APPENDIX T

Storm Water Pollution Prevention Plan (SWPPP)

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STORM-WATER POLLUTION PREVENTION PLAN
FYN PAINT & LACQUER CO., INC.
230 KENT AVENUE
BROOKLYN, KINGS COUNTY, NEW YORK
NYSDEC BCP SITE NO. C224154
INDEX NO. C224154-02-15

Prepared For:

Kent Riverview LLC

April 2015

Prepared By:

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Figure

1 Site Map with Storm-Water Drainage

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1.0 INTRODUCTION

The following Storm-Water Pollution Prevention Plan (SWPPP) was completed on behalf of the Fyn Paint & Lacquer Co., Inc. (Fyn) by Leggette, Brashears & Graham, Inc. (LBG). Fyn has entered into the NYSDEC Brownfield Cleanup Program (BCP), and is listed as Site No. C224154, Index No. C224154-02-15 which applies to the property located at 230 Kent Avenue in Brooklyn, New York (the Site). This SWPPP is being included as an attachment to the Remedial Action Work Plan (RAWP) for the Site, which outlines activities to be performed at the Site in conjunction with the approved remedial actions.

The Fyn Paint & Lacquer Co., Inc. is located in an industrial/commercial area at the intersection of Kent Avenue and North First Street in the Borough of Brooklyn, New York City. The Fyn Paint site consists of a one story industrial/warehouse building. The footprint of the building is approximately 5,000 ft^2 (square feet) on the first floor and approximately 3,500 ft^2 on the balcony. The facility is currently inactive.

The vicinity of the property consists of industrial, commercial and residential properties, with increasing development of residential properties throughout the area. The Site is bordered on the: north by Metropolitan Avenue; south by North First Street; east by Kent Avenue; and, west by River Street. The East River is located approximately 375 feet to the northwest of the Site.

The Site has historically been utilized for the manufacture of paint and lacquers.

1.1 Goals of the SWPPP

The goals of the SWPPP are:

- to prevent pollution of surface waters that could result in toxicity to aquatic organisms, impair ecosystems or create risk to human health; and,

- to prevent floating oil, scum or similar non-natural substances arising from investigation activities from entering surface waters.

A copy of the approved SWPPP, including related drawings, will be kept at the Site at all times for inspection by the NYSDEC. Revisions to the approved plan (if required) will be submitted to the NYSDEC for approval.

2.0 SCOPE AND PLAN OBJECTIVES OF SWPPP

This SWPPP covers all requirements as specified by the New York State Department of Environmental Conservation (NYSDEC) for management of storm-water discharges. The SWPPP outlines soil erosion and sediment control measures to be taken during the subsurface investigation ground invasive activities in areas exposed to the elements that could cause sediment or cause contaminants such as contaminated soil, fuels or other petroleum products to transport to the East River or surrounding combined storm-water and sanitary sewer catch-basins surrounding the Site. A further objective of the SWPPP is to minimize the quantity of accumulated storm-water on and surrounding the Site, so as to allow excavations and other site activities to remain dry and active. This SWPPP includes plans for controlling erosion and sediment transport as a result of construction activities on and surrounding the Site. Temporary erosion and sediment control measures such as dikes, silt fences, turbidity curtains (booms), diversion ditches, and inlet protection shall be identified and employed on and surrounding the Site as described in this plan or the Remedial Action Work Plan. These structural measures and other Best Management Practices (BMP) that may be necessary to achieve the plan's objectives are included in this SWPPP.

Contaminated materials, primarily volatile organic compounds (VOCs) are known to be present in the subsurface beneath the Site and beneath adjacent properties. Therefore, the SWPPP will focus on mitigating the release of contaminants generated from excavation activities. The soil erosion and contaminant control measures described herein are designed based on the following principles:

1. Minimize exposure of bare soil;
2. Prevent soil from leaving the area where ground invasive activities are being performed through the use of silt fences, permeable berms, inlet protection, tracking pad and/or stone weeper (as necessary);
3. Stabilize disturbed areas soon after final grading; and
4. Divert run-on water away from disturbed areas.

