PROPOSED DECISION DOCUMENT

Bloody Brook
Voluntary Cleanup Program
Salina, Onondaga County
Site No. V00501
September 2013

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED DECISION DOCUMENT

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The release of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Decision Document (PDD). The release of contaminants at this site, as more fully described in Section 6 of this document, has contaminated various environmental media.

The Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents in the document repositories identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all Proposed Decision Documents. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repositories:

Liverpool Public Library
310 Tulip Street
Liverpool, NY 13088
Phone: 315-457-0310

NYS Dept, of Environmental Conservation
Attn: Richard Mustico, P.E.
625 Broadway
Albany, NY 12233
Phone: 518-402-9676

Atlantic States Legal Foundation
Attn: Samual Sage
658 West Onondaga Street
Syracuse, NY 13204
Phone: 315-475-1170

NYS Dept. of Environmental Conservation
615 Erie Blvd. West
Syracuse, NY 13204
Phone: 315-426-7400

A public comment period has been set from:

9/25/2013 to 10/25/2013

A public meeting is scheduled for the following date:

10/8/2013 at 6:00 PM

Public meeting location:

Holiday Inn
441 Electronics Parkway
Liverpool, NY 13088

At the meeting, the findings of the remedial investigation (RI) and the alternatives analysis (AA) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the Proposed Decision Document. **An availability session will precede the public meeting from 4:00 pm to 6:00 pm.**

Written comments may also be sent through **10/25/2013** to:

Richard Mustico
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
rxmustic@gw.dec.state.ny.us

The proposed remedy may be modified based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Bloody Brook site is located in the Town of Salina and the Village of Liverpool in Onondaga County, New York.

Site Features: The Bloody Brook Site is an approximately 5,000-foot long stretch of the brook from the New York State Thruway to the Onondaga Lake Parkway. The main site features include the west and middle branches of the brook and brook sediments; the banks of the brook; floodplain soils; a wetland area; a wooded area; and soils associated with the former channel.

Current Zoning and Land Use: The land uses surrounding Bloody Brook include industrial, commercial and residential, consistent with applicable, current zoning. The surrounding area also contains railroad tracks, numerous roads and right-of-ways. The brook itself is not used commercially. Bloody Brook is a Class B stream (best use is contact recreation) from the mouth of the brook to its confluence with the West Branch of Bloody Brook, approximately 0.4 miles upstream from the mouth. Upstream of this confluence, the West and Middle Branches of Bloody Brook are Class C streams (best use is fishing). The site is within the Bloody Brook Drainage District. The drainage district was formed to allow Onondaga County access to the brook to complete drainage improvements and maintain the drainage capacity of the brook.

Past Use of the Site: The site contamination is believed to have resulted from discharges to the West Branch of Bloody Brook from Electronics Park which was owned by General Electric from 1949 to 1993 when it was transferred to Martin Marietta (predecessor to Lockheed Martin). General Electric used cadmium in the manufacturing of television picture tubes. The course of the brook channel was modified five times between 1944 and 1978. The modifications occurred as part of Thruway construction; construction of the residential areas; construction of the former Lakeshore Drive-In Theater; and installation of new culverts for hydraulic improvements downstream of the former Lakeshore Drive-In Theater. Prior to 1938, the area was generally used for agriculture with some wooded areas and some residential homes. As per the Department's February 1997 Final Decision and Response to Comments for the Electronics Park Facility, the final remedy implemented for the Electronics Park Facility included the continuation of the site-wide groundwater pump and treat system, to eliminate the off-site migration of groundwater; storm sewer maintenance, to eliminate infiltration of groundwater into the storm sewers; and the removal of cadmium-impacted and PCB-impacted sediments within a 200-foot long culvert beneath the Thruway and from a 750-foot section in the West Branch of Bloody Brook south of the Thruway.

Site Geology and Hydrogeology: The site geology consists of a sand and silt mixture, underlain by dense clay. The clay elevation is relatively consistent across the site, while the sand and silt mixture fluctuates with the surface elevation. Within the location of the former brook channel, an organic peat layer exists with a thickness from approximately one inch to three feet.

The brook has been channelized by the Bloody Brook Drainage District. The brook generally flows south, and is a tributary to Onondaga Lake.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. Land uses vary over the length of the site and encompass residential, commercial and industrial.

SECTION 5: ENFORCEMENT STATUS

The Department and Lockheed Martin entered into a Voluntary Cleanup Agreement for the Bloody Brook site on July 19, 2002 (Index No. D7-0001-01-09). The agreement governs the submission and implementation of work plans for the site investigation, remediation and operation, maintenance and monitoring.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells may be installed to assess groundwater and soil borings or test pits may be installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor may also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives.

