

ATTACHMENT C

Pre-mobilization and Post-demobilization Site Condition Survey Reports

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Final
Pre-Mobilization Survey Report
For
Soils Remedial Action
AOC 1 at Occidental Chemical Corporation Property
Former Lake Ontario Ordnance Works
Niagara County, New York

Prepared for:

U.S. Army Corps of Engineers
Buffalo District

Contract No. W912QR-12-D-0011
Delivery Order W912P417F0022

Prepared by:

ERT, Inc.
14401 Sweitzer Lane, Suite 300
Laurel, Maryland 20707
(301) 361-0620

Approvers:



04 September 2018

Date

Project Manager

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1.0 PRE-MOBILIZATION SURVEY

Prior to the commencement of site work, a pre-mobilization survey was conducted to adequately document the site conditions. The pre-mobilization survey includes documentation of site conditions, land surveying, and soils characterization. The results of the pre-mobilization survey are summarized below.

2.0 SITE CONDITION SURVEY

The project site is currently a vacant, undeveloped property, with no structures present. The property is relatively flat and heavily forested and contains soil, waste materials, and comingled debris from past DoD activities. The area is zoned low-density residential. A north-south gravel road adjacent to the site is used as an access road to the private wilderness preserve by the Niagara River Anglers Association (NRAA). Field observations note the presence of mounded soil and surface debris within the AOC 1 area. The site contains dense vegetation and does not appear to have any active usage. The access road to the site (NRAA access road) is in relatively poor condition with numerous potholes along the road. The vegetation lining the access road is slightly overgrown and encroach on the lane of travel. A photographic log depicting site conditions is included as **Appendix 1** of this report.

3.0 LAND SURVEY

The pre-mobilization land survey was completed by McIntosh & McIntosh, P.C., a New York state licensed surveyor. The purpose of the initial land survey was to determine initial topography from which the volume of soil removed will be generated, from which progress and restoration will be measured. The surveyors calculated the pre-construction elevations of the NRAA access road and AOC 1 site. Due to the dense vegetation across the site, the topographic survey was conducted following vegetation removal activities. The resulting topographic map is included as **Appendix 2** of this report. Post-excavation surveys will be completed to document the amount of soil and debris that has been removed and to document the post-remediation site topography.

4.0 SOIL WASTE CHARACTERIZATION

Soils within AOC 1 were characterized for the purposes of waste disposal prior to any activities to allow for live-loading of contaminated soils. Based on previous sampling results, soil outside of the TNT and lead contaminated area is not expected to contain chemicals at concentrations that would be characterized as hazardous waste. ERT collected composite soil samples from three decision units (DUs), one composite waste characterization soil sample in the TNT and lead contaminated area (DU 2) and two composite waste characterization soil samples outside of the contaminated area but within the debris field (DUs 1 and 3). Each composite sample contained four increments that were collected in a systematic random fashion to ensure the sample was representative of the DU. Each increment was collected with the use of a mini-excavator, to the depth of the native soil. Waste characterization samples were analyzed by TestAmerica in accordance with the Modern Landfill Generator waste characterization permit requirements. Waste characterization analysis determined all soil can be disposed of as non-hazardous waste. The preliminary analytical report is included as **Appendix 3** of this pre-mobilization survey report.

5.0 UTILITY CLEARANCE

Prior to the commencement of field activities, a utility location request was submitted to Dig Safely New York (1-800-962-7962). All partnering utility companies fulfilled the request. No underground utilities were identified within the AOC 1 site or surrounding area.

Appendix 1

Site Condition Survey Photo Log

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Photograph 1. View of the north-south gravel dirt road entering the project site. Slightly overgrown vegetation along the road. Numerous potholes along the road, filled with water following a rain event.



Photograph 2. Dense vegetation cover within the debris field area. Vehicles and personnel on the access road in the background.



Photograph 3. Abandoned tires within the densely vegetated AOC 1.



Photograph 4. Miscellaneous debris located on the surface within the debris field area. Picture taken following clearance of small vegetation.

