

**F00538**

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

**DESCRIPTIVE REPORT**

*Type of Survey:* **Field examination**

*Registry Number:* **F00538**

**LOCALITY**

*State:* **New York**

*General Locality:* **East River**

*Sub-locality:* **63<sup>rd</sup> Street Tunnel**

**2007**

CHIEF OF PARTY  
**LT(jg) Matthew Jaskoski, NOAA**

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DATE

NOAA FORM 77-28  
(11-72)

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

## HYDROGRAPHIC TITLE SHEET

**F00538**

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State: **New York**

General Locality: **East River**

Sub-Locality: **63<sup>rd</sup> Street Tunnel**

Scale: **1:5,000** Date of Survey: **03/13/06 to 03/19/07**

Instructions Dated: **01/05/05** Project Number: **OPR-B310-NRT5-07**

Change No.1 Dated: **N/A**

Change No.2 Dated: **N/A**

Vessel: **NOAA NRT-5, S3002**

Chief of Party: **LT(jg) Matthew Jaskoski, NOAA**

Surveyed by: **NOAA Navigational Response Team 5 Personnel**

Soundings by: **Kongsberg Simrad EM 3002 multibeam sonar**

Graphic record checked by: **N/A**

Protracted by: **N/A** Automated Plot: **N/A**

Verification by: **Atlantic Hydrographic Branch Personnel**

Soundings in: **Meters at MLLW**

Remarks: ***Bold, Italic, Red notes in the Descriptive Report were made during office processing.***

***1) All Times are UTC.***

***2) This is a Basic Navigable Area Hydrographic Survey.***

***3) Projection is UTM Zone 18.***

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*\*Data Filed with original field records*

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**DESCRIPTIVE REPORT**  
 to accompany  
 HYDROGRAPHIC SURVEY F00538

Scale of Survey: 1:5,000  
 Year of Survey: 2007  
 NOAA Navigational Response Team 5  
 LT(jg) Matthew Jaskoski, OIC

**A. AREA SURVEYED**

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions\* for project OPR-B310-NRT5-07, F00538 New York, NY. The original instructions are dated January 5, 2005.

This Descriptive Report pertains to an area of approximately 0.24 SNM, adjacent to Roosevelt Island on the East River at the 63<sup>rd</sup> Street Tunnel. The assigned registry number for this sheet is F00538, as prescribed in the Letter Instructions.

The purposes of the field examination in this area were twofold; (1) to address a specific request by the United States Coast Guard for updated survey coverage in the vicinity to allow for the safe navigation of the East River following construction in the 63<sup>rd</sup> Street Tunnel area, and (2) to provide contemporary surveys to update National Ocean Service (NOS) nautical charts and examine the validity of the following: Note F Chart 12327, Note B Chart 12335 and Note D Chart 12339.

