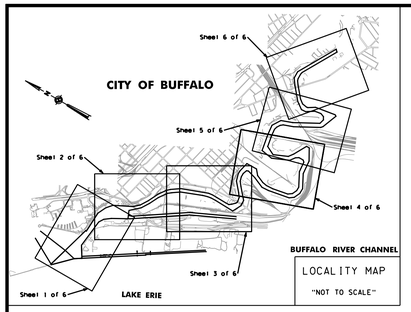


N 1,043,000 E 1,076,000 N 1,042,000 N 1,041,000

E 1,075,000 N 1,044,000

E 1,074,000 N 1,044,000

E 1,073,000 N 1,043,000 N 1,042,000 E 1,073,000 N 1,041,000

E 1,076,000 E 1,075,000 E 1,074,000 N 1,040,000

See Sheet VH - 105

See Sheet VH - 303

670+00 665+00 660+00 655+00 650+00 645+00 640+00 637+00 635+00 630+00 625+00 620+00 615+00 610+00 605+00 600+00 595+00 592+50 590+00

SITE SPECIFIC NOTES:

1. PROJECT DEPTHS AND SOUNDINGS ARE REFERRED TO LOW WATER DATUM OF 569.2 FEET IGLD 1985.

2. HORIZONTAL CONTROL IS REFERRED TO NORTH AMERICAN DATUM 1983 NEW YORK STATE PLANE COORDINATE SYSTEM - WEST ZONE.

3. PROJECT DEPTH IS 23.0.

4. THE FILES USED IN THE PREPARATION OF THIS DRAWING ARE ON
DISK:HARBOR 2012
BFR12PCVH1034-6.DGN
BFR12PCV-HP.DGN

5. SOUNDINGS WERE TAKEN BY THE BUFFALO DISTRICT ARMY CORPS OF ENGINEERS BY D. BANNING AND PARTY ON JUNE 25, 2012 THROUGH JULY 10, 2012. USING
GPS POSITIONING, POS-MV VER.4 AND HEMISPHERE MBX-4 BEACON USED;YOUNGSTOWN
SONAR HEAD: 240 KHZ, SEABAT 7101 MULTIBEAM
1.5 DEGREE BEAMS 210 DEGREE ARC
HEAVE PITCH AND ROLL: APPLANIX POS-MV VER. 4
VELOCITY PROFILER: RESON SVP 15
HYPACK SURVEY SOFTWARE
SURVEY LAUNCH CROTTY

6. THE SOUNDING INFORMATION DEPICTED ON THE MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICTING THE GENERAL CONDITION AT THAT TIME.

7. THE TOPOGRAPHIC INFORMATION IS BASED ON AERIAL PHOTOGRAPHY ACQUIRED FROM 1998 THROUGH 2004.

8. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OUTLINED IN CORPS OF ENGINEERS HYDROGRAPHIC SURVEY MANUAL EM 1110-2-1003.

| CHANNEL CORNER COORDINATES | | |
|---|---|---|
| POINT | NORTHING | EASTING |
| 504 | 1043446.50 | 1073537.61 |
| 506 | 1043369.41 | 1073746.31 |
| 508 | 1043272.54 | 1073777.29 |
| 509 | 1043662.25 | 1073401.73 |
| 510 | 1042824.67 | 1073777.29 |
| 511 | 1043653.71 | 1073576.07 |
| 512 | 1042260.28 | 1073403.81 |
| 513 | 1043538.15 | 1074068.38 |
| 514 | 1041897.16 | 1073425.63 |
| 515 | 1042574.94 | 1074075.81 |
| 516 | 1040787.69 | 1073630.28 |
| 517 | 1042753.28 | 1073812.90 |
| 518 | 1040573.47 | 1073783.81 |
| 519 | 1042347.05 | 1073637.38 |
| 520 | 1040426.19 | 1074097.71 |
| 521 | 1042108.82 | 1073594.59 |
| 522 | 1040422.82 | 1074378.91 |
| 523 | 1041744.52 | 1073616.47 |
| 524 | 1040780.61 | 1075066.52 |
| 525 | 1040944.34 | 1073764.07 |
| 526 | 1040843.83 | 1075772.96 |
| 527 | 1040749.02 | 1073904.06 |
| 528 | 1041174.48 | 1076363.98 |
| 529 | 1040636.00 | 1074145.83 |
| 530 | 1041331.14 | 1076363.30 |
| 531 | 1040633.55 | 1074350.12 |
| 532 | 1041702.15 | 1075692.89 |
| 533 | 1041000.89 | 1075056.05 |
| 534 | 1041884.48 | 1075447.91 |
| 535 | 1041048.97 | 1075593.50 |
| 536 | 1041884.48 | 1075447.91 |
| 537 | 1041138.59 | 1075669.08 |
| 538 | 1043052.18 | 1075360.34 |
| 539 | 1041378.72 | 1075668.16 |
| 540 | 1043154.21 | 1075929.50 |
| 541 | 1041533.77 | 1075568.01 |
| 542 | 1043191.02 | 1076295.98 |
| 543 | 1041722.55 | 1075311.24 |
| 545 | 1042582.77 | 1074939.39 |
| 547 | 1043197.92 | 1075037.98 |

| LEGEND OF SYMBOLS | |
|---|---|
| 17+00 | CHANNEL STATIONING |
| 417 | CHANNEL CORNER |
| H.L.F | HARBOR LINE CORNER |
| | FEDERAL CHANNEL |
| | HARBOR LINE |
| | SUBMARINE CABLE |
| | CAN BOUY |
| | NUN BOUY |
| | LIGHTED BOUY |
| | FIXED LIGHT |
| | LIGHT HOUSE |
| W | LIGHT COLOR WHITE |
| R | LIGHT COLOR RED |
| G | LIGHT COLOR GREEN |
| FL | FLASHING LIGHT |
| F | FIXED LIGHT |
| Oc | OCCULTING LIGHT |
| Iso | EQUAL INTERVAL |
| AL | ALTERNATING |
| Q | QUICK (FLASHING) |
| S | LIGHT CYCLE SECONDS |

**SOUNDING COLOR LEGEND**

- DEPTHS 0.1' OR MORE ABOVE CONTRACT DEPTH
- DEPTHS WITHIN ONE FOOT OF OVERDEPTH
- DEPTHS 1.0' OR MORE BELOW CONTRACT DEPTH

US Army Corps of Engineers
Buffalo District

Drawn by: PAN
Checked by: ACK
Reviewed by:
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Chief, Survey Section
Approved:
Raymond N. Lewis
Chief, NY/PA Navigation and Maintenance Section
Date: August 7, 2012

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
BUFFALO, NEW YORK 14207-3199

To view a color version of this map, point a web browser to http://www.lrb.usace.army.mil/ANDBAFC/NAVIGMGT/Survey/survey.htm | This drawing was prepared using a CADD system. Scaling may be distorted.

BUFFALO HARBOR, N.Y.
BUFFALO RIVER AND SHIP CANAL
**PROJECT CONDITION SOUNDINGS 2012**
SCALE: 1" = 100'
SCALE OF FEET
25 0 50 100

Sheet reference number:
**VH - 304**
Sheet **4** of **6**

**12S-BFR-3/4**