For the Bloody Brook Site, several remedial investigations were completed. The analytical data collected from the site are summarized in the investigation reports. The investigation reports are available for review in the site document repositories and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- surface water
- soil
- sediment

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the investigation reports contain full discussions of the data. The contaminant(s) of concern identified at this site is/are:

Cadmium

The contaminant(s) of concern exceed the applicable SCGs for:

- soil
- sediment

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Culvert IRM

In 2008, Lockheed Martin conducted a sediment removal from four culvert crossings in the West Branch of Bloody Brook. This IRM was conducted at the request of Onondaga County in order to increase the hydraulic capacity of the brook. Sediment removal totaled approximately 68 cubic yards, and the material was properly disposed of at a permitted solid waste facility.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The Remedial Action Work Plan presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:

Based upon the investigations conducted to date, the primary contaminant of concern at the site is cadmium.

Soil - Cadmium is found in both shallow and deeper soil (up to approximately 15 feet below grade), and at concentrations from below laboratory detection limits to 5,350 parts per million (ppm). Concentrations of cadmium found on-site exceed the New York State Soil Cleanup Objectives (SCOs) for unrestricted use (2.5 ppm), residential use (2.5 ppm), restricted residential use (4.3 ppm), commercial use (9.3 ppm), industrial use (60 ppm) and for the protection of ecological resources (4 ppm). Sample results indicate that cadmium concentrations decrease away from the current and former channels of the brook. In addition, cadmium concentrations are, in general, higher in the upstream portion of the site (*i.e.*, towards the Thruway), and decrease towards the downstream end of the site (*i.e.*, towards Onondaga Lake Parkway).

Sediment - Sediment in the West Branch of Bloody Brook and Bloody Brook, below its confluence with the West Branch of Bloody Brook, have been impacted by cadmium in an area from below the Thruway to the Onondaga Lake Parkway. Cadmium is found in the brook sediments at concentrations from below laboratory detection limits to 174 ppm. Cadmium concentrations in sediment exceed New York State sediment values for both the lowest effect level sediment criterion (0.6 ppm) and severe effect level sediment criterion (9.0 ppm). Sample results indicate that cadmium concentrations are, in general, higher in the northern portion of the site and decrease towards the south end of the site. Sediment in the Middle Branch was analyzed early in the investigation, and based on the sampling results, it was determined that further investigation and sediment remediation of the Middle Branch was not warranted.

Surface Water - Surface water samples collected from the West and Middle Branches of Bloody Brook did not exhibit cadmium concentrations in excess of applicable water quality standards.

A fish and wildlife impact analysis was performed for the site. The habitat within most areas of the site is generally limited due to the surrounding land use and maintenance activities in the Bloody Brook Drainage District easement (*e.g.*, mowing). However, in addition to the brook, the site contains a wooded area and three small federal wetland areas. The wetland areas range in size from 334 square feet to 1.2 acres. As discussed above, cadmium concentrations in some areas of the brook exceed the New York State severe effect level sediment criterion. Also as discussed above, site soil numbers exceed the New York State SCO for the protection of ecological resources.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Contact with site-related contamination along the creek banks and in nearby soil is minimized because the areas are either well vegetated with grass and brush, or covered by barriers to reduce erosion (*e.g.*, gabions, flagstone). People may come into contact with site-related contamination if they disturb sediment in the brook or if they dig below the surface in surrounding areas.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-release conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives (RAOs) for this site are:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.

RAOs for Environmental Protection

- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
- Restore sediments to pre-release/background conditions to the extent feasible.

SECTION 7: ELEMENTS OF THE PROPOSED REMEDY

The alternatives developed for the site and an evaluation of the remedial criteria are presented in the alternatives analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The proposed remedy is referred to as the excavation and off-site disposal remedy.

The elements of the proposed remedy, as shown in Figures 2A, 2B, 2C and 2D are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation and off-site disposal of contaminated soil and sediment, including:

- all sediment from the West Branch of Bloody Brook and Bloody Brook, from below the confluence of the West and Middle Branches of Bloody Brook, between the New York State Thruway and the Onondaga Lake Parkway;
- top 2 feet of side bank soil from the West Branch of Bloody Brook and Bloody Brook, from below the confluence of the West and Middle Branches of Bloody Brook, between the New York State Thruway and Old Liverpool Road, with the exception of the existing gabion-lined section (channel side banks will be reconstructed with a minimum of two feet of clean cover material);
- side bank soil from Bloody Brook between Old Liverpool Road and the Onondaga Lake Parkway that exhibit cadmium concentrations greater than 4 ppm (up to two feet below grade);
- the wooded/wetland area (soils in the top two feet that exhibit cadmium concentrations greater than 4 ppm, and soils from two to six feet below grade that exhibit cadmium concentrations greater than 100 ppm);
- residential properties (soils in the top two feet that exhibit cadmium concentrations greater than 2.5 ppm, and soils from two to four feet below grade that exhibit cadmium concentrations greater than 10 ppm);
- apartment complex area (soils in the top two feet that exhibit cadmium concentrations greater than 4.3 ppm and soils from two to four feet below grade that exhibit cadmium concentrations greater than 10 ppm);
- drainage district easement maintained by Onondaga County (soils in the top two feet that exhibit cadmium concentrations greater than 10 ppm); and

- former drive-in theater area (soils in the top two feet that exhibit cadmium concentrations greater than 9.3 ppm where surface disposal of brook dredge spoils occurred).

