areas where final stabilization measures are installed should not be disturbed.

The inspector should note if the BMPs listed/shown in the SWPPP and accompanying plans have been installed for the relevant phases of construction. If any of the control practices installed in accordance with the approved SWPPP require corrective actions, maintenance, revision, repair, reinstallation and/or replacement, the inspector must notify the owner or operator and the appropriate contractor or subcontractor within one business day. When an inspection shows the approved SWPPP to be ineffective in eliminating or minimizing pollutants from on-site sources or discharges that cause a substantial visible contrast to natural conditions, the inspector must inform the owner of the site or his responsible agent of their duty to amend the SWPPP.

The inspector must notify the owner or operator of the site which corrective actions are necessary to install, repair, replace and/or maintain the erosion and sediment control practices and to correct deficiencies identified with the construction of the post-construction storm water management practice(s). While the inspector should not endorse specific products to solve these problems, as it is the responsibility of the site owner or operator to implement a workable solution to a compliance problem, he might refer the owner or operator to the appropriate sections of the technical standards.

The completed inspection report must be signed by the qualified inspector and included with the SWPPP. All BMP deficiencies and corrective actions identified should be summarized in the SWPPP Corrective Action Log.

INSPECTION REPORT

GENERAL INFORMATION			
Project Name: Glen Cove Ferry Terminal Project			
PDES Permit No.:		**Site Location:** Garvies Point Road, Glen Cove, New York	
Date of Inspection:	**Start Time:**		**End Time:**
Type of Inspection: ☐ General	☐ Pre-storm	☐ During storm	☐ Post-storm

INSPECTORS' INFORMATION	
Name:	**Title:**
Company:	**Inspector Qualifications:** See Section 5.1.1 of the SWPPP
Phone No.:	**Address:**
Name:	**Title:**
Company:	**Inspector Qualifications:** See Section 5.1.1 of the SWPPP
Phone No.:	**Address:**

CURRENT WEATHER CONDITIONS						
☐ Clear	☐ Cloudy	☐ Fog	☐ Rain	☐ Sleet	☐ Snow	☐ High Winds
☐ Other:				Temperature:		
Notes:						

CURRENT SOIL CONDITIONS			
☐ Dry	☐ Wet	☐ Saturated	☐ Other:
Notes:			

AREA OF DISTURBANCE				
Do the following BMPs require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
Less than 2 acres of cleared at a time	☐	☐	☐	
Limits of disturbance clearly marked onsite	☐	☐	☐	
Disturbance within limits of approved plans	☐	☐	☐	
Describe the areas that have been disturbed and the areas that have been stabilized (temporary and/or final) since the last inspection:				
Has a sketch of these areas been attached to this report?	☐	☐	☐	

DISCHARGE CONDITIONS
Since the last inspection, have any storm water discharges occurred from any point from the construction site? ☐ **Yes** ☐ **No** If Yes, describe sources (e.g., overland flow, pipes, culverts, ditches, etc.), conditions (e.g., sediment, floatables, turbidity, oil/grease, etc) and impacts on adjacent properties and waterbodies:
Are there any storm water discharges from any point from the construction site at the time of the inspection? ☐ **Yes** ☐ **No** If Yes, describe sources (e.g., overland flow, pipes, culverts, ditches, etc.), conditions (e.g., sediment, floatables, turbidity, oil/grease, etc) and impacts on adjacent properties and waterbodies:

DOCUMENT VERIFICATION				
Do the following BMPs require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
SWPPP retained at construction site	☐	☐	☐	
SWPPP updated as site conditions change	☐	☐	☐	
SPDES General Permit retained at construction site	☐	☐	☐	
NOI and NYSDEC acknowledgment letter retained at construction site	☐	☐	☐	
MS4 SWPPP Acceptance Form retained at construction site	☐	☐	☐	
Past inspection reports retained at construction site	☐	☐	☐	

EROSION AND SEDIMENT CONTROL BMPS				
Do the following BMPs require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
Perimeter dike/swale	☐	☐	☐	
Storm drain inlet protection	☐	☐	☐	
Silt fence	☐	☐	☐	
Turbidity curtain	☐	☐	☐	
Sediment trap	☐	☐	☐	
Stabilized construction entrance	☐	☐	☐	
Stabilized construction roads	☐	☐	☐	
Other:	☐	☐	☐	

SOIL STABILIZATION BMPS				
Do the following BMPs require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
Stockpiles	☐	☐	☐	
Temporary seeding	☐	☐	☐	
Mulch	☐	☐	☐	
Matting	☐	☐	☐	
Topsoil	☐	☐	☐	
Sod	☐	☐	☐	
Final stabilization	☐	☐	☐	
Other:	☐	☐	☐	