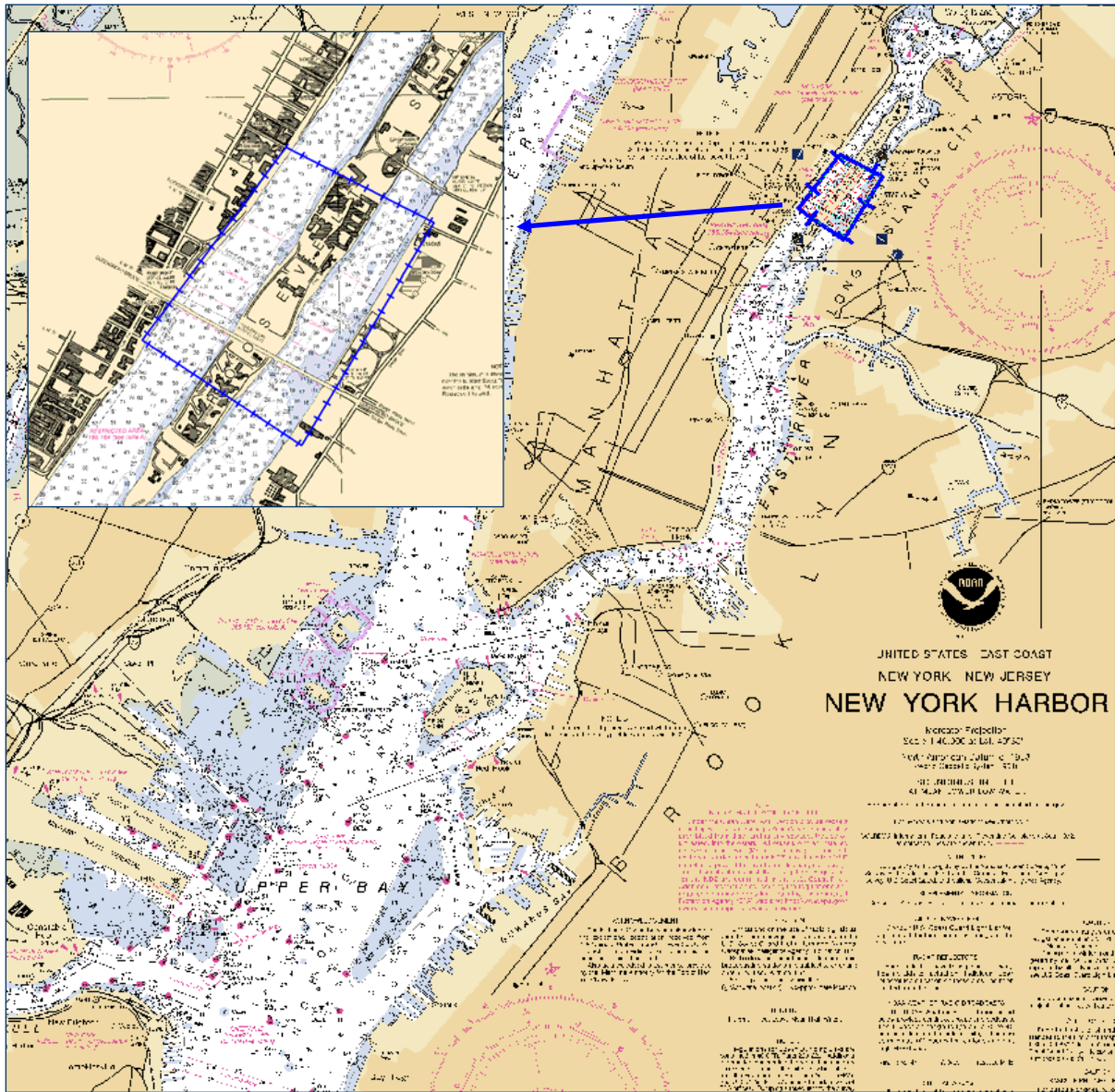
For complete survey limits, see figure A-1 on the following page.

Linear nautical miles of single beam only sounding lines - mainscheme only	0
Linear nautical miles of multibeam only sounding lines - mainscheme only	12
Linear nautical miles of side scan sonar only lines - mainscheme only	5
Linear nautical miles of any combination of the above techniques	17
Linear nautical miles of crosslines from single beam and multibeam combined	0.5
Linear nautical miles of developments other than mainscheme lines	0
Linear nautical miles of shoreline/nearshore investigation	0
Number of bottom samples collected	0
Number of items investigated that required additional time/effort in the field beyond the above survey operations	0
 Total square nautical miles	 0.24

Dates of acquisition: March 13, 2007 to March 19, 2007

***\*Data Filed with original field records***

Figure A-1: Outline of survey area



## **B. DATA ACQUISITION AND PROCESSING** *See also the Evaluation Report.*

### **B.1 EQUIPMENT**

Data were acquired by NOAA NRT-5 S3002. NOAA Survey Vessel S3002 is a 9.12-meter aluminum SeaArk outboard driven vessel with an average multibeam transducer draft of 1.3 meters.

NOAA S3002 acquired both bathymetry and imagery data. Side scan sonar data were acquired with a towed Klein 3000 sonar system. Multibeam data were acquired with a Kongsberg Simrad EM 3000 multibeam echosounder (MBES). Positioning and attitude were determined with a TSS POS/MV 320 (version 4) GPS aided inertial navigation system

No unusual vessel configurations or problems were encountered. Refer to the 2006 Data Acquisition and Processing Report (DAPR) for detailed equipment and vessel configuration information.

### **B.2 QUALITY CONTROL**

#### **B.2.1 Side Scan Sonar Quality Control**

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing linear contacts across the entire range of the side scan trace. No unusual problems were encountered.

200% SSS bottom coverage was collected for this survey project at 75 m range scale.