Appendix 2 Topographic Survey Map

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SITE MATCHLINE

REPUTED OWNER
OCCIDENTAL CHEMICAL CORPORATION

BRUSH & TREES

BRUSH & TREES

CLEARED AREA

BRUSH & TREES

STONE PARKING

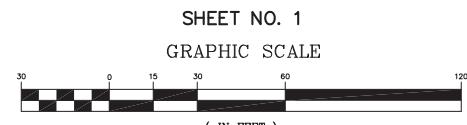
BRUSH & TREES

STONE PARKING

LEGEND

DEAT Ø P.P.
OVERHEAD ELECTRIC & TELEPHONE
POWER POLE

- GENERAL NOTES
- 1) BENCHMARK: TIMBER SPIKE IN NORTH FACE OF POWER POLE
NG 1128/NYNEC 1128 LOCATED ON THE SOUTH SIDE OF BALMER
ROAD, APPROXIMATELY 76 $\frac{1}{2}$ FT. EAST OF LANE TO LANDS OF NIAGARA
RIVER ANGLERS ASSOCIATION - ELEVATION 311.38 (NAVD 88)
 - 2) NO UNDERGROUND UTILITY INVESTIGATION WAS PERFORMED AS PART
OF THIS PROJECT.
 - 3) SBL - PART OF TOWN OF PORTER TAX MAP NO. 60.00-3-5
 - 4) COORDINATES SHOWN REFER TO NEW YORK STATE PLANE (NAD 83).



SITE NAME: LOOW AOC 1 SURVEY

McINTOSH & McINTOSH, P.C.
CONSULTING ENGINEERS, LAND SURVEYORS, PLANNERS
429 PINE STREET, LOCKPORT, NEW YORK 14094
PHONE 433-2535

REVISION	REVISION

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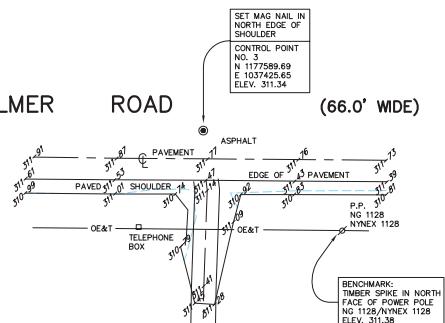
NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS
MAP IS A VIOLATION OF SECTION 7209, PROVISION
2 OF THE NEW YORK STATE EDUCATION LAW.

LOCATION	TOWN OF PORTER, NIAGARA COUNTY, NEW YORK	DRAWN MAS JEM, III
JOB No.	9305	SCALE: 1" = 30'
DESC.		DATE: AUGUST 15, 2018

SET MAG NAIL IN
NORTH EDGE OF
SHOULDER
CONTROL POINT
NO. 4
N 1177593.58
E 1030325.42
ELEV. 311.73

BALMER ROAD

(66.0' WIDE)



MATCHLINE



REPUTED OWNER
OCCIDENTAL CHEMICAL CORPORATION

REPUTED OWNER
OCCIDENTAL CHEMICAL CORPORATION

SITE MATCHLINE

LEGEND

— OE&T
Ø P.P.
OVERHEAD ELECTRIC & TELEPHONE
POWER POLE

GENERAL NOTES

- 1) BENCHMARK: TIMBER SPIKE IN NORTH FACE OF POWER POLE NG 1128/NYNEX 1128 LOCATED ON THE SOUTH SIDE OF BALMER ROAD, APPROXIMATELY 76± EAST OF LANE TO LANDS OF NIAGARA RIVER ANGLERS ASSOCIATION - ELEVATION 311.38 (NAVD 88)
- 2) NO UNDERGROUND UTILITY INVESTIGATION WAS PERFORMED AS PART OF THIS PROJECT.
- 3) SBL - PART OF TOWN OF PORTER TAX MAP NO. 60.00-3-5
- 4) COORDINATES SHOWN REFER TO NEW YORK STATE PLANE (NAD 83).

MATCHLINE

SHEET NO. 2

GRAPHIC SCALE



SITE NAME: LOOW AOC 1 SURVEY

McINTOSH & McINTOSH, P.C.
CONSULTING ENGINEERS, LAND SURVEYORS, PLANNERS
429 PINE STREET, LOCKPORT, NEW YORK 14094
PHONE 433-2535

TOPOGRAPHICAL MAP OF PART OF LOT-19, TWP.-15, R.-9, HOLLAND PURCHASE		DRAWN COMP. DESC. CADDLE
LOCATION TOWN OF PORTER, NIAGARA COUNTY, NEW YORK		MAS JEM, III PHONE 625-8360 9305.DWG
REVISION	REVISION	

NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS
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2 OF THE NEW YORK STATE EDUCATION LAW

JOB No. 9305 SCALE: 1" = 50' DATE: AUGUST 15, 2018

Appendix 3
Soil Waste Characterization Analytical Report
(provided electronically)