POLLUTION PREVENTION AND GOOD HOUSEKEEPING BMPS				
Do the following BMPs require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
Material delivery and storage area	☐	☐	☐	
Hazardous waste storage area	☐	☐	☐	
Stockpile management	☐	☐	☐	
Material management over water	☐	☐	☐	
Waste management	☐	☐	☐	
Dumpsters	☐	☐	☐	
Concrete truck washout area	☐	☐	☐	
Equipment and vehicle maintenance area	☐	☐	☐	
Equipment and vehicle fueling area	☐	☐	☐	
Spill prevention and control	☐	☐	☐	
Dust control	☐	☐	☐	
Temporary/portable sanitary facilities	☐	☐	☐	
Other:	☐	☐	☐	

POST-CONSTRUCTION BMPS				
Does the following BMP require maintenance, revision, repair, reinstallation and/or replacement?	**Yes**	**No**	**N/A**	**Corrective Action Needed**
Underground sand filter	☐	☐	☐	

Describe the current phase of construction of the underground sand filter and any construction that is not in conformance with the SWPPP and technical standards:

ADDITIONAL COMMENTS AND NOTES

Describe any incidences of non-compliance that are not described above:

CERTIFICATION STATEMENT

Check box if:

☐ No incidents of non-compliance were found, and I certify that this inspection found this site to be fully in compliance with the Storm Water Pollution Prevention Plan (SWPPP), the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, and the most current version of NYSDEC technical standards.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name and Title: _____

Signature: _____ **Date:** _____

APPENDIX F

CORRECTIVE ACTION LOG

CORRECTIVE ACTION LOG

Project Name: Glen Cove Ferry Terminal Project **SWPPP Contact:** _____

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed			Action Taken	
			Description of Action	Planned Date	Person Responsible	Date	Person Responsible

APPENDIX G

NOTICE OF INTENT AND ACKNOWLEDGEMENT LETTER FROM NYSDEC

0669273036

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR [ ][ ][ ][ ][ ][ ]
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-10-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-

RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
City of Glen Cove

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Archambault

Owner/Operator Contact Person First Name
William

Owner/Operator Mailing Address
9 Glen Street

City
Glen Cove

State
NY

Zip
11543 - 2798

Phone (Owner/Operator)
631 - 676 - 4402

Fax (Owner/Operator)
516 - 759 - 3104

Email (Owner/Operator)
warchambault@cityofglencoveny.org

FED TAX ID
11 - 6000350 (not required for individuals)

Project Site Information

Project/Site Name
Glen Cove Ferry Terminal and Boat Basin

Street Address (NOT P.O. BOX)
Garvies Point Road

Side of Street
○ North ● South ○ East ○ West

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Glen Cove

State: NY Zip: 11542-2798 County: Nassau DEC Region: 1

Name of Nearest Cross Street
Herb Hill Road

Distance to Nearest Cross Street (Feet)
1492

Project In Relation to Cross Street
○ North ○ South ○ East ● West

Tax Map Numbers
Section-Block-Parcel
21-259-1

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting): 614277

Y Coordinates (Northing): 4523936

2. What is the nature of this construction project?

○ New Construction

● Redevelopment with increase in imperviousness

○ Redevelopment with no increase in imperviousness

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ● INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME — Number of Lots
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ● OTHER: Transportation

4. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ Yes ● No

5. Is this a project which does not require coverage under the General Permit (e.g. Project done under an Individual SPDES Permit, or department approved remediation)? ○ Yes ● No

6. Is this property owned by a state authority, state agency or local government? ● Yes ○ No

7. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage) within the disturbed area. Round to the nearest tenth of an acre.

Total Site Acreage	Acreage To Be Disturbed	Existing Impervious Area Within Disturbed	Future Impervious Area Within Disturbed
1.6	1.6	0.2	1.4

8. Do you plan to disturb more than 5 acres of soil at any one time? ○ Yes ● No

9. Indicate the percentage of each Hydrologic Soil Group (HSG) at the site.

A	B	C	D
0 %	100 %	0 %	0 %

10. Is this a phased project? ● Yes ○ No

11. Enter the planned start and end dates of the disturbance activities.

Start Date		End Date
06 / 01 / 2010	–	06 / 28 / 2011

12. Identify the nearest, natural, surface waterbody(ies) to which construction site runoff will discharge.

Name: Glen Cove Creek

12a. Type of waterbody identified in Question 12?

- ○ Wetland / State Jurisdiction On Site (Answer 12b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 12b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ● Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

12b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

13. Has the surface waterbody(ies) in question 12 been identified as a 303(d) segment in Appendix E of GP-0-10-001? ● Yes ○ No

14. Is this project located in one of the Watersheds identified in Appendix C of GP-0-10-001? ○ Yes ● No

15. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? **If no, skip question 16.** ○ Yes ● No

16. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ Yes ● No
If Yes, what is the acreage to be disturbed?

17. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ Yes ● No

18. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ● Yes ○ No ○ Unknown
(If No, skip question 19)

19. What is the name of the municipality/entity that owns the separate storm sewer system?

City of Glen Cove

20. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ● No ○ Unknown

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book) ? ● Yes ○ No

22. Does this construction activity require the development of a SWPPP that includes Water Quality and Quantity Control components (Post-Construction Stormwater Management Practices) ● Yes ○ No
(If No, skip questions 23 and 27-35)

23. Have the Water Quality and Quantity Control components of the SWPPP been developed in comformance with the current NYS Stormwater Management Design Manual ? ● Yes ○ No

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● Professional Engineer (P.E.)
- ○ Soil and Water Conservation District (SWCD)
- ○ Registered Landscape Architect (R.L.A)
- ○ Certified Professional in Erosion and Sediment Control (CPESC)
- ○ Owner/Operator
- ○ Other

SWPPP Preparer: Dvirka & Bartilucci Consulting Engineers

Contact Name (Last, Space, First): Pritchard, Kenneth

Mailing Address: 330 Crossways Park Drive

City: Woodbury

State: NY Zip: 11797-2050

Phone: 516-364-9890 Fax: 516-364-9045

Email: kpritchard@db-eng.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-10-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name: Kenneth **MI**: J

Last Name: Pritchard

Signature: Kenneth J Pritchard

Date: 05/04/2010

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select all of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ● Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ● Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ● Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ● Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ● Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Water Quality and Quantity Control

Important: Completion of Questions 27-35 is not required if response to Question 22 is No.

Post-Construction Stormwater Management Practices

27. Indicate all Stormwater Management Practice(s) that will be installed/constructed on this site:

Ponds
- ○ Micropool Extended Detention (P-1)
- ○ Wet Pond (P-2)
- ○ Wet Extended Detention (P-3)
- ○ Multiple Pond System (P-4)
- ○ Pocket Pond (P-5)

Filtering
- ○ Surface Sand Filter (F-1)
- ● Underground Sand Filter (F-2)
- ○ Perimeter Sand Filter (F-3)
- ○ Organic Filter (F-4)
- ○ Bioretention (F-5)
- ○ Other

Alternative Practice
- ○ Rain Garden
- ○ Cistern
- ○ Green Roof
- ○ Stormwater Planters
- ○ Permeable Paving (Modular Block)

Wetlands
- ○ Shallow Wetland (W-1)
- ○ Extended Detention Wetland (W-2)
- ○ Pond/Wetland System (W-3)
- ○ Pocket Wetland (W-4)

Infiltration
- ○ Infiltration Trench (I-1)
- ○ Infiltration Basin (I-2)
- ○ Dry Well (I-3)
- ○ Underground Infiltration System

Open Channels
- ○ Dry Swale (O-1)
- ○ Wet Swale (O-2)

Verified Proprietary Practice
- ○ Hydrodynamic
- ○ Wet Vault
- ○ Media Filter

28. Describe other stormwater management practices not listed above or explain any deviations from the technical standards.

NA

29. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ Yes ○ No

If Yes, Identify the entity responsible for the long term Operation and Maintenance

City of Glen Cove Department of Public Works

30. Provide the total water quality volume required and the total provided for the site.

WQv Required 0.014 acre-feet

WQv Provided 0.014 acre-feet

31. Provide the following Unified Stormwater Sizing Criteria for the site.

Total Channel Protection Storage Volume (CPv) - Extended detention of post-developed 1 year, 24 hour storm event

CPv Required ____.____ acre-feet

CPv Provided ____.____ acre-feet

31a. The need to provide for channel protection has been waived because:

● **Site discharges directly to fourth order stream or larger**

Total Overbank Flood Control Criteria (Qp) - Peak discharge rate for the 10 year storm

Pre-Development ____.____ CFS

Post-development ____.____ CFS

Total Extreme Flood Control Criteria (Qf) - Peak discharge rate for the 100 year storm

Pre-Development ____.____ CFS

Post-development ____.____ CFS

31b. The need to provide for flood control has been waived because:

● **Site discharges directly to fourth order stream or larger**

○ **Downstream analysis reveals that flood control is not required**

IMPORTANT: For questions 31 and 32, impervious area should be calculated considering the project site and all offsite areas that drain to the post-construction stormwater management practice(s). (Total Drainage Area = Project Site + Offsite areas)

32. Pre-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the existing impervious areas before construction begins. 14 %

33. Post-Construction Impervious Area - As a percent of the Total Drainage Area, enter the percentage of the future impervious areas that will be created/remain on the site after completion of construction. 90 %

34. Indicate the total number of post-construction stormwater management practices to be installed/constructed. 1

35. Provide the total number of stormwater discharge points from the site. (include discharges to either surface waters or to separate storm sewer systems) 1

36. Identify other DEC permits that are required for this project.

DEC Permits

○ Air Pollution Control	● Navigable Waters Protection / Article 15
○ Coastal Erosion	○ Water Quality Certificate
○ Hazardous Waste	○ Dam Safety
○ Long Island Wells	○ Water Supply
○ Mined Land Reclamation	○ Freshwater Wetlands/Article 24
○ Other SPDES	● Tidal Wetlands
○ Solid Waste	○ Wild, Scenic and Recreational Rivers
○ None	○ Stream Bed or Bank Protection / Article 15

○ Other

37. Does this project require a US Army Corps of Engineers Wetland Permit? ● Yes ○ No

If Yes, indicate Size of Impact. 5 1 0 . 0

38. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● Yes ○ No

(If No, skip question 39)

39. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ Yes ● No

40. If this NOI is being submitted for the purpose of continuing coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. N Y R

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: William

MI:

Print Last Name: Archambault

Owner/Operator Signature: William Archambault

Date: 06 / 01 / 2010

APPENDIX H

SWPPP AMENDMENT LOG

SWPPP AMENDMENT LOG

Project Name: Glen Cove Ferry Terminal Project **SWPPP Contact:** _____

No.	Date	Prepared by		Description of the Amendment
		Name	Title	

APPENDIX I

TRAINING LOG

Project Name: Glen Cove Ferry Terminal Project

Instructor Name: _____ **Title:** _____

Course Location: _____

Date: _____ **Course Length:** _____

Storm Water Training Topic: *(check all that apply)*

☐ Erosion Control BMPs ☐ Emergency Procedures

☐ Sediment Control BMPs ☐ Good Housekeeping BMPs

Specific Training Objective: _____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

No.	Name of Attendee	Company

APPENDIX J

GRADING AND STABILIZATION ACTIVITIES LOG

GRADING AND STABI ATION ACTIVITIES LOG

Project Name: Glen Cove Ferry Terminal Project **SWPPP Contact:** _____

Grading Activities				Stabilization Measures		
Date Initiated	Description	Date Ceased	Temporary or Permanent	Date Initiated	Description	Location

Appendix E

NYSDEC Long Island Well Permit Application Form and Region I-required Supplemental Data Sheet

JOINT APPLICATION FORM - INSTRUCTIONS

For Permits/Determinations to undertake activities affecting streams, waterways, waterbodies, wetlands, coastal areas and sources of water supply.

New York State
Department of Environmental Conservation (DEC)
Office of General Services (OGS)
Department of State (DOS)

US Army Corps of Engineers (USACE)
New York District
Buffalo District

Type or print clearly in ink. Incomplete or inaccurate information may delay processing and a final decision on your application. Individual Agencies may request that you submit additional information to complete your application.

PERMITS REQUESTED Check all Permits/Determinations requested from all the listed Agencies.

Separate authorizations or determinations of no permit required must be received from each Agency in accordance with their jurisdiction prior to initiation of work.

The applicant is responsible for obtaining any other federal, state or local permits or other approvals.

APPLICANT / OWNER / CONTACT INFORMATION AND SIGNATURES Signatures of the Applicant, Owner and Agent, where applicable, are required.

Applications by a Corporation must be signed by a member of the board of directors or a "high managerial agent" of the corporation as that term is defined in the § 20.20 of the Penal Law; a Partnership by a general partner; a Sole Proprietorship by the proprietor; a Limited Liability Company by member or manager in accordance with the LLC's articles of organization as filed with the Secretary of State.

Applications by a State Agency must be signed by a person duly designated by the commissioner or other agency head. Applications by Municipalities (counties, cities, towns and villages) and Public Corporations must be signed by the chief executive officer, the head of a subordinate agency or department, or a person duly designated by the chief executive officer.

Construction or work contractors may serve as a contact/agent on behalf of the applicant, but cannot be identified as the applicant or prospective permittee should a permit be issued.

PROJECT / FACILITY LOCATION INFORMATION Location Coordinates are expressed in New York Transverse Mercator (NYTM) units (i.e., UTM Zone 18 expanded to encompass the entire state) based on the North American Datum 1983, or Latitude and Longitude. If you are able to supply accurate coordinates, please do so. Coordinates may be obtained from DEC's online Environmental Resource Mapper (www.dec.ny.gov/animals/38801.html), using the Identify i tool.

PROJECT DESCRIPTION AND PURPOSE Provide a complete narrative description of the proposed work and its purpose. Attach additional page(s) if necessary.

REQUIRED APPLICATION ATTACHMENTS

Attach and submit the following to each involved Agency:

1) **LOCATION MAP** A US Geological Survey (USGS) Quadrangle Map, or equivalent identifying the project location. The map should include wetlands, seasonally wet streams and ditches. An acceptable location map may be obtained from DEC's online Environmental Resource Mapper (www.dec.ny.gov/animals/38801.html), using the Printer tool.

2) **PROJECT PLANS** A sketch plan view and cross-section drawn to scale with dimensions given, or engineering drawings showing location and extent of work. Note from which direction the photographs required in (3) are taken.

3) **PHOTOGRAPHS** At least 3 color photographs, taken from multiple directions, that clearly depict the site of the proposed activity, including any existing structures on the site, and the area surrounding that site. Indicate the time and date when taken.

OTHER REQUIREMENTS

For NY State Agencies - State Environmental Quality Review Act regulations (SEQR), 6 NYCRR Part 617 (www.dec.ny.gov/regs/4490.html) -

a) If the project is an Unlisted Action, submit a completed Part 1 of a Short Environmental Assessment Form. *
b) If the project is a Type I Action, submit a completed Part 1 of a Full Environmental Assessment Form. *

For NYS DEC Only - Complete the **Permission to Inspect Property Supplement** * to provide consent for DEC inspection. Failure to grant consent can be grounds for, and may result in, permit denial.

For USACE / NYS DOS - If the project requires a federal permit and lies within or affects the Coastal Zone (see the DOS Coastal Area Maps at www.nyswaterfronts.com/maps_regions.asp), submit a completed Federal Consistency Assessment Form (available at www.nyswaterfronts.com/consistency_federal.asp) to NYS DOS with a copy to USACE.

For USACE Section 404 Clean Water Act permits and specific Nationwide permits - a 401 Water Quality Certification must be obtained from NYS DEC.

For Adirondack Park - If the project is within the Adirondack Park, to determine permitting applicability contact -
NYS Adirondack Park Agency, 1133 NYS Rte 86, PO Box 99, Ray Brook, NY 12977 (518) 891-4050 www.apa.state.ny.us

SPECIAL SUPPLEMENTS AND REQUIREMENTS FOR SPECIFIC PERMIT APPLICATIONS

Applications for . . .	must be accompanied by . . .
• **Dams and Impoundment Structures**	Supplement D-1 *
• **Docks and Moorings**	Supplement D-2 *
• **Water Supply**	Supplement W-1 *
• **Long Island Well**	Regional specific supplement *
• **Wild, Scenic and Recreational River Systems**	Supplement WSR-1 *
• **Aquatic Vegetation, Aquatic Insect, and Fish Control** . .	Category specific form available at NYS DEC offices and at www.dec.ny.gov/chemical/8530.html. Submit applications to the NYS DEC regional office, Attn: Bureau of Pesticides.

• **USACE Section 404 Clean Water Act**, and **DEC Freshwater Wetlands** and **Tidal Wetlands** . . . Applications to disturb a wetland or waterway by placing fill or performing mechanized land clearing, ditching, channelization, dredging, or excavation activities should provide a discussion of practicable alternatives considered to avoid, minimize and/or mitigate the proposed project impacts. Particular justification should be given as to why the alternatives are not suitable.

* Forms are available at NYS DEC offices and at www.dec.ny.gov/permits/6222.html

JOINT APPLICATION FORM INSTRUCTIONS - PAGE 2 OF 2

SUBMISSION OF APPLICATION FORMS AND ATTACHMENTS

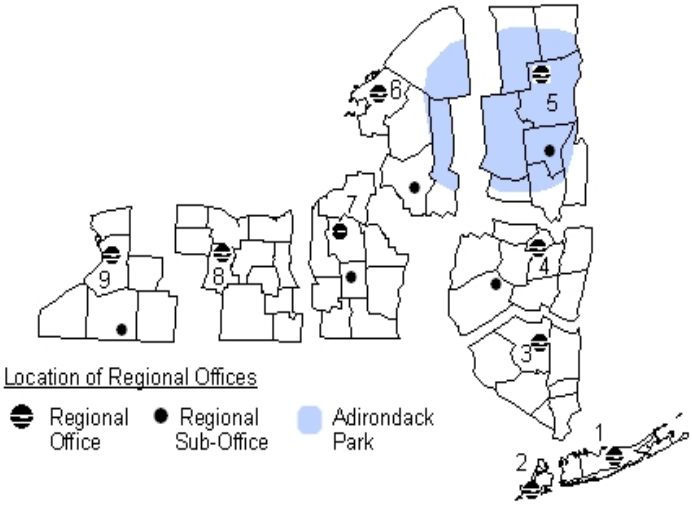
Mail applications to each appropriate Agency office based on project location and permit(s) requested.

For DEC - Mail **3 copies** of Pages 1 and 2 of the Application Form and **3 copies** of all required attachments.

For Other Agencies - Mail **1 copy** of Pages 1 and 2 of the Application Form and **1 copy** of all required attachments.

AGENCY CONTACT INFORMATION

NYS Department of Environmental Conservation
www.dec.ny.gov



NYS DEC REGION 4 Sub-Office
Regional Permit Administrator
65561 State Hwy 10
Stamford, NY 12167-9503
(607) 652-7741
email: r4dep@gw.dec.state.ny.us

NYS DEC REGION 7
Regional Permit Administrator
615 Erie Blvd West
Syracuse, NY 13204-2400
(315) 426-7438
email: r7dep@gw.dec.state.ny.us

NYS DEC REGION 5
Regional Permit Administrator
PO Box 296
1115 Route 86
Ray Brook, NY 12977-0296
(518) 897-1234
email: r5dep@gw.dec.state.ny.us

NYS DEC REGION 7 Sub-Office
Regional Permit Administrator
1285 Fisher Avenue
Cortland, NY 13045-1090
(607) 753-3095
email: r7dep@gw.dec.state.ny.us

NYS DEC REGION 5 Sub-Office
Regional Permit Administrator
232 Golf Course Rd
Warrensburg, NY 12885-0220
(518) 623-1281
email: r5dep@gw.dec.state.ny.us

NYS DEC REGION 8
Regional Permit Administrator
6274 E. Avon - Lima Road
Avon, NY 14414-9519
(585) 226-5400
email: r8dep@gw.dec.state.ny.us

NYS DEC REGION 1
Regional Permit Administrator
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790-3409
(631) 444-0365
email: r1dep@gw.dec.state.ny.us

NYS DEC REGION 3
Regional Permit Administrator
21 South Putt Corners Road
New Paltz, NY 12561-1620
(845) 256-3054
email: r3dep@gw.dec.state.ny.us

NYS DEC REGION 6
Regional Permit Administrator
317 Washington Street
Watertown, NY 13601-3787
(315) 785-2245
email: r6dep@gw.dec.state.ny.us

NYS DEC REGION 9
Regional Permit Administrator
270 Michigan Avenue
Buffalo, NY 14203-2915
(716) 851-7165
email: r9dep@gw.dec.state.ny.us

NYS DEC REGION 2
Regional Permit Administrator
1 Hunter's Point Plaza
47-40 21st Street
Long Island City, NY 11101-5407
(718) 482-4997
email: r2dep@gw.dec.state.ny.us

NYS DEC REGION 4
Regional Permit Administrator
1130 North Westcott Road
Schenectady, NY 12306-2014
(518) 357-2069
email: r4dep@gw.dec.state.ny.us

NYS DEC REGION 6 Sub-Office
Regional Permit Administrator
207 Genesee Street
Utica, NY 13501-2885
(315) 793-2555
email: r6dep@gw.dec.state.ny.us

NYS DEC REGION 9 Sub-Office
Regional Permit Administrator
182 East Union, Suite 3
Allegany, NY 14706-1328
(716) 372-0645
email: r9dep@gw.dec.state.ny.us

US Army Corps of Engineers
www.usace.army.mil

For DEC Regions 1, 2 and 3
US Army Corps of Engineers NY District
ATTN: Regulatory Branch
26 Federal Plaza, Room 1937
New York, NY 10278-0090
email: CENAN.PublicNotice@usace.army.mil

For DEC Regions 1, 2, Westchester County and Rockland County - (917) 790-8511

For the other counties of DEC Region 3 - (917) 790-8411

For DEC Regions 4, 5
Department of the Army
ATTN: CENAN-OP-R
NY District, Corps of Engineers
1 Buffington Street
Building 10, 3rd Floor
Watervliet, NY 12189-4000
(518) 266-6350 - Permits team
(518) 266-6360 - Compliance Team
email: cenan.rfo@usace.army.mil

For DEC Regions 6, 7, 8, 9
US Army Corps of Engineers
Buffalo District
ATTN: Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199
(716) 879-4330
email: LRB.Regulatory@usace.army.mil

Statewide
NYS Department of State
Division of Coastal Resources
Consistency Review Unit
One Commerce Plaza
99 Washington Ave, Suite 1010
Albany, NY 12231-00001
(518) 474-6000
www.nyswaterfronts.com

Statewide
NYS Office of General Services
Real Estate Development - Land Management
Corning Tower, 26th Floor
Empire State Plaza
Albany, NY 12242-0001
(518) 474-2195
www.ogs.state.ny.us

JOINT APPLICATION FORM

For Permits/Determinations to undertake activities affecting streams, waterways waterbodies, wetlands, coastal areas and sources of water supply.

New York State

Separate Permits/Determinations must be obtained from each involved agency prior to proceeding with work. Please read all instructions.

US Army Corps of Engineers (USACE)

1. **Check All That Apply:**

NYS Department of Environmental Conservation

- ☐ Stream Disturbance
- ☐ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☐ 401 Water Quality Certification
- ☐ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Coastal Erosion Management
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Water Supply
- ☐ Long Island Well
- ☐ Aquatic Vegetation Control
- ☐ Aquatic Insect Control
- ☐ Fish Control

US Army Corps of Engineers

- ☐ Section 404 Clean Water Act
- ☐ Section 10 Rivers and Harbors Act
- ☐ Nationwide Permit(s) - Identify Number(s): _____
- Preconstruction Notification - ☐ Y / ☐ N

NYS Office of General Services
(State Owned Lands Under Water)

- ☐ Utility Easement (pipelines, conduits, cables, etc.)
- ☐ Docks, Moorings or Platforms

NYS Department of State

- ☐ Coastal Consistency Concurrence

2. **Name of Applicant** (use full name)

Applicant must be (check all that apply): ☐ Owner ☐ Operator ☐ Lessee

Street Address

Taxpayer ID (If applicant is NOT an individual):

Post Office City | State | Zip Code | Telephone (daytime) | Email

3. **Name of Facility or Property Owner**, if different than Applicant

Street Address

Post Office City | State | Zip Code | Telephone (daytime) | Email

4. **Contact/Agent Name**

Company Name

Street Address

Post Office City | State | Zip Code | Telephone (daytime) | Email

5. **Project / Facility Name**

Property Tax Map Section / Block / Lot Number

Project Location - Provide directions and distances to roads, bridges and bodies of waters:

Street Address, if applicable

Post Office City | State NY | Zip Code | Telephone, if applicable | Email

Town / Village / City

County

Name of USGS Quadrangle Map

Stream/Water Body Name

Location Coordinates: Enter NYTMs in kilometers, **OR** Latitude/Longitude in degrees, minutes, seconds

NYTM-E	NYTM- N	Latitude	Longitude

6. If applicant is not the owner, both must sign the application. I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant	Printed Name	Title	Date
Signature of Owner	Printed Name	Title	Date
Signature of Agent	Printed Name	Title	Date

For Agency Use Only DEC Application Number: USACE Number:

Reset

Submit this completed page as part of your Application.

7. **Project Description and Purpose:** Provide a complete narrative description of the proposed work and its purpose. Attach additional page(s) if necessary. Include: description of current site conditions and how the site will be modified by the proposed project; structures and fill materials to be installed; type and quantity of materials to be used (i.e., cubic yds or square ft of fill material below ordinary high water, or of structures below mean high water); area of excavation or dredging, volumes of material to be removed and location of dredged material disposal or use; work methods and type of equipment to be used; pollution control methods and mitigation activities proposed to compensate for resource impacts; and where applicable, the phasing of activities.

Proposed Use: ☐ Private ☐ Public ☐ Commercial

Will Project Occupy Federal, State or Municipal Land? ☐ Yes ☐ No
If yes, please specify.

Has Work Begun on Project? ☐ Yes ☐ No If Yes, explain.

Proposed Start Date:

Estimated Completion Date:

8. List Previous Permit / Application Numbers (if any) and Dates:

9. Will this project require additional Federal, State, or Local Permits including zoning changes? ☐ Yes ☐ No If Yes, please list:

10. Based on the permits and determinations requested and project location, check all the boxes corresponding to each of the Agencies and Offices to which you are filing an application. For Agency addresses and areas covered, refer to the Agency Contact Information on the Application Instructions - Page 2.

☐ **NYS Department of Environmental Conservation**

- ☐ REGION 1 Stony Brook
- ☐ REGION 2 Long Island City
- ☐ REGION 3 New Paltz
- ☐ REGION 4 Schenectady
- ☐ REGION 4 Stamford Sub-Office
- ☐ REGION 5 Ray Brook
- ☐ REGION 5 Warrensburg Sub-Office
- ☐ REGION 6 Watertown
- ☐ REGION 6 Utica Sub-Office
- ☐ REGION 7 Syracuse
- ☐ REGION 7 Cortland Sub-Office
- ☐ REGION 8 Avon
- ☐ REGION 9 Buffalo
- ☐ REGION 9 Allegany Sub-Office

☐ **US Army Corps of Engineers**

- ☐ NY District, NYC
- ☐ NY District, Watervliet
- ☐ Buffalo District

☐ **NYS Department of State**

☐ **NYS Office of General Services**

For Agency Use Only

DETERMINATION OF NO PERMIT REQUIRED

Agency Project Number _____

_____ has determined that No Permit is required from this Agency for the project described in this application.
(Agency Name)

Agency Representative: Name (printed) _____ Title _____

Signature _____ Date _____

Reset

New York State
Department of Environmental Conservation

PERMISSION TO INSPECT PROPERTY

By signing this permission form for submission with an application for a permit(s) to the Department of Environmental Conservation ("DEC"), the signer consents to inspection by DEC staff of the project site or facility for which a permit is sought and, to the extent necessary, areas adjacent to the project site or facility. This consent allows DEC staff to enter upon and pass through such property in order to inspect the project site or facility, without prior notice, between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. If DEC staff should wish to conduct an inspection at any other times, DEC staff will so notify the applicant and will obtain a separate consent for such an inspection.

Inspections may take place as part of the application review prior to a decision to grant or deny the permit(s) sought. By signing this consent form, the signer agrees that this consent remains in effect as long as the application is pending, and is effective regardless of whether the signer, applicant or an agent is present at the time of the inspection. In the event that the project site or facility is posted with any form of "posted" or "keep out" notices, or fenced in with an unlocked gate, this permission authorizes DEC staff to disregard such notices or unlocked gates at the time of inspection.

The signer further agrees that during an inspection, DEC staff may, among other things, take measurements, may analyze physical characteristics of the site including, but not limited to, soils and vegetation (taking samples for analysis), and may make drawings and take photographs.

Failure to grant consent for an inspection is grounds for, and may result in, denial of the permit(s) sought by the application.

Permission is granted for inspection of property located at the following address(es):

_____

_____

*By signing this form, I affirm under penalty of perjury that I am authorized to give consent to entry by DEC staff as described above. I understand that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.**

Print Name and Title	Signature	Date

*The signer of this form must be an individual or authorized representative of a legal entity that:

- owns fee title and is in possession of the property identified above;
- maintains possessory interest in the property through a lease, rental agreement or other legally binding agreement; or
- is provided permission to act on behalf of an individual or legal entity possessing fee title or other possessory interest in the property for the purpose of consenting to inspection of such property.

SUPPLEMENTAL DATA SHEET – APPLICATION FOR WELLPOINT DEWATERING PERMIT (except tank installations or replacements)
(Submit in duplicate)

1. PROJECT DESCRIPTION - _____

_____

_____

2. PROPOSED DEWATERING SYSTEM (Complete all items)

   a. Number of wellpoints _____

   b. Diameter of wellpoints _____

   c. Spacing of wellpoints _____

   d. Length of screen _____

   e. Depth to bottom of screen _____

   f. Number of pumps _____

   g. Capacity of pumps _____

   h. Static water level _____

   i. Drawdown required _____

   j. Duration of dewatering _____

   k. Maximum daily pumpage _____

3. PROPOSED POINT OF DISCHARGE (Show on site plan and check one of the following)

   Surface water _____ ; If checked, indicate body of water _____

   Recharge basin * _____

   Storm drain * _____ ; If checked, indicate ultimate discharge point _____

   Other _____ ; If checked, specify discharge point _____

   * For discharges to recharge basins and storm drains, applicants are responsible for obtaining all appropriate State, County and/or Town approvals.

4. SITE PLAN

   Two (2) copies of a site plan are required. The site plan must include the project location, proposed wellpoint layout and the proposed discharge point.

Appendix F

Chesterfield Well Driller's License

New York State Department of Environmental Conservation
SUNY at Stony Brook 50 Circle Road Stony Brook, N.Y. 11790-34
Phone: (631) 444-0410 Fax: (631) 444-0424

Alexander B. Grannis
Commissioner

REGISTRATION PERIOD: APRIL 1, 2010 TO MARCH 31,2011

REGISTRATION NUMBER: 1605

RECEIVED
MAR 18 2010
CHESTERFIELD ASSOCIATES INC.

CHESTERFIELD ASSOC. INC.
P.O. BOX 1229
WESTHAMPTON BEACH N.Y. 11978

is hereby registered, under the provisions of the Environmental Conservation Law, to drill wells in the State of New York for the period listed above.

It is required that before the commencement of drilling of any well or wells the driller shall file a preliminary report with the Department. It is also required that upon the completion of the drilling of any well or wells a completion report must be filed with the Department, giving the log of the well, the size and depth thereof, the capacity of the pump or pumps attached or to be attached thereto, and other such information pertaining to the withdrawal of water and operation of said well or wells as the Department by its rules and regulations may require.The number of this registration must be displayed on well drilling machinery of this registrant

(D.E.C. Registration No 1605).

Dated: APR 01, 2010
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