2.1 General Responsibilities

Fyn shall assure the implementation of this SWPPP. LBG representatives will be responsible for ensuring daily activities are conducted in a way that is consistent with this SWPPP. Specifically, all activities which involve solid, liquid or hazardous waste handling, or movement of subsurface materials outdoors is to conduct work activities in such a way that:

- no drums or roll-off containers are left anywhere outside unless they are properly stored with the tops securely fastened;
- work areas on and surrounding the Site are kept neat and picked up on a regular basis;
- no change-outs of vehicle or equipment fluids (crankcase, transmission, hydraulic systems, radiator, oil) are conducted outdoors; and,
- no liquid coating materials, fuels, oils, paints, solvents or similar substances are poured onto the ground or into catch basins, sumps, down spouts or drains.

2.2 Pollution Prevention Team

The pollution prevention team for the Site has one administrator and several members from the LBG White Plains, New York office. Prior to starting any work associated with the Remedial Action Work Plan, all personnel active at the work site will review this SWPPP and will sign the Storm-Water Pollution Prevention Plan Terms and Conditions Certification form which is included in the Appendix. The primary personnel presently assigned to the team and the activities for which they are responsible, are listed below:

Name	Company	Responsibility
Sean Groszkowski	LBG	Overall Project Oversight, Agency Communication
William Beckman	LBG	Review and Approval of Work Plans Certification of Work Performed
Brian Hawe	LBG	Field Supervision
Contractor	TBD	Excavation Activities Installation of SWPP Measures

3.0 HYDROLOGY AND HYDRAULICS

LBG evaluated the existing drainage patterns at the Site and surrounding the Site. The areas outside of the extents of the proposed excavation (within the property boundaries) include the sidewalk area adjacent to the east, south and west of the Site and the parking lot on the Con Edison property adjacent to the north of the Site. The proposed excavation area is illustrated on figure 1 along with the locations of the combined storm-water and sanitary sewer catch-basins surrounding the Site and the East River.

The slope of grade affects the amount of runoff and rate of runoff. With all other things being equal, a site with steep slopes will produce more runoff and transport it at a faster rate than a flat site. Base on the field visit, the excavation locations are in areas where there is a level grade. To the north and of south these areas, the sidewalks and adjacent roadways (Metropolitan Avenue and North First Street, respectively) slope to the west towards the East River. The storm-water runoff from the Site eventually discharges to combined sanitary sewer storm-water catch-basins and/or the East River. The primary route for storm-water runoff from the Site and Con Edison parking lot would be contained by raise sidewalk curbs and would travel via Kent Avenue and continue along Metropolitan Avenue and North First Street. The Site is approximately 20 feet above the water elevation in the river.

The type of soil on a site also affects the amount and rate of runoff generated. The soil type found on a site determines the amount and rate at which water can be absorbed into the ground. The more water which infiltrates into the soil, the greater the reduction in runoff volume and rate will be. The Natural Resources Conservation Service (NRCS) categorizes soils

into one of four hydrologic soils group: type A, B, C, D. Type A soils are the most permeable and Type D soils are the least.

The surface cover on a site refers to what is on the surface of a site; whether it is lawn, row crops, asphalt, brush, etc. Surface cover affects the rate and volume of runoff just like slope and type of soil. Certain covers allow for a greater opportunity for water to be absorbed into the ground. Based on the fact that the Site and the Con Edison parking lot are covered with impermeable asphalt and concrete, it will not allow for any water to be absorbed into the ground. Almost all the rain that falls on asphalt or other impermeable covers will be converted to runoff. As such, the primary goal of preventing the contamination of the runoff will be by containing onsite excavated soils.

LBG determined that the majority of the surface covers on and surrounding the Site consists of impervious areas including existing buildings, and the adjoining streets and side-walks. The soil type on the site was determined using the historical subsurface investigations prepared by LBG. The historical subsurface investigations characterize onsite and offsite sub-surface conditions interpreted from borings. According to data obtained from these investiga-tions, the soil beneath the Site and the Con Edison parking lot consists of layers of Fill, Native Soil and Cobble, Boulders and are defined as follows: Fill: ash, some tar, slag, metal trash, cobble, and trace sand; Native Soil: fine to medium sand, some silt with little to trace gravel, brow; to silt with some to trace very fine sand, with trace gravel; and, Cobble, Boulders and/or Obstructions (encountered beneath both the Site and the Con Edison parking lot as approximately 10-15 ft bg).