Approximately 20,100 cubic yards of soil and 1,700 cubic yards of sediment are estimated to be removed from the site.

Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to replace the excavated soil and sediment or complete the backfilling of the excavation and establish the designed grades at the site.

The wooded and wetland areas and stream banks will be restored as per an approved design.

3. A site cover will be required to allow for current uses of the site and surrounding properties. A site cover will be allowed for those properties currently zoned and used as residential, commercial and industrial. The cover will consist of soil in areas where the upper two to six feet of exposed soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in DER-10, Appendix 5 for current uses of the site and surrounding properties. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in DER-10, Appendix 5.

4. A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: requires the remedial party to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3). Institutional controls also include voluntary agreements between Lockheed Martin and respective property owners for site access and any other pertinent provisions to enable the installation and maintenance of cover systems, management of residual contamination, excavation, inspections, sampling, and/or any other requisite activities.

Engineering Controls: The soil cover discussed in Paragraph 3.

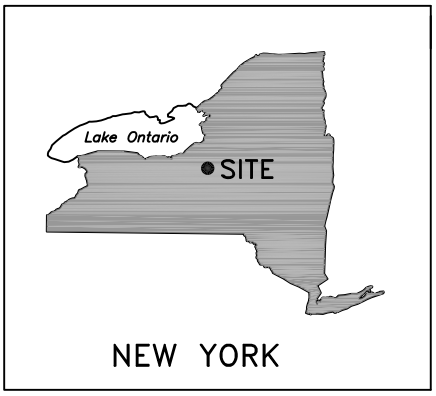
This plan includes, but may not be limited to:

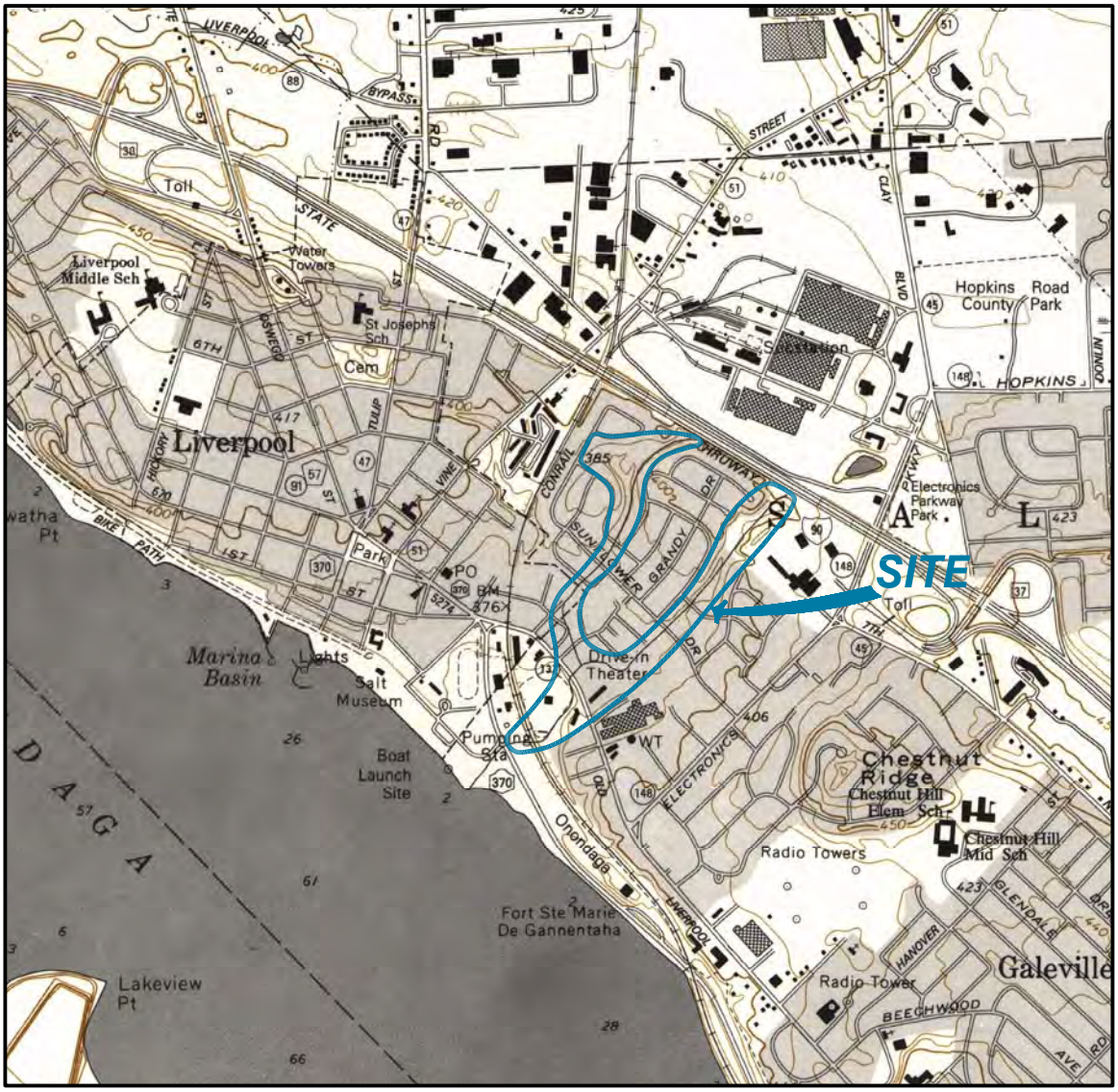
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for further investigation to refine the extent of contamination in the following areas where access was previously hindered: any residential property where access is currently denied; and future excavations at depths greater than that remediated under this proposed remedy;