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Final
Post-Demobilization Survey Report
For
Soils Remedial Action
AOC 1 at Occidental Chemical Corporation Property
Former Lake Ontario Ordnance Works
Niagara County, New York

Prepared for:

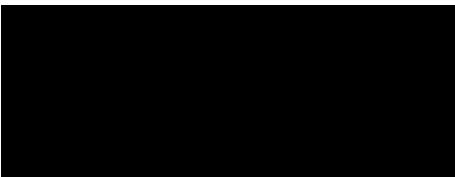
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(301) 361-0620

Approvers:



10 October 2019

Date

Project Manager

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1.0 POST-DEMOBILIZATION SURVEY

Following the completion of site work and final demobilization, a post-demobilization survey was conducted to adequately document the site conditions. The post-demobilization survey includes documentation of site conditions, land surveying, and soil characterization.

2.0 SITE CONDITION SURVEY

The project site currently remains a vacant, undeveloped property, with no structures present. The area is zoned low-density residential. No contaminated soils, waste materials, or comingled debris from past DoD activities remain within the AOC 1 site. The site has been restored to a grade matching that of the surrounding area to mitigate ponding of water and has been hydroseeded with a native New York wetland grass mix.

A north-south gravel road adjacent to the site is used as an access road to the private wilderness preserve by the Niagara River Anglers Association (NRAA). The property along the access road contains dense vegetation and does not appear to have any active usage. The condition of the access road to the site (NRAA access road) has been restored in several sections with a suitable road base stone material. Overgrown vegetation lining the road has been cut back to the edges of the road, opening the lane of travel for large vehicular traffic. A photographic log depicting post-demobilization site conditions is included as Appendix 1 of this report.

3.0 LAND SURVEY

The post-demobilization land survey was completed by McIntosh & McIntosh, P.C., a New York state licensed surveyor. The purpose of the post-demobilization land survey was to document the restored site and access road topography and to compare restored topography to that of the pre-mobilization topography. The resulting topographic maps are included as Appendix 2 of this report.

4.0 SITE SOILS CHARACTERIZATION

A total of 8,708.32 tons of soil and debris were removed from the AOC 1 site. Prior to backfill and restoration efforts soil sampling was performed to confirm the removal of all contaminated soil. Following confirmation of successful contaminant removal, clean backfill was imported to restore the site.

5.0 UTILITY CLEARANCE

Prior to the commencement of field activities, a utility location request was submitted to Dig Safely New York (1-800-962-7962). All partnering utility companies fulfilled the request. No underground utilities were identified within the AOC 1 site or surrounding area. No utilities were encountered during site remediation activities and no new utilities were installed.

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Appendix 1
Site Condition Survey Photo Log

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Photograph 1. View of the access road, looking north, alongside of AOC 1. Staging area has been removed and road has been restored.



Photograph 2. View of access road looking north. Road is free of major potholes and overgrowing vegetation following road restoration.



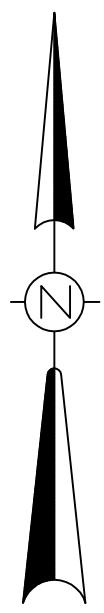
Photograph 3. View of AOC 1 looking west from access road following restoration activities.



Photograph 4. View of AOC 1 looking northwest from access road following restoration activities.