Based on the fact that the excavations will be advanced to depths below grade, storm-water would collect within the excavation. Therefore, storm-water sheet flow to drainage areas downgradient from the Site will not be impacted by activities at the Site.

4.0 PLAN IMPLEMENTATION

The general sequence of activities for the SWPPP will be dictated by the implementa-tion of the RAWP activities and are as follows:

- Mobilization—delivery of construction equipment, installation of silt fences and security fences, and installation of temporary utilities as required;
- Demolition of existing building;
- Excavation and soil storing (stockpiled onsite);
- Backfilling activities;
- Installation of additional institutional or engineering controls if necessary; and,
- Restoration of grade surface (asphalt or concrete).

If feasible, excavation activities will be scheduled to correspond with anticipated time periods where precipitation is not forecast. It is anticipated that the excavation activities will have the most impact on erosion. Therefore, all erosion and sediment controls will be put into effect and functional prior to commencement of any earthwork activities. Sediment and erosion control practices will be consistent with currently acceptable practices, including the placement of silt fencing and permeable berms to mitigate sedimentation transport; the use of berms and trenches to re-direct surface water runoff/run-on to prevent migration to and control discharges from adjacent properties; and the use of absorbent booms, where applicable, to prevent the flow of contaminated liquids from entering navigable waterways and/or storm sewer pathways. All runoff control barriers will be spot checked daily. Areas of bare soil exposed by construction activities will be minimized. Stabilized construction entrances will be used to minimize tracking of mud or soil into the roadways. Mud or soil that may be tracked from the excavation areas and onto roadways will be cleaned as necessary. The excavating contractor will immediately clean up mud or soil tracked from the excavation areas onto roadways. All soil erosion and sediment control measures (silt fence, trenches, berms, etc.) will be installed prior to any major soil disturbances, or in their proper sequence, and maintained until permanent protection is established (i.e., the excavation is backfilled and the surface seal has been restored). Any changes to the approved SWPPP will require the submission of a revised SWPPP to the NYSDEC. The revised plans must meet all current soil erosion and sediment control standards.

4.1 Good Housekeeping

During construction, the Contractor will establish and maintain good housekeeping Best Management Practices (BMP) for the site. These will include the following:

- When not in use, all construction equipment will be stored in designated equipment staging areas.
- All vehicle fueling will be conducted within a containment area or asphalt-covered area.
- All fuel will be stored in approved storage containers.
- All vehicle maintenance such as oil changes, lubrication, and other tasks will be conducted within a containment area or asphalt-covered area.
- All vehicle washing and general maintenance activities that could produce contaminants will be conducted within a containment area or asphalt-covered area.
- All cleaning materials, lubricants, fuel, and other construction materials will be stored in original containers as much as possible, or will be stored in other approved containers when necessary.
- All spills will be promptly cleaned up.

4.2 Site Sediment Controls

The following control devices will be available (if necessary), constructed as indicated below and will meet the requirements of the contract documents and the New York Standards and Specifications for Sediment Control:

- **Construction Entrance:** The Site presently has one main access point for vehicular traffic, at the eastern end of the site from Kent Avenue. The Site also has a smaller secondary access-way on the southern portion of the building. The Kent Avenue entrance is paved asphalt and concrete. This is the road that will be used and will be monitored daily. Any dirt and/or mud deposited on public roadways from a source at the Site will be removed and cleaned up.