- provisions for the management and inspection of the identified engineering controls, including within drainage district right-of-way areas [While usage of these areas is generally controlled by their right-of-way status, potential exposures related to required district maintenance or repairs to brook banks, culverts, *etc*. will be addressed by Lockheed Martin.];
- maintaining site access controls and Department notification;
- tracking of property ownership changes to allow for the continued communication with owners;
- annual notification by Lockheed Martin to property owners of Lockheed Martin's offer to implement the remedy for property owners who chose to decline remedy implementation and/or sampling on their property;
- an annual reminder from Lockheed Martin to property owners with post remedy residual soil contamination of the presence of such residual contamination, and of Lockheed Martin's commitment to handle [excavate, manage and dispose] residual contaminated soils, as necessary and in accordance with the intended use of the property;
- provision for Lockheed Martin to request that the Village of Liverpool Code Enforcement Office and the Town of Salina Department of Planning and Development timely inform Lockheed Martin of any building permits they grant for properties within the site boundaries where residual material remains post remedy;
- provision for Lockheed Martin to request that the Town of Salina and Onondaga County timely inform Lockheed Martin of any Town or County plans to conduct intrusive maintenance work within the site boundaries (*e.g*., soil disturbance work); and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of wetlands, surface water and sediment to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.





0' 2000' 4000'

APPROXIMATE SCALE

REFERENCE:

1. NYSDOT 7.5 MIN TOPOGRAPHIC MAP OF SYRACUSE WEST, QUADRANGLE 1990, SCALE: 1" = 2000'.

AECOM

LOCKHEED MARTIN CORPORATION

SITE LOCATION MAP

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

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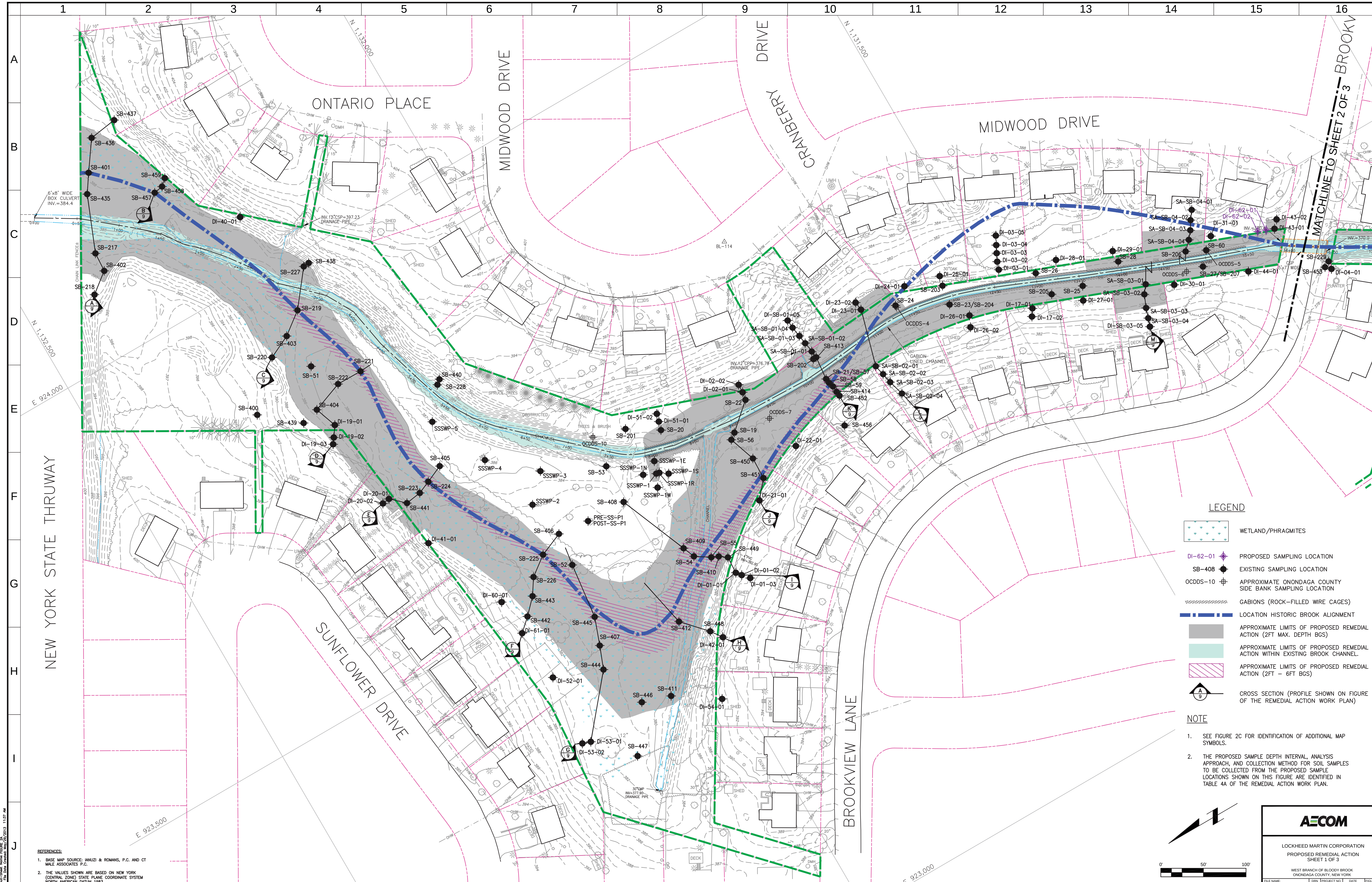