#### **B.2.2 Multibeam Echosounder Quality Control**

There were no faults with the SWMB system which affected data integrity. For detailed discussion of SWMB system calibrations, data acquisition, and data processing refer to this project's DAPR.

#### **B.2.3 Total Propagated Error**

Total Propagated Error (TPE) parameters for sound speed and tide data for F00538 are shown in table B-1.

Table B-1. Total Propagated Error parameters.

Project	Vessel	Tide Values		Sound Speed Values	
		Measured	Zoning	Measured	Surface
F00538	S3002	0.02	0.02	0.02	0.02

**B.2.4 Fieldsheets and Navigation Surfaces**

Caris HIPS CUBE (Combined Uncertainty Bathymetry Estimator) surfaces were created using CUBE parameters provided by LCDR Shepard M. Smith on 22 November 2005. Surfaces were created at 2m resolution for holiday determination and submitted at 0.75m resolution. Table B-2 lists all CUBE and combined surfaces submitted with this survey.

**B.2.5 Single Beam Quality Control**

There were no unusual events associated with the collection of the Single Beam data for this project. Single Beam data are not the primary bathymetry source for this survey.

Refer to this project’s DAPR for detailed discussion of SBES system calibrations, data acquisition, and data processing.

Table B-2: F00538 CUBE surface, and Side Scan mosaic resolutions.

Fieldsheet	Surface Resolution
F00538	
F00538_2m	2m
F00538_2m_Final	2m
F00538_75cm	0.75m
F00538_75cm_Final	0.75m

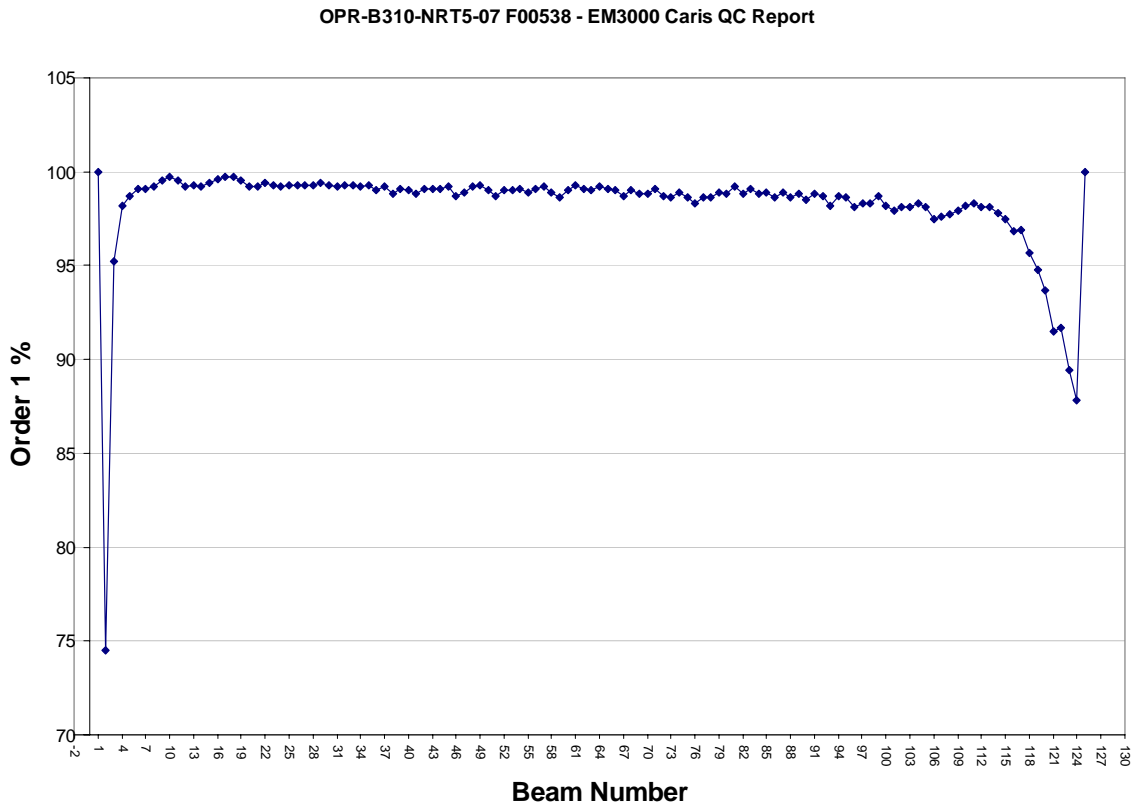
Fieldsheet	Mosaic Resolution
F00538	
F00538_200%_1m	1m



**B.2.5 Crosslines**

A total of 0.5 linear NM of crosslines were run; this was approximately 4.2% of the total mainscheme linear NM of MBES lines run. Crosslines agreed with mainscheme lines within IHO order 1 specifications, 94.4% of beams were within 95% of IHO Order 1 (figure B-1). Refer to separates for Caris QC tables.

Figure B-1 IHO-ness vs. beam number



**B.2.6 Junctions**

Visual comparison of current data to adjacent prior bathymetry data was not performed.

**B.3 CORRECTIONS TO ECHO SOUNDING**

All methods or instruments used were as described in the project DAPR. All sound velocity casts are included in the Pydro PSS.

## **C. VERTICAL AND HORIZONTAL CONTROL** *See also the Evaluation Report.*

### **C.1 VERTICAL CONTROL**

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at The Battery (851-8750) served as datum control for the survey area.

A Request for Approved Tides was sent to N/OPS1 on April 6, 2007 (Appendix III\*).

*\*Data Filed with original field records*

### **C.2 HORIZONTAL CONTROL**

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 18.

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The DGPS beacon used for this survey was Sandy Hook, NJ. No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored during acquisition, and did not exceed 4.00. Adequate satellite coverage was maintained throughout the survey period.

## **D. RESULTS AND RECOMMENDATIONS** *See also the Evaluation Report.*

### **D.1 CHART COMPARISON** *See also the Evaluation Report.*

The charts affected by this survey are:

12335	41st Ed.	09/01/2006	1:10000
12339	45th Ed.	09/01/2006	1:10000
12327	99th Ed.	10/01/2006	1:40000
12363	40th Ed.	06/01/2005	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	33rd Ed.	04/01/2006	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000
14500	27th Ed.	10/01/2002	1:1500000

#### **D.1.1 General Agreement with Charted soundings**

Sounding data generally agreed with charted depths to within 1-2 feet, significant differences from charted depths are addressed in Appendices II.

#### **D.1.2 AWOIS Items and Significant Contacts**

There were no AWOIS items within the survey limits.

#### **D.1.3 Dangers to Navigation**

There were no DTONs on this sheet. See Appendix I. *See also the Evaluation Report.*

#### **D.1.4 Charted Features**

See Appendix II. *See also the Evaluation Report.*

### **D.1.5 Charting Recommendations** *See also the Evaluation Report.*

The hydrographer recommends that notes: F - Chart 12327, B - Chart 12335 and D - Chart 12339 be updated to reflect current bathymetric data acquired over the 63<sup>rd</sup> Street Tunnel. Survey F00538 is complete and adequate to supersede charted soundings in their common areas.

## **D.2 ADDITIONAL RESULTS**

### **D.2.1 Aids to Navigation**

See Appendix V, section V.3. *Data Filed with original field records*

### **D.2.2 Bridges and Overhead Cables**

There is one bridge (the 59<sup>th</sup> Street-Queensboro Bridge) and one overhead cable (Roosevelt Island Tram) in the survey area. Positioning data was not adversely effected while crossing under either of the overhead objects and the hydrographer has no charting recommendations.

### **D.2.3 Submarine Cables and Pipelines**

There is a charted submarine cable area from 60<sup>th</sup> Street to 65<sup>th</sup> Street, however no exposed cables were positioned during this survey, nor were any images of these items acquired on SSS. The 63<sup>rd</sup> Street Tunnel was found to have a significantly shallower clearance than that described in the charted notes, see section D.1.5 and Appendix II. *See also the Evaluation Report.*

**E. APPROVAL SHEET**

**OPR-B310  
East River  
New York**

**63<sup>rd</sup> Street Tunnel  
Survey Registry No. F00538**

Field operations for this survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, bathymetry models, this Descriptive Report, and all accompanying records and data are approved.

Submitted in association with this descriptive report has been a series of reports and data:

OPR-B310-NRT5-07 horizontal and vertical control report (submitted with this DR)  
Data Acquisition and Processing Report (submitted 09 June 2006)

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Respectfully,

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LT(jg) Matthew Jaskoski, NOAA  
OIC NRT-5

## **APPENDIX I**

### **DANGERS TO NAVIGATION REPORT**

There were no DToNs on this sheet.

## **APPENDIX II**

### **SURVEY FEATURES REPORT**

# F00538 Features Report

**Registry Number:** F00538  
**State:** NY  
**Locality:** East River  
**Sub-locality:** 63rd Street Tunnel  
**Project Number:** OPR-B310-NRT5-07  
**Survey Dates:** 3/13/2007 - 3/19/2007

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12335	42nd	03/01/2008	1:10,000 (12335_1)	USCG LNM: 09/18/2007 (10/14/2008) CHS NTM: None (08/29/2008) NGA NTM: 12/23/2006 (10/18/2008)
12339	46th	06/01/2008	1:10,000 (12339_1)	NGA NTM: None (10/18/2008) USCG LNM: None (10/14/2008) CHS NTM: None (08/29/2008)
12327	99th	10/01/2006	1:40,000 (12327_1)	[L]NTM: ?
12363	40th	06/01/2005	1:80,000 (12363_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	33rd	04/01/2006	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

\* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	revise 22 sndg to 22 Rk	Shoal	6.73 m	40° 45' 43.4" N	073° 56' 49.4" W	---
1.2	33 ft. shoal sounding - East side of tunnel	Shoal	10.18 m	40° 45' 29.5" N	073° 57' 03.2" W	---
1.3	34 ft shoal - 63rd St West channel	Shoal	10.55 m	40° 45' 37.9" N	073° 57' 20.9" W	---
1.4	38' LD Shoal	Shoal	11.54 m	40° 45' 44.3" N	073° 57' 12.3" W	---
1.5	54' on charted 56'	Shoal	16.44 m	40° 45' 48.0" N	073° 57' 09.4" W	---
1.6	charted 19' confirmed	Shoal	5.84 m	40° 45' 40.9" N	073° 56' 47.1" W	---



1.7	add 25 Rk	Rock	7.80 m	40° 45' 15.4" N	073° 57' 14.8" W	---
1.8	21' on charted 22'	Shoal	6.46 m	40° 45' 16.8" N	073° 57' 13.4" W	---
1.9	26' on charted 28'	Shoal	8.03 m	40° 45' 25.4" N	073° 57' 02.7" W	---
1.10	revise charted 22' Obstn to 21' Obstn	Obstruction	6.36 m	40° 45' 20.4" N	073° 57' 12.4" W	---
1.11	35 ft shoal - 63rd St West channel	Shoal	10.72 m	40° 45' 35.6" N	073° 57' 17.0" W	---
2.1	add 59 Obstn	Obstruction	18.02 m	40° 45' 39.2" N	073° 57' 14.9" W	---
2.2	add 35 Obstn	Obstruction	10.65 m	40° 45' 32.1" N	073° 57' 17.3" W	---
2.3	add 64 Obstn	Obstruction	19.55 m	40° 45' 47.7" N	073° 57' 07.2" W	---
2.4	add 38 Rk	Rock	11.75 m	40° 45' 23.8" N	073° 57' 26.3" W	---
2.5	add 37 Rk	Rock	11.33 m	40° 45' 47.6" N	073° 57' 10.8" W	---
2.6	add 23 Rk	Rock	6.95 m	40° 45' 39.2" N	073° 56' 50.4" W	---

# **1 - Charted Features**

## 1.1) revise 22 sndg to 22 Rk

### Survey Summary

**Survey Position:** 40° 45' 43.4" N, 073° 56' 49.4" W  
**Least Depth:** 6.73 m (= 22.09 ft = 3.682 fm = 3 fm 4.09 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh)  $\pm 1.040$  m ; TVU (TPEv)  $\pm 0.141$  m  
**Timestamp:** 2007-072.17:48:01.257 (03/13/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-072 / 015\_1747  
**Profile/Beam:** 492/117  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object is a rock charted as a representative sounding LD 22'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-072/015_1747	492/117	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313145000	0001	9.38	030.5	Secondary

### Hydrographer Recommendations

The hydrographer recommends a representative sounding be charted.

Survey confirms currently charted 22 ft sounding.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Do not concur, chart a Rk with a depth of 22 ft. in Latitude 45-45-43.39 N, Longitude 73-56-49.39 W.

## 1.2) 33 ft. shoal sounding - East side of tunnel

### Survey Summary

**Survey Position:** 40° 45' 29.5" N, 073° 57' 03.2" W  
**Least Depth:** 10.18 m (= 33.38 ft = 5.564 fm = 5 fm 3.38 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh)  $\pm 1.117$  m ; TVU (TPEv)  $\pm 0.150$  m  
**Timestamp:** 2007-072.17:19:32.528 (03/13/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-072 / 017\_1715  
**Profile/Beam:** 2188/11  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Shoal sounding over 63rd Street tunnel - East Channel Charted controlling depth 35'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-072/017_1715	2188/11	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313145000	0002	20.66	358.8	Secondary

### Hydrographer Recommendations

The hydrographer recommends that notes: F - Chart 12327, B - Chart 12335 and D - Chart 12339 be updated to reflect current bathymetric data acquired over the 63rd Street Tunnel. - See also the Evaluation Report.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Concur, chart a shoal sounding of 33 ft. in Latitude 40-45-29.52 N, Longitude 73-57-03.22 W.

### 1.3) 34 ft shoal - 63rd St West channel

#### Survey Summary

**Survey Position:** 40° 45' 37.9" N, 073° 57' 20.9" W  
**Least Depth:** 10.55 m (= 34.61 ft = 5.768 fm = 5 fm 4.61 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.022$  m ; **TVU (TPEv)**  $\pm 0.145$  m  
**Timestamp:** 2007-073.14:57:27.287 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 010\_1452  
**Profile/Beam:** 1731/115  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Shoal sounding over the 63rd Street Tunnel - West Channel controlling depth 45'

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/010_1452	1731/115	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313155100	0002	119.69	323.4	Secondary (grouped)

#### Hydrographer Recommendations

The hydrographer recommends that notes: F - Chart 12327, B - Chart 12335 and D - Chart 12339 be updated to reflect current bathymetric data acquired over the 63rd Street Tunnel.

#### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

#### Office Notes

Concur, chart a shoal sounding of 34 ft. in Latitude 40-45-37.93 N, Longitude 73-57-20.87 W.

## 1.4) 38' LD Shoal

### Survey Summary

**Survey Position:** 40° 45' 44.3" N, 073° 57' 12.3" W  
**Least Depth:** 11.54 m (= 37.86 ft = 6.311 fm = 6 fm 1.86 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.025$  m ; **TVU (TPEv)**  $\pm 0.153$  m  
**Timestamp:** 2007-073.15:15:51.846 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 007\_1509  
**Profile/Beam:** 2106/121  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Current sounding data agree with charted depths.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/007_1509	2106/121	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends no charting action be taken.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 SORDAT - 20070314  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Do not concur, chart a shoal sounding of 38 ft. in Latitude 40-45-44.27 N, Longitude 73-57-12.27 W.

**1.5) 54' on charted 56'****Survey Summary**

**Survey Position:** 40° 45' 48.0" N, 073° 57' 09.4" W  
**Least Depth:** 16.44 m (= 53.92 ft = 8.987 fm = 8 fm 5.92 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.042$  m ; **TVU (TPEv)**  $\pm 0.144$  m  
**Timestamp:** 2007-073.15:16:59.859 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 007\_1509  
**Profile/Beam:** 2540/43  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

Object is a rock charted as LD 56'

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/007_1509	2540/43	0.00	000.0	Primary

**Hydrographer Recommendations**

The hydrographer recommends a representative sounding be charted.

**S-57 Data**

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

**Office Notes**

Concur, chart a shoal sounding of 54 ft. in Latitude 40-45-47.97 N, Longitude 73-57-09.42 W.

## 1.6) charted 19' confirmed

### Survey Summary

**Survey Position:** 40° 45' 40.9" N, 073° 56' 47.1" W  
**Least Depth:** 5.84 m (= 19.17 ft = 3.194 fm = 3 fm 1.17 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.249$  m ; **TVU (TPEv)**  $\pm 0.142$  m  
**Timestamp:** 2007-072.17:13:56.644 (03/13/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-072 / 011\_1708  
**Profile/Beam:** 3846/47  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object is a rock located directly under a charted 19'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-072/011_1708	3846/47	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends a representative sounding be charted.

Charted 19 ft sounding confirmed by survey.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 SORDAT - 20070313  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Concur, chart present survey soundings.



**1.7) add 25 Rk****Survey Summary**

**Survey Position:** 40° 45' 15.4" N, 073° 57' 14.8" W  
**Least Depth:** 7.80 m (= 25.60 ft = 4.267 fm = 4 fm 1.60 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.125$  m ; **TVU (TPEv)**  $\pm 0.142$  m  
**Timestamp:** 2007-072.17:39:15.253 (03/13/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-072 / 016\_1731  
**Profile/Beam:** 4334/88  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

Object is a rock charted as LD 26'

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-072/016_1731	4334/88	0.00	000.0	Primary

**Hydrographer Recommendations**

The hydrographer recommends a rock be charted.

**S-57 Data**

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 7.804 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

**Office Notes**

Concur, chart a Rk with a depth of 25 ft. in Latitude 40-45-15.42 N, Longitude 73-57-14.77 W.

## 1.8) 21' on charted 22'

### Survey Summary

**Survey Position:** 40° 45' 16.8" N, 073° 57' 13.4" W  
**Least Depth:** 6.46 m (= 21.21 ft = 3.535 fm = 3 fm 3.21 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.116$  m ; **TVU (TPEv)**  $\pm 0.142$  m  
**Timestamp:** 2007-072.17:38:55.865 (03/13/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-072 / 016\_1731  
**Profile/Beam:** 4184/49  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object is a rock charted as LD 22'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-072/016_1731	4184/49	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends a representative sounding be charted.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 SORDAT - 20070313  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Concur, chart a shoal sounding of 21 ft. in Latitude 40-45-16.80 N, Longitude 73-57-13.40 W.

## 1.9) 26' on charted 28'

### Survey Summary

**Survey Position:** 40° 45' 25.4" N, 073° 57' 02.7" W  
**Least Depth:** 8.03 m (= 26.34 ft = 4.390 fm = 4 fm 2.34 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh)  $\pm 1.230$  m ; TVU (TPEv)  $\pm 0.143$  m  
**Timestamp:** 2007-073.14:10:02.831 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 003\_1407  
**Profile/Beam:** 1778/16  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object is a rock charted as LD 28'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/003_1407	1778/16	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends a representative sounding be charted.

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 SORDAT - 20070314  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Concur, chart a shoal sounding of 26 ft. in Latitude 40-45-25.41 N, Longitude 73-57-02.72 W.

## 1.10) revise charted 22' Obstn to 21' Obstn

### Survey Summary

**Survey Position:** 40° 45' 20.4" N, 073° 57' 12.4" W  
**Least Depth:** 6.36 m (= 20.87 ft = 3.479 fm = 3 fm 2.87 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.362$  m ; **TVU (TPEv)**  $\pm 0.142$  m  
**Timestamp:** 2007-078.15:51:00.427 (03/19/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-078 / 019\_1550  
**Profile/Beam:** 55/93  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Sounding data indicate OBSTN deeper than charted depths

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-078/019_1550	55/93	0.00	000.0	Primary
f00538/3002_mbes/2007-072/017_1715	3372/127	1.52	078.4	Secondary
f00538/3002sss500k/2007-072/sonar_data070313145000	0003	2.99	007.0	Secondary
f00538/3002sss500k/2007-072/sonar_data070313150900	0003	5.14	040.3	Secondary

### Hydrographer Recommendations

Retain as charted

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 6.601 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur, revise the charted dang. 22 Obstn to a dang. Obstn with a least depth of 21 ft. (6.363 m) in Latitude 40-45-20.38 N, Longitude 73-57-12.41 W.

## 1.11) 35 ft shoal - 63rd St West channel

### Survey Summary

**Survey Position:** 40° 45' 35.6" N, 073° 57' 17.0" W  
**Least Depth:** 10.72 m (= 35.17 ft = 5.861 fm = 5 fm 5.17 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.027$  m ; **TVU (TPEv)**  $\pm 0.149$  m  
**Timestamp:** 2007-078.16:45:19.943 (03/19/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-078 / 034\_1644  
**Profile/Beam:** 379/11  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Shoal area of tunnel on charted 45'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-078/034_1644	379/11	0.00	000.0	Primary

### Hydrographer Recommendations

Chart representative sounding

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VERDAT - 12:Mean lower low water

### Office Notes

Concur, chart the shoal sounding of 35 ft. in Latitude 40-45-35.63 N, Longitude 73-57-16.98 W.

## **2 - New Features**

## 2.1) add 59 Obstn

### Survey Summary

**Survey Position:** 40° 45' 39.2" N, 073° 57' 14.9" W  
**Least Depth:** 18.02 m (= 59.12 ft = 9.854 fm = 9 fm 5.12 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.190$  m ; **TVU (TPEv)**  $\pm 0.146$  m  
**Timestamp:** 2007-073.15:55:21.505 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 006\_1553  
**Profile/Beam:** 525/98  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

The object is an obstruction located between a charted 67' and 55'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/006_1553	525/98	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends no charting action be taken.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 18.021 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

### Office Notes

Do not concur, chart an Obstn with a depth of 59 ft. in Latitude 40-45-39.19 N, Longitude 73-57-14.94 W.



## 2.2) add 35 Obstn

### Survey Summary

**Survey Position:** 40° 45' 32.1" N, 073° 57' 17.3" W  
**Least Depth:** 10.65 m (= 34.84 ft = 5.824 fm = 5 fm 4.84 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.122$  m ; **TVU (TPEv)**  $\pm 0.157$  m  
**Timestamp:** 2007-073.15:05:18.558 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 002\_1502  
**Profile/Beam:** 1182/125  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/002_1502	1182/125	0.00	000.0	Primary

### Hydrographer Recommendations

Obstn with a height off the seafloor of 7 ft.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 10.670 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

### Office Notes

Chart an Obstn with a depth of 35 ft. (10.652 m) in Latitude 40-45-32.08 N, Longitude 73-57-17.28 W.

## 2.3) add 64 Obstn

### Survey Summary

**Survey Position:** 40° 45' 47.7" N, 073° 57' 07.2" W  
**Least Depth:** 19.55 m (= 64.12 ft = 10.687 fm = 10 fm 4.12 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.267$  m ; **TVU (TPEv)**  $\pm 0.153$  m  
**Timestamp:** 2007-073.15:26:35.635 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 005\_1526  
**Profile/Beam:** 166/108  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object is a significant obstruction located between a charted 71' and a charted 73' sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/005_1526	166/108	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313154100	0001	12.12	037.3	Secondary
f00538/3002sss500k/2007-072/sonar_data070313160200	0003	14.95	223.7	Secondary

### Hydrographer Recommendations

The hydrographer recommends a representative sounding be added.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 19.545 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Do not concur, chart an Obstn with a depth of 64 ft. in Latitude 40-45-47.71 N, Longitude 73-57-07.16 W.

## 2.4) add 38 Rk

### Survey Summary

**Survey Position:** 40° 45' 23.8" N, 073° 57' 26.3" W  
**Least Depth:** 11.75 m (= 38.55 ft = 6.425 fm = 6 fm 2.55 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.058$  m ; **TVU (TPEv)**  $\pm 0.143$  m  
**Timestamp:** 2007-073.15:32:42.374 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 004\_1532  
**Profile/Beam:** 296/49  
**Charts Affected:** 12335\_1, 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

In agreement with charted depths

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/004_1532	296/49	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313160200	0001	12.28	209.1	Secondary
f00538/3002sss500k/2007-072/sonar_data070313155100	0003	22.46	028.3	Secondary

### Hydrographer Recommendations

Feature is a rock with a height off the seafloor of 5 ft.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 11.751 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a depth of 38 ft (11.751 m) in Latitude 40-45-23.75 N, Longitude 73-57-26.31 W.

## 2.5) add 37 Rk

### Survey Summary

**Survey Position:** 40° 45' 47.6" N, 073° 57' 10.8" W  
**Least Depth:** 11.33 m (= 37.16 ft = 6.194 fm = 6 fm 1.16 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.049$  m ; **TVU (TPEv)**  $\pm 0.169$  m  
**Timestamp:** 2007-073.15:16:43.440 (03/14/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-073 / 007\_1509  
**Profile/Beam:** 2448/5  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

The object is a rock near the western bank of the channel, and is in agreement with charted depths.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-073/007_1509	2448/5	0.00	000.0	Primary

### Hydrographer Recommendations

The hydrographer recommends no charting action be taken.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 11.327 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

### Office Notes

Do not concur, chart a Rk with a depth of 37 ft. in Latitude 40-45-47.59 N, Longitude 73-57-10.78 W.

## 2.6) add 23 Rk

### Survey Summary

**Survