FACT SHEET

Voluntary Cleanup Program

Receive Site Fact Sheets by *Email.* See "For More Information" to Learn How.

Site Name: Bloody Brook
DEC Site #: V00501
Address: Salina, NY 13088

Have questions? See "Who to Contact" Below

Remedy Proposed for Voluntary Cleanup Site Contamination; Public Comment Period and Public Meeting Announced

Public Meeting, Tuesday, 10/8/2013 at 6:00 PM
Holiday Inn
441 Electronics Parkway
Liverpool, New York 13088

NYSDEC invites you to a public meeting to discuss the proposed remedy to address contamination at the site. You are encouraged to provide comments at the meeting, and during the 30-day comment period described in this fact sheet. **An availability session will precede the public meeting from 4:00 pm to 6:00 pm.**

The New York State Department of Environmental Conservation (NYSDEC) has released a proposed cleanup plan for the Bloody Brook site ("site") located in the Town of Salina, Onondaga County. Please see the map for the site location. Documents related to the cleanup of this site can be found at the location(s) identified below under "Where to Find Information."

How to Comment
NYSDEC is accepting written comments about the proposed plan for 30 days, from **September, 25, 2013 through October 25, 2013**. The proposed plan is available for public review at the location(s) identified below under "Where to Find Information." Please submit comments to the NYSDEC project manager listed under Project Related Questions in the "Who to Contact" area below.

Draft Remedial Action Work Plan and Proposed Decision Document
The cleanup plan is described in NYSDEC's Proposed Decision Document, which is based on a more detailed "Remedial Action Work Plan". The proposed remedy consists of:

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.

2. Excavation and off-site disposal of contaminated soil and sediment. Approximately 20,100 cubic yards of soil and 1,700 cubic yards of sediment are estimated to be removed from the site. Clean fill will be brought in to replace the excavated soil and sediment.

3. A site cover will be required to allow for current uses of the site.

4. A Site Management Plan is required to manage and monitor residual materials left buried at the site.

The proposed remedy was developed by Lockheed Martin Corporation ("volunteer(s)") after performing a detailed investigation of the site under New York's Voluntary Cleanup Program (VCP).

Summary of the Investigation
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.

Next Steps
NYSDEC will consider public comments, revise the plan as necessary, and issue a final Decision Document. New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The draft Remedial Action Work Plan and Proposed Decision Document are revised as needed to describe the selected remedy, and will be made available to the public. The volunteer(s) may then design and perform the cleanup action to address the site contamination, with oversight by NYSDEC and NYSDOH.

NYSDEC will keep the public informed throughout the investigation and cleanup of the site.

Background
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:

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. The site 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. Between 1944 and 1978, the course of the brook channel was modified five times. The modifications occurred as part of NYS 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. In February 1997, NYSDEC issued a decision document for the Electronics Park Facility. The final remedy implemented for the Electronics Park Facility included, in part, the removal of cadmium-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 under the Onondaga County Drainage District. The brook generally flows south, and is a tributary to Onondaga Lake.

Additional site details, including environmental and health assessment summaries, are available on NYSDEC's website at:
http://www.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm?pageid=3&progno=V00501

Voluntary Cleanup Program: New York's Voluntary Cleanup Program (VCP) was developed to encourage private sector volunteers to investigate and clean up contaminated properties and return these sites to productive use. Once cleaned up, the properties may be redeveloped for commercial, industrial, residential or public use.

For more information about the VCP, visit: http://www.dec.ny.gov/chemical/8442.html

FOR MORE INFORMATION

Where to Find Information
Project documents are available at the following location(s) to help the public stay informed.

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

NYS Department of Environmental Conservation
Attn: Richard Mustico, P.E.
625 Broadway
Albany, NY 12233
Phone: 518-402-9676
(rxmustic@gw.dec.state.ny.us)

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

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

Project documents are also available on the NYSDEC website at:
http://www.dec.ny.gov/chemical/37558.html

Who to Contact
Comments and questions are always welcome and should be directed as follows:

Project Related Questions
Richard Mustico
Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7013
518-402-9788
rxmustic@gw.dec.state.ny.us

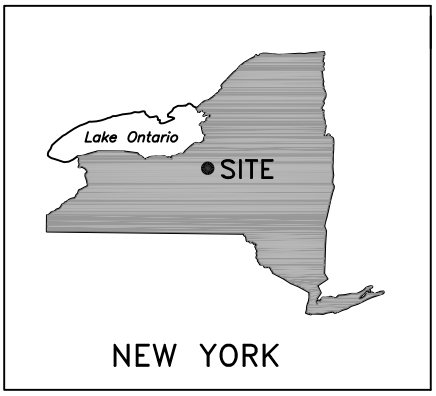
Project Related Health Questions
Mark Sergott
New York State Department of Health
Bureau of Environmental Exposure Investigation
Empire State Plaza - Corning Tower, Room 1787
Albany, NY 12237
518-402-7860
BEEI@health.state.ny.us

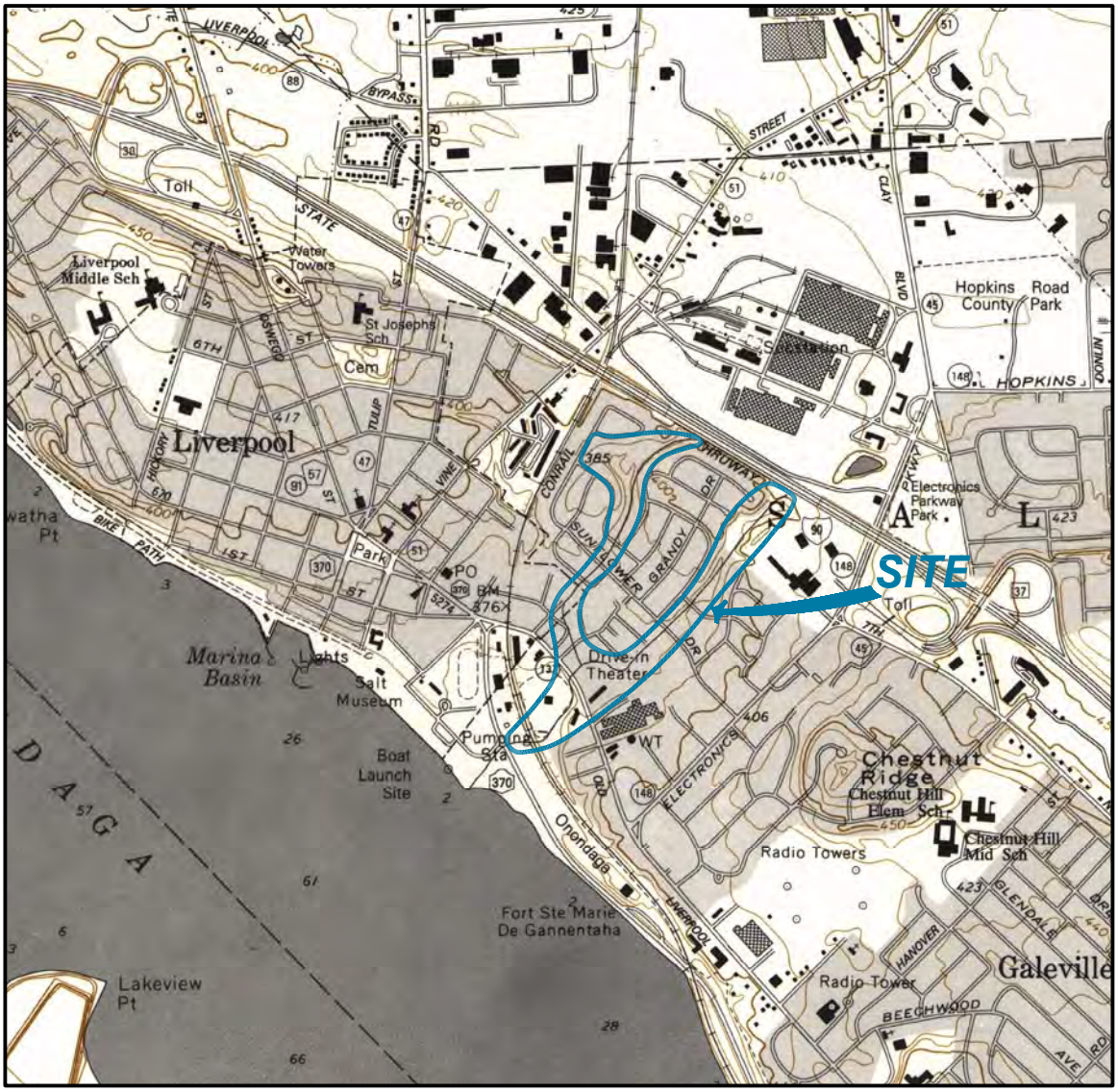
We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Site Fact Sheets by Email
Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: http://www.dec.ny.gov/chemical/61092.html. It's quick, it's free, and it will help keep you *better informed*.

As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.





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

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
A4DECFIG1.dwg	—	60194430	05 / 2013	1

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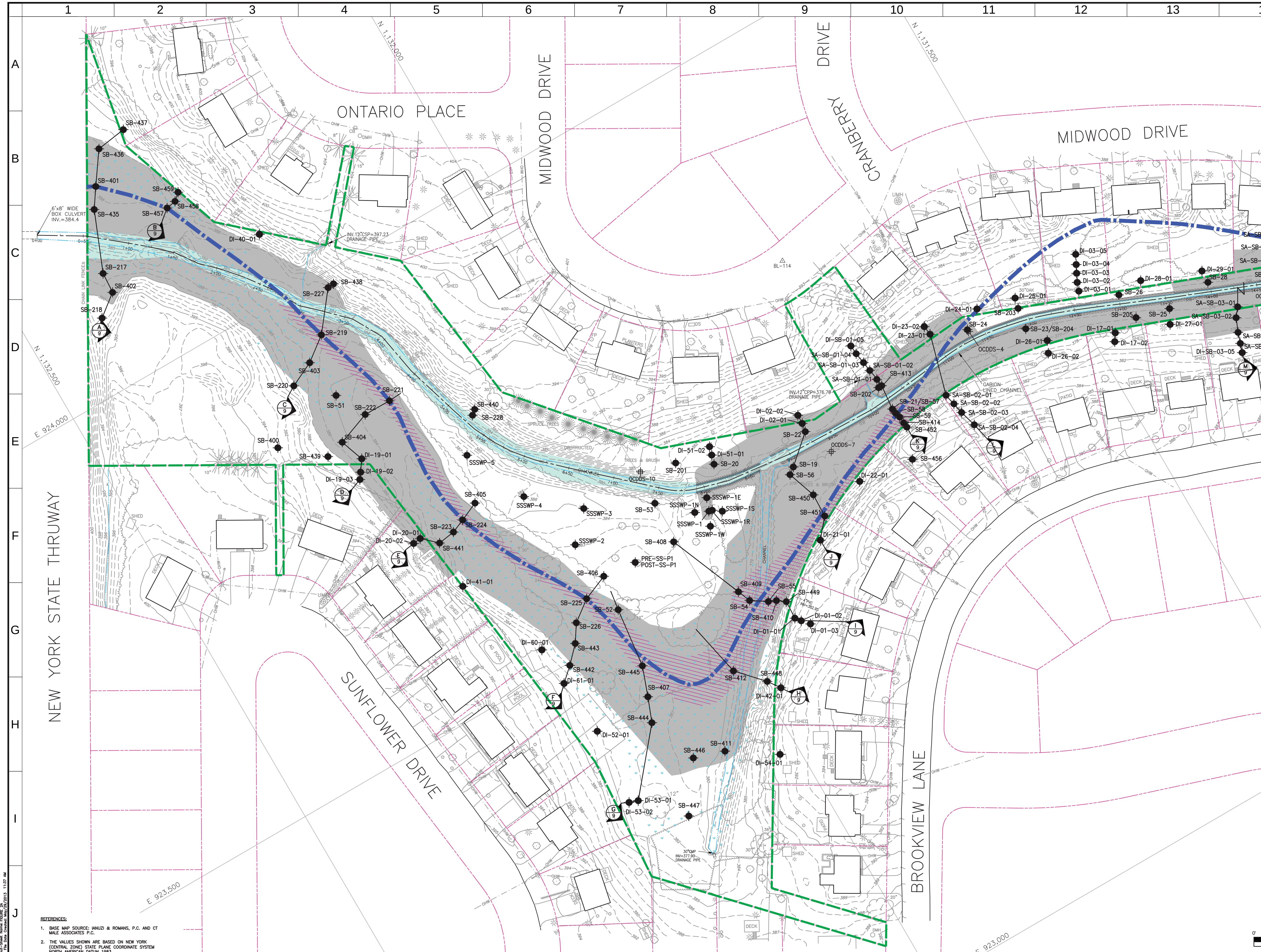

LEGEND

(symbol)	WETLAND/PHRAGMITES
DI-62-01	PROPOSED SAMPLING LOCATION
SB-408	EXISTING SAMPLING LOCATION
OCDDS-10	APPROXIMATE ONONDAGA COUNTY SIDE BANK SAMPLING LOCATION
(symbol)	GABIONS (ROCK-FILLED WIRE CAGES)
(symbol)	LOCATION HISTORIC BROOK ALIGNMENT
(symbol)	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
(symbol)	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL.
(symbol)	APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT – 6FT BGS)
A / 9	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.

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 1 OF 3

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
D7DECFIG2.dwg	---	60194430	05 / 2013	2A

Plotted By: bookasr
Layout-Sheet Name: FIGURE 2A
Plot File Date Created: May/29/2013 11:37 AM

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ROYAL DRIVE

BROOKVIEW LANE

TOWN GARDENS DRIVE
(PRIVATE ROAD)

SUNFLOWER DRIVE

FLORADALE ROAD

PEARL STREET

SALINA STREET

OLD LIVERPOOL ROAD
(C.R. No. 137)

TOWN OF SALINA
VILLAGE OF LIVERPOOL

MATCHLINE TO SHEET 1 OF 3

MATCHLINE TO SHEET 3 OF 3

N 1,131,000

N 1,130,500

N 1,130,000

E 923,000

E 923,500

E 922,500

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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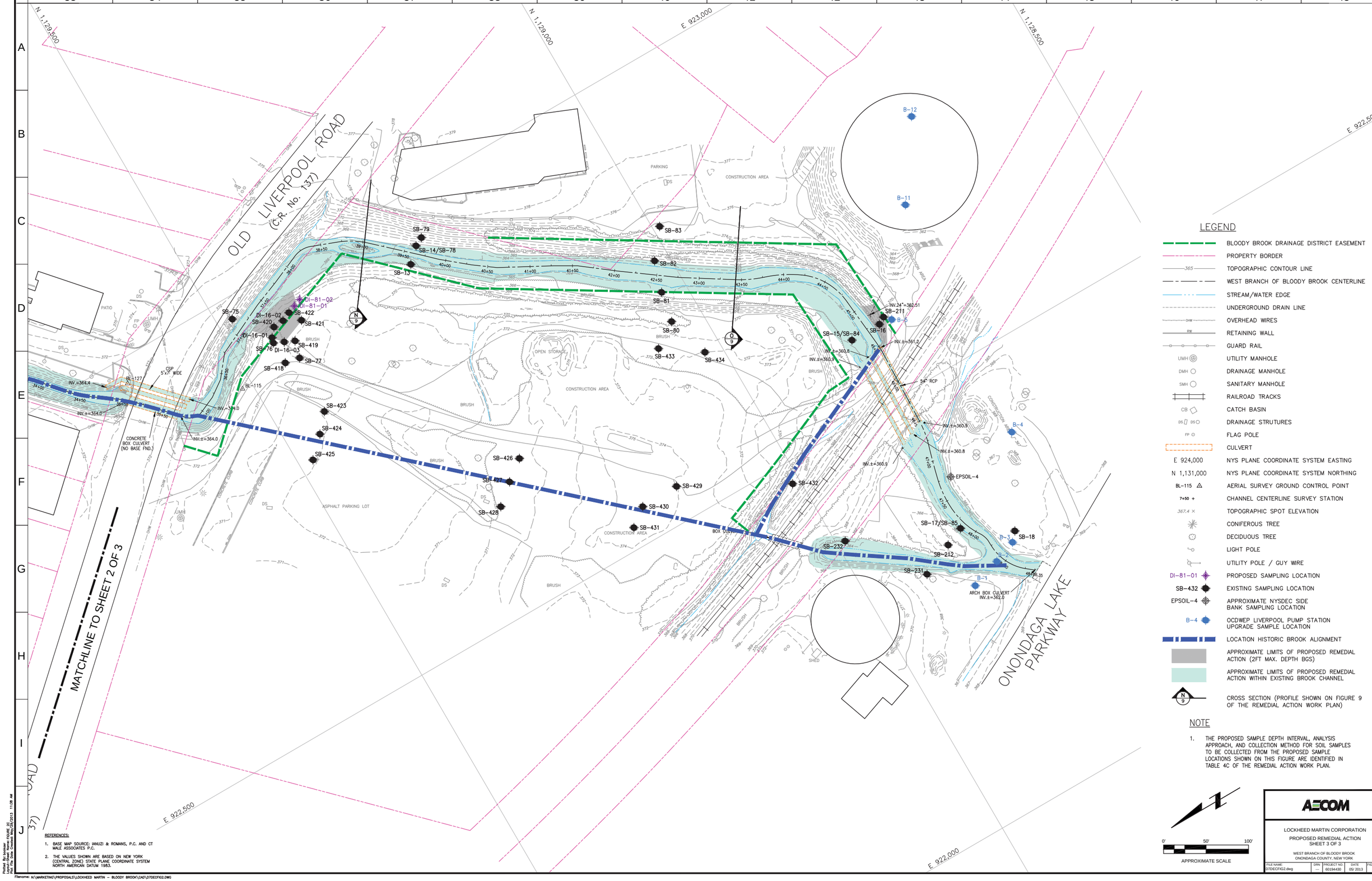

LEGEND

- BLOODY BROOK DRAINAGE DISTRICT EASEMENT
- PROPERTY BORDER
- 365 TOPOGRAPHIC CONTOUR LINE
- WEST BRANCH OF BLOODY BROOK CENTERLINE
- STREAM/WATER EDGE
- UNDERGROUND DRAIN LINE
- OHW OVERHEAD WIRES
- RW 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
- N 9 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.

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.

0' 50' 100'
APPROXIMATE SCALE

AECOM

LOCKHEED MARTIN CORPORATION
PROPOSED REMEDIAL ACTION
SHEET 3 OF 3
WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

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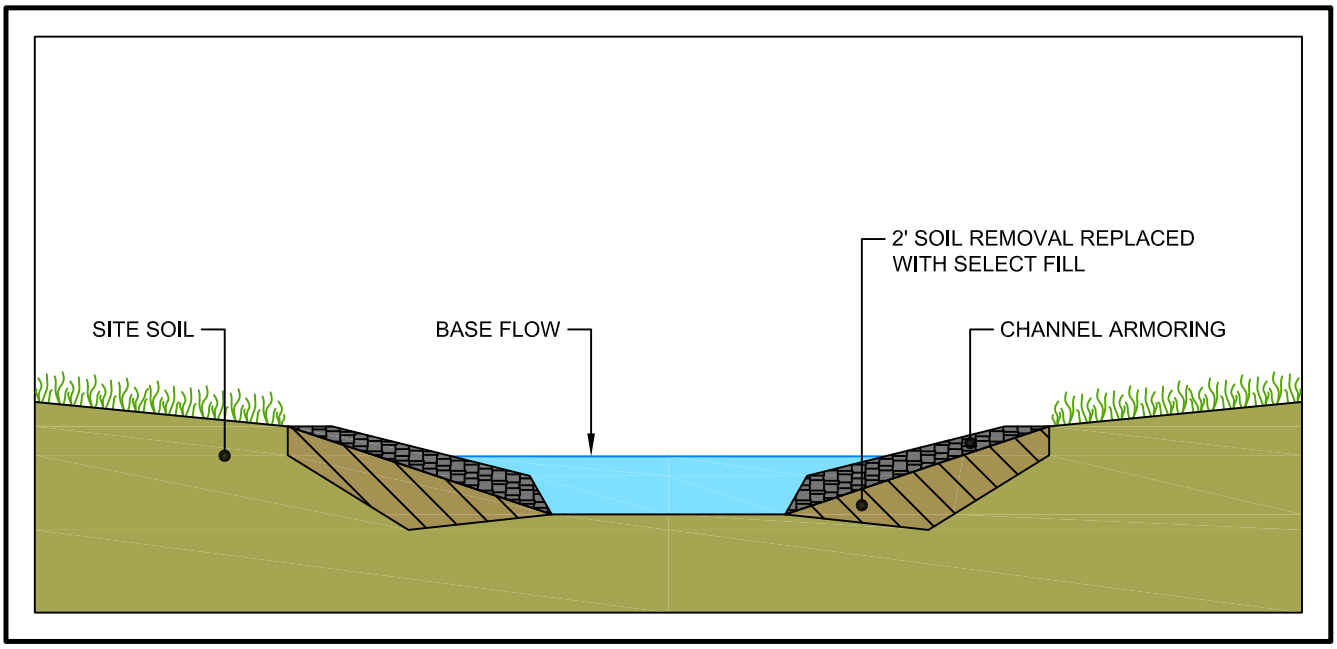
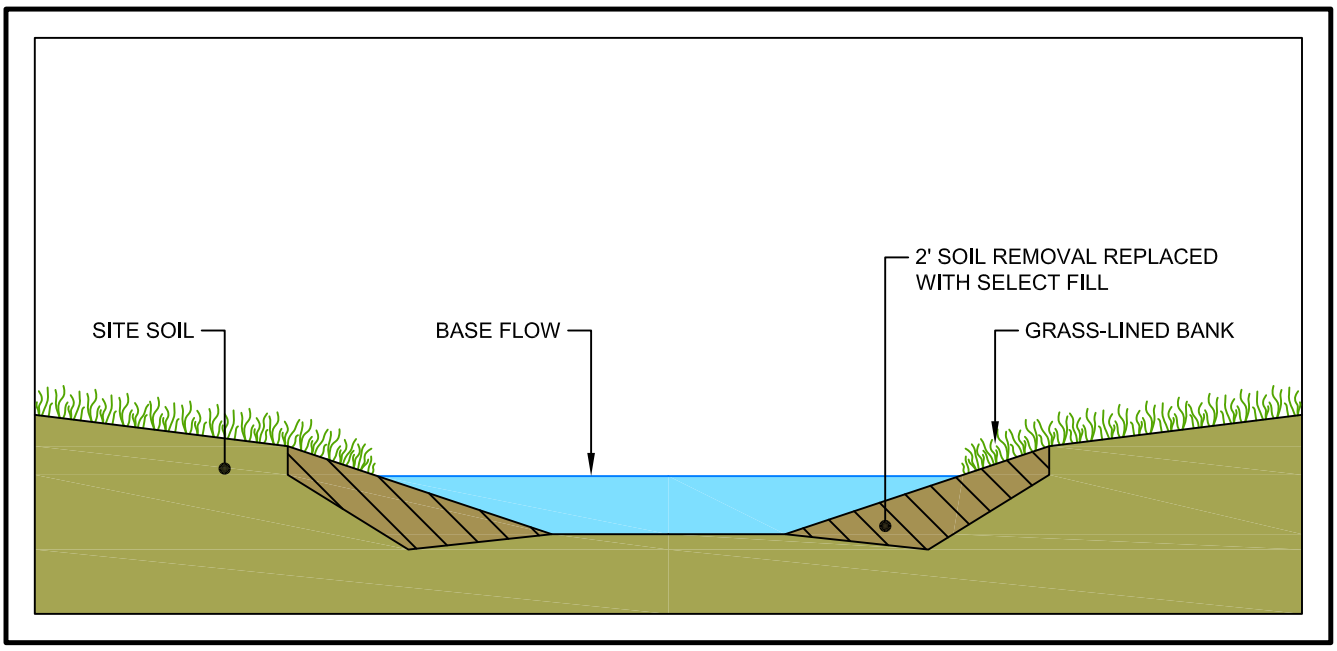


ARMORED BANK RESTORATION



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.
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