- **Sedimentation Barriers:** Although their use is not anticipated, pre-manufactured silt fences will be used as sedimentation barriers and will be installed in areas where the potential of soil runoff and erosion may occur. Silt fences will be installed in areas where siltation is a problem, and will be maintained until surface restoration is completed. These silt fences will be embedded to prevent water from running under them. Silt fences will be spot checked daily and maintained in satisfactory condition for the duration of the project.
- **Excavation Coverage:** Following the completion of the work day, any open soil excavation will be covered over with a poly barrier or tarp to prevent the excavation from filling up with storm-water.
- **Inlet Protection:** There are several catch basins adjacent to the proposed excavation area at the Site. Although contaminated runoff into these catch basins is not anticipated, should any contaminated runoff be observed entering a catch basin, hay bales or another similar inlet protection structure will be implemented.
- **Stockpiled Soil:** All excavated material will be stockpiled onsite prior to disposal and any soil stockpiles onsite will be covered with tarps or poly at the end of each workday.
- **Additional Measures:** Immediately upon recognizing that unforeseen circumstances pose the potential for accelerated erosion or sedimentation, LBG will ensure that the Contractor uses appropriate best management practices to eliminate the potential for accelerated erosion and sedimentation. The Contractor, where necessary, will supplement the above control devices with hay bales, rock dams, erosion control matting, and riprap lining.
- **Removal:** Removal of the erosion and sediment controls will be accomplished as the items are no longer needed. Inlet protection structures and silt fencing will be removed once they are not needed.

Once in place, the LBG Program Geologist will be responsible for daily inspections of all erosion and sediment control measures and spot checking structural control measures daily. Any items found noncompliant with this plan will either be repaired or replaced immediately.

The LBG Program Geologist has the authority to stop work until these repairs are completed. He will also maintain list of deficiencies found, and the corrective action(s) taken in the daily field log required under the RAWP.

4.3 Contaminated Runoff Controls

If during the course of the remedial action ground invasive activities, contaminated runoff is observed flowing away from the work zone action will be taken to prevent it from leaving the work area. These actions will consist of:

- **Boom Barriers:** If required, a sorbent boom will be laid out to contain contaminants in the work area and prevent it from flowing offsite.
- **Excavation Coverage:** Following the completion of the work day, any open soil excavation will be covered over with a poly barrier or tarp to prevent the excavation from filling up with storm-water.
- **Stockpiled Soil:** All excavated material will be stockpiled onsite prior to disposal and any soil stockpiles onsite will be covered with tarps or poly at the end of each workday.
- **Additional Measures:** Immediately upon recognizing the potential for contaminated runoff to migrate off site and toward sanitary sewer storm-water catchbasins and/or the East River, a vacuum truck will be mobilized to the Site to capture the contaminated runoff. This contaminated water will then be processed through a sediment filter and then through the onsite groundwater treatment system.

4.4 Final Restoration

Following the completion of all construction activities, all areas where ground invasive activities had been performed will be restored. Site restoration will include the repair of any

site areas damaged or disturbed during the completion of construction activities and cleaning of all work areas to remove all materials and waste. All washed out areas will be re-graded to final grades and restored. All cap materials (i.e., asphalt and concrete) will be restored to at a minimum their previous construction specifications.

LEGGETTE, BRASHEARS & GRAHAM, INC.

Sean Groszkowski
Associate Vice President

Reviewed By:

William K. Beckman, P.E.
Principal

dmd
April 10, 2015
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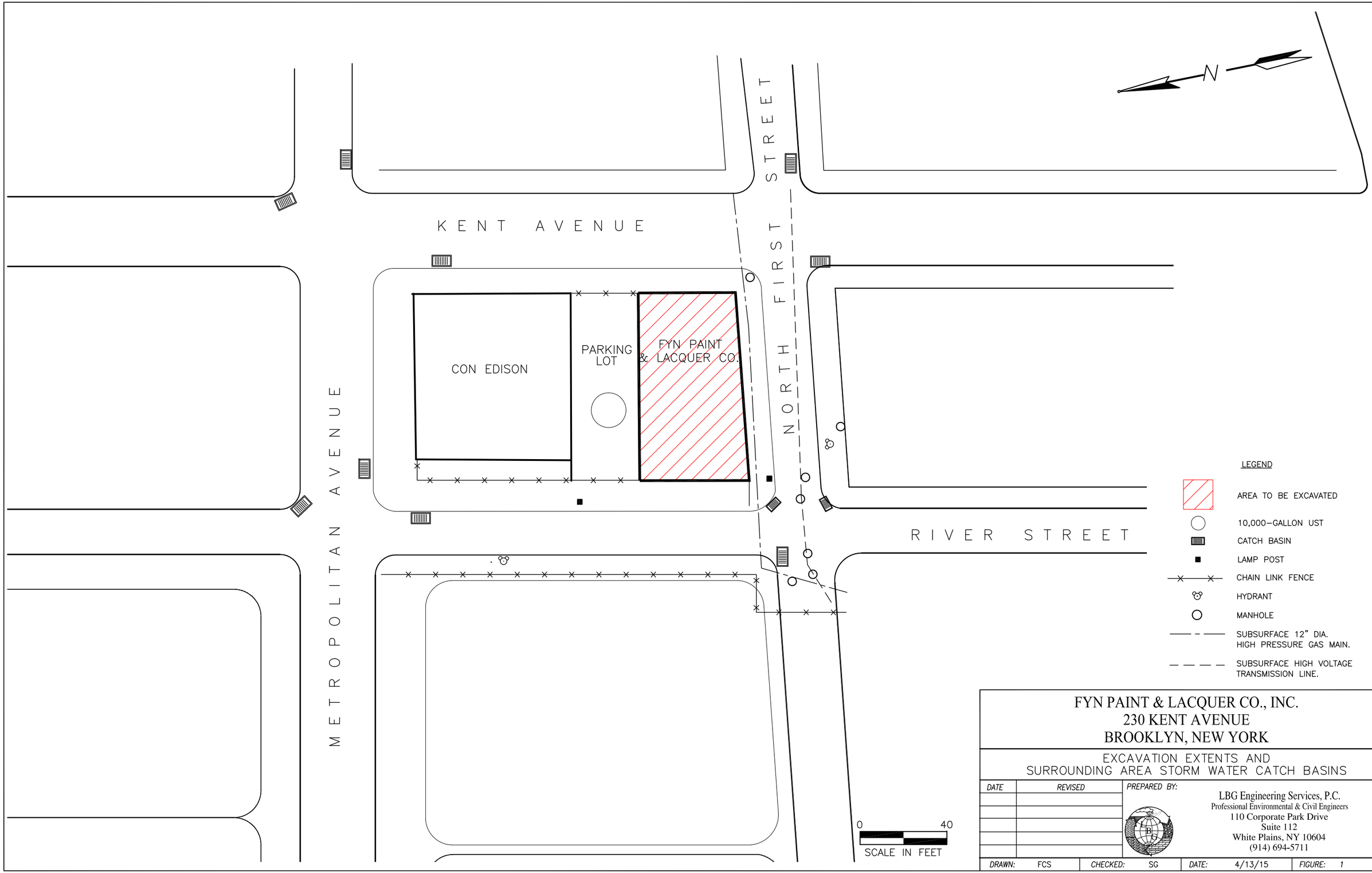
FIGURE



FYN PAINT & LACQUER CO., INC.
230 KENT AVENUE
BROOKLYN, NEW YORK

EXCAVATION EXTENTS AND SURROUNDING AREA STORM WATER CATCH BASINS

DATE	REVISED

PREPARED BY:

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DRAWN:	FCS	CHECKED:	SG	DATE:	4/13/15	FIGURE:	1

APPENDIX

Storm-Water Pollution Prevention Plan
Terms and Conditions Certification

LEGGETTE, BRASHEARS & GRAHAM, INC.
LBG ENGINEERING SERVICES, P.C.

FYN PAINT & LACQUER CO., INC.
230 KENT AVENUE
BROOKLYN, KINGS COUNTY, NEW YORK

NYSDEC BCP SITE NO. C224154
INDEX NO. C224154-02-15

REMEDIAL ACTION WORK PLAN
STORM-WATER POLLUTION PREVENTION PLAN
TERMS AND CONDITIONS CERTIFICATION

I hereby certify that I understand and agree to comply with the terms and conditions of the Storm-Water Pollution Prevention Plan (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 storm-water 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.

Name	**Signature**	**Date**
_____	_____	_____
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April 10, 2015
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