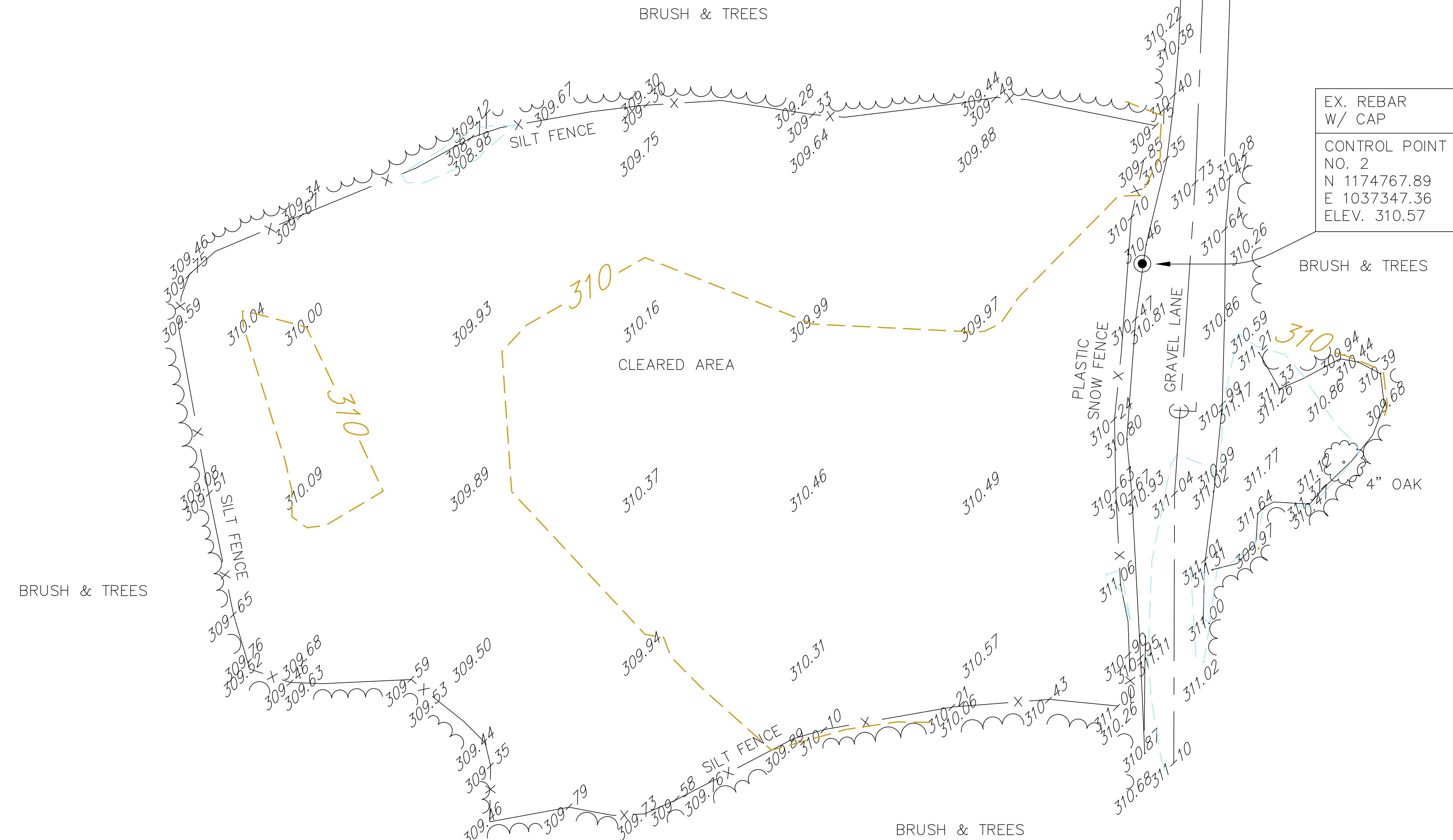
Appendix 2 Topographic Survey Maps

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REPUTED OWNER
OCCIDENTAL CHEMICAL CORPORATION

SITE MATCHLINE



LEGEND

OE&T
P.P.

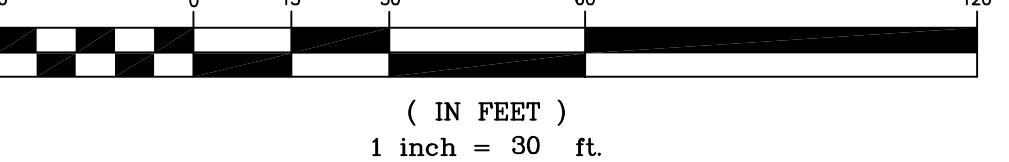
GENERAL NOTES

- 1) BENCHMARK: TIMBER SPIKE IN NORTH FACE OF POWER POLE NC 1128/VYNEX 11128 LOCATED ON THE SOUTH SIDE OF BAUMER ROAD, APPROXIMATELY 76± FEET EAST OF LANE TO LANDS OF NIAGARA RIVER ANGLERS ASSOCIATION - ELEVATION 311.38 (NAVD 88)
- 2) NO UNDERGROUND UTILITY INVESTIGATION WAS PERFORMED AS PART OF THIS PROJECT.
- 3) SBL - PART OF TOWN OF PORTER TAX MAP NO. 60.00-3-5
- 4) COORDINATES SHOWN REFER TO NEW YORK STATE PLANE (NAD 83).



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SHEET NO. 1
GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

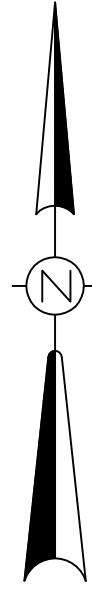
SITE NAME: LOOW AOC 1 SURVEY

McINTOSH & McINTOSH, P.C.

CONSULTING ENGINEERS, LAND SURVEYORS, PLANNERS
429 PINE STREET, LOCKPORT, NEW YORK 14094
PHONE 625-8360

REVISION	REVISION
RECORD PLAN SEPTEMBER 27, 2019	

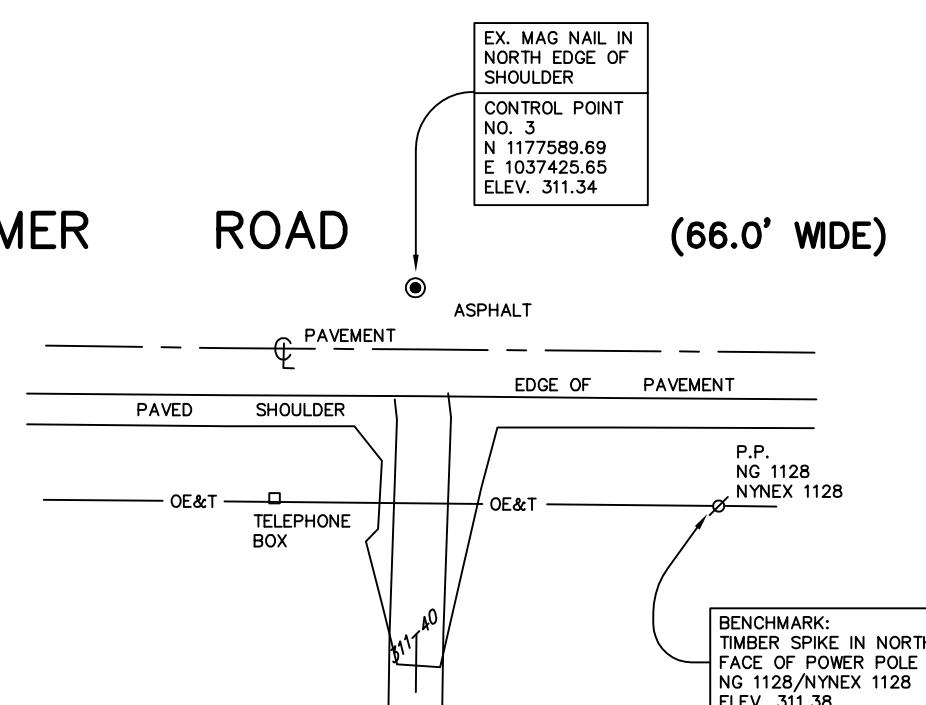
TOPOGRAPHICAL MAP OF PART OF LOT-19, TWP.-15, R.-9, HOLLAND PURCHASE		
LOCATION	TOWN OF PORTER, NIAGARA COUNTY, NEW YORK	
NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS MAP IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.		DRAWN MAS COMP. JEM, III DESC.
JOB No. 9305	SCALE: 1" = 30'	DATE: AUGUST 15, 2018 CADDFILE 9305.DWG



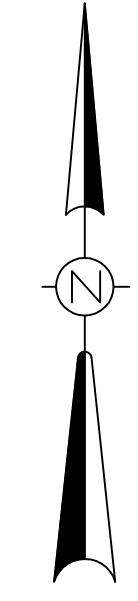
EX. MAG NAIL IN
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BALMER ROAD

(66.0' WIDE)



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- 5) GRAY TONE ELEVATIONS AND LINES DEPICT FIELD DATA COLLECTED. AUGUST 15, 2018.

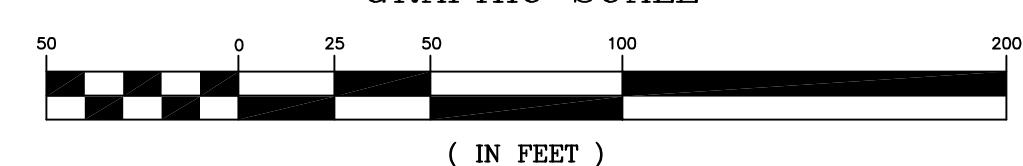
MATCHLINE



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SHEET NO. 2

GRAPHIC SCALE



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429 PINE STREET, LOCKPORT, NEW YORK 14094
PHONE 433-2535

REVISION	REVISION
RECORD PLAN	
SEPTEMBER 27, 2019	

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DRAWN M.A.S.
CLERK JEM, III
DESC
CADDFILE 9305.DWG

JOB No. 9305

SCALE: 1" = 50'

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