LEGEND

- WETLAND/PHRAGMITES
- DI-62-01 — PROPOSED SAMPLING LOCATION
- SB-408 — EXISTING SAMPLING LOCATION
- OCDDS-10 — APPROXIMATE ONONDAGA COUNTY SIDE BANK SAMPLING LOCATION
- GABIONS (ROCK-FILLED WIRE CAGES)
- LOCATION HISTORIC BROOK ALIGNMENT
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL.
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT – 6FT BGS)
- CROSS SECTION (PROFILE SHOWN ON FIGURE 9 OF THE REMEDIAL ACTION WORK PLAN)

NOTE

1. SEE FIGURE 2C FOR IDENTIFICATION OF ADDITIONAL MAP SYMBOLS.
2. THE PROPOSED SAMPLE DEPTH INTERVAL, ANALYSIS APPROACH, AND COLLECTION METHOD FOR SOIL SAMPLES TO BE COLLECTED FROM THE PROPOSED SAMPLE LOCATIONS SHOWN ON THIS FIGURE ARE IDENTIFIED IN TABLE 4A OF THE REMEDIAL ACTION WORK PLAN.

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

AECOM

LOCKHEED MARTIN CORPORATION

PROPOSED REMEDIAL ACTION
SHEET 1 OF 3

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

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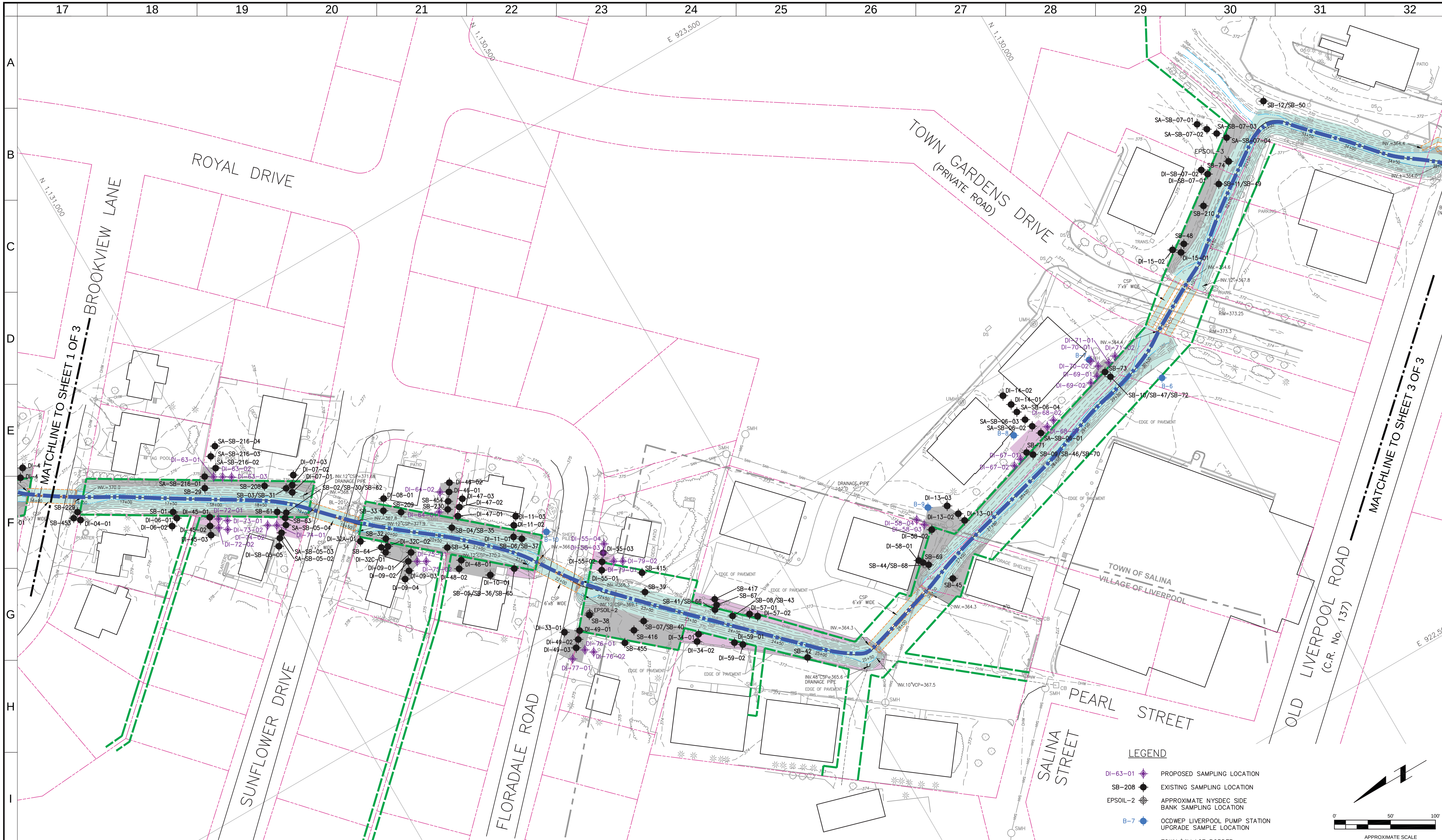

LEGEND

DI-63-01	PROPOSED SAMPLING LOCATION
SB-208	EXISTING SAMPLING LOCATION
EPSOIL-2	APPROXIMATE NYSDEC SIDE BANK SAMPLING LOCATION
B-7	OCDWEP LIVERPOOL PUMP STATION UPGRADE SAMPLE LOCATION
	TOWN/VILLAGE BORDER
	LOCATION HISTORIC BROOK ALIGNMENT
	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (4FT MAX. DEPTH BGS)

0' 50' 100'
APPROXIMATE SCALE

NOTE

1. SEE FIGURE 2C FOR IDENTIFICATION OF ADDITIONAL MAP SYMBOLS.
2. THE PROPOSED SAMPLE DEPTH INTERVAL, ANALYSIS APPROACH, AND COLLECTION METHOD FOR SOIL SAMPLES TO BE COLLECTED FROM THE PROPOSED SAMPLE LOCATIONS SHOWN ON THIS FIGURE ARE IDENTIFIED IN TABLE 4B OF THE REMEDIAL ACTION WORK PLAN.

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

AECOM

LOCKHEED MARTIN CORPORATION

PROPOSED REMEDIAL ACTION
SHEET 2 OF 3

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

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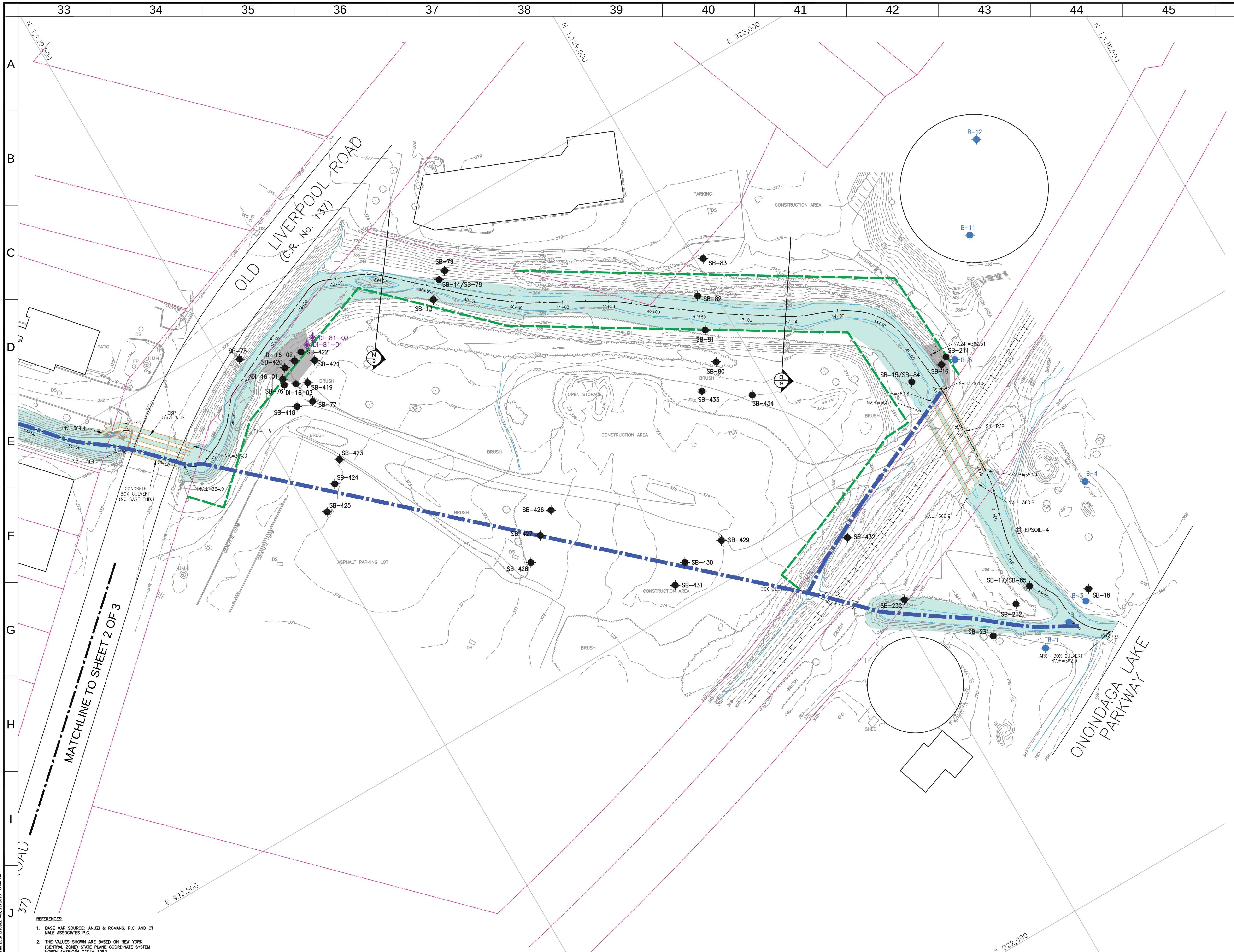

LEGEND

- BLOODY BROOK DRAINAGE DISTRICT EASEMENT
- PROPERTY BORDER
- TOPOGRAPHIC CONTOUR LINE
- WEST BRANCH OF BLOODY BROOK CENTERLINE
- STREAM/WATER EDGE
- UNDERGROUND DRAIN LINE
- OVERHEAD WIRES
- RETAINING WALL
- GUARD RAIL
- UMH — UTILITY MANHOLE
- DMH — DRAINAGE MANHOLE
- SMH — SANITARY MANHOLE
- RAILROAD TRACKS
- CB — CATCH BASIN
- DS — DRAINAGE STRUTURES
- FP — FLAG POLE
- CULVERT
- E 924,000 — NYS PLANE COORDINATE SYSTEM EASTING
- N 1,131,000 — NYS PLANE COORDINATE SYSTEM NORTHING
- BL-115 — AERIAL SURVEY GROUND CONTROL POINT
- 7+50 — CHANNEL CENTERLINE SURVEY STATION
- 367.4 — TOPOGRAPHIC SPOT ELEVATION
- CONIFEROUS TREE
- DECIDUOUS TREE
- LIGHT POLE
- UTILITY POLE / GUY WIRE
- DI-81-01 — PROPOSED SAMPLING LOCATION
- SB-432 — EXISTING SAMPLING LOCATION
- EPSOIL-4 — APPROXIMATE NYSDEC SIDE BANK SAMPLING LOCATION
- B-4 — OCDWEP LIVERPOOL PUMP STATION UPGRADE SAMPLE LOCATION
- LOCATION HISTORIC BROOK ALIGNMENT
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
- CROSS SECTION (PROFILE SHOWN ON FIGURE 9 OF THE REMEDIAL ACTION WORK PLAN)

NOTE

1. THE PROPOSED SAMPLE DEPTH INTERVAL, ANALYSIS APPROACH, AND COLLECTION METHOD FOR SOIL SAMPLES TO BE COLLECTED FROM THE PROPOSED SAMPLE LOCATIONS SHOWN ON THIS FIGURE ARE IDENTIFIED IN TABLE 4C OF THE REMEDIAL ACTION WORK PLAN.

0' 50' 100'
APPROXIMATE SCALE

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

AECOM

LOCKHEED MARTIN CORPORATION

PROPOSED REMEDIAL ACTION
SHEET 3 OF 3

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

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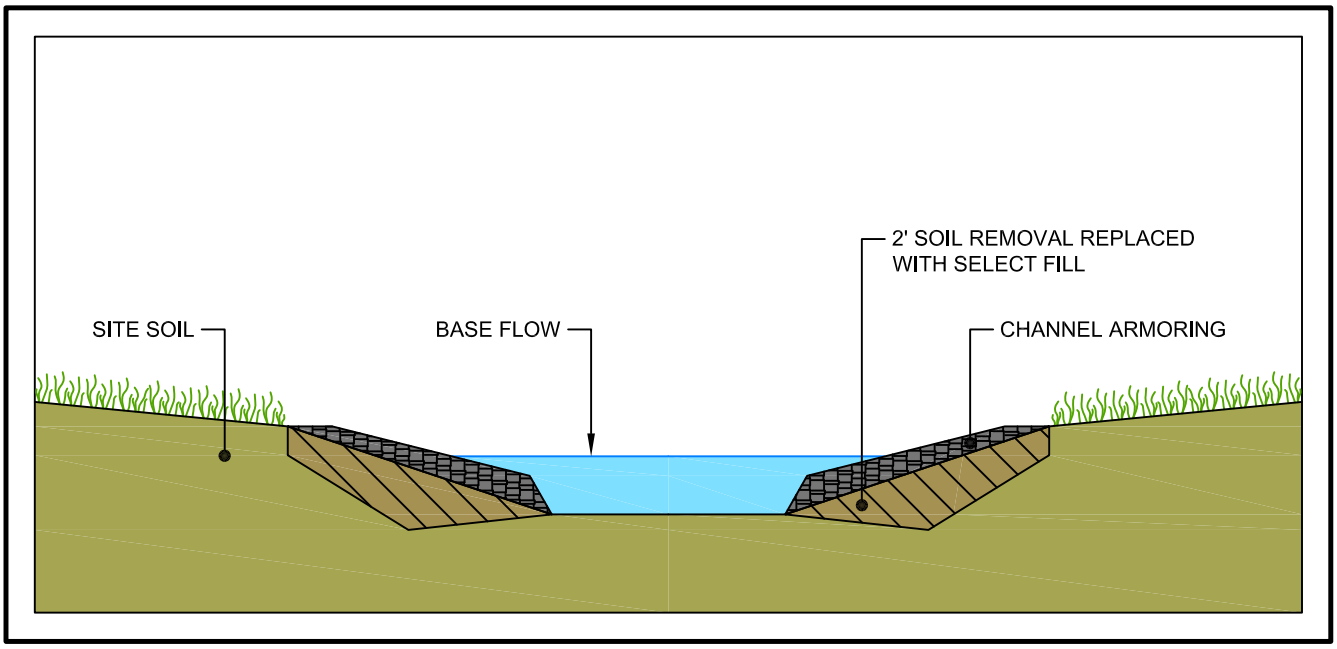
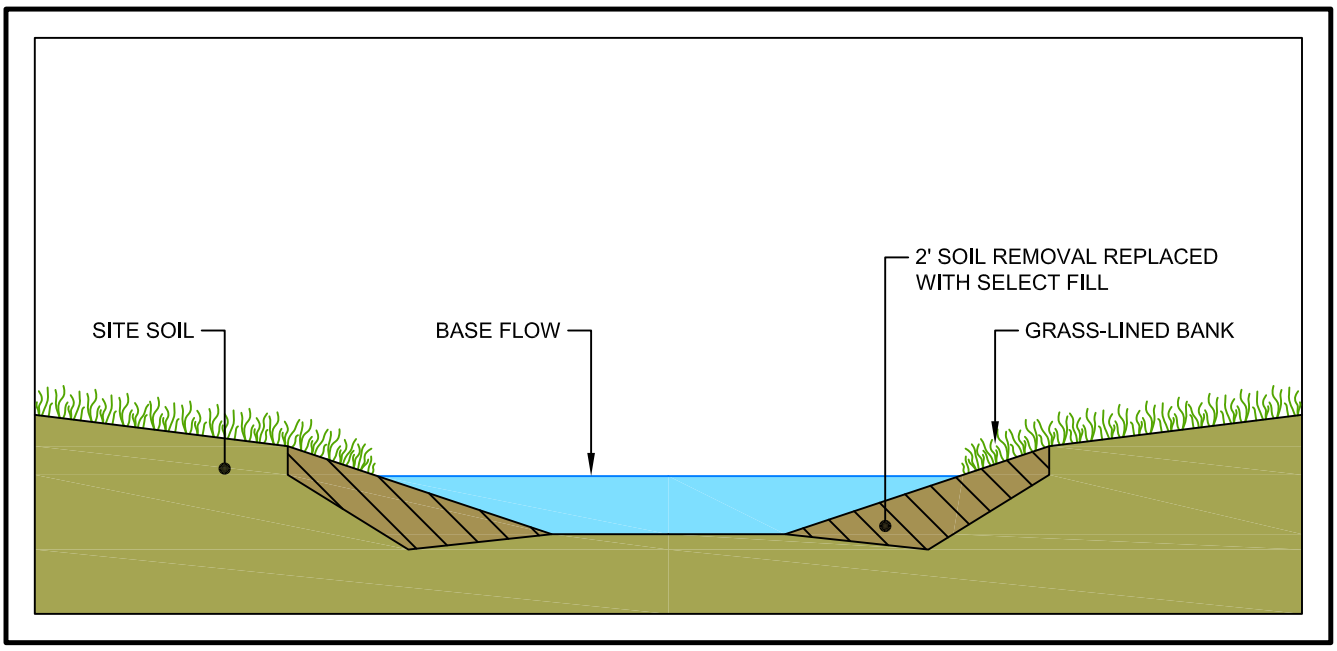


ARMORED BANK RESTORATION



GRASS-LINED BANK RESTORATION

AECOM

LOCKHEED MARTIN CORPORATION

TYPICAL BLOODY BROOK RESTORATIONS

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
A5DECFIG2D.dwg	—	60194430	06 / 2013	2D

Plotted By: bookasr
Layout-Sheet Name: FIGURE 2D
Plot File Date Created: Jun/05/2013 11:19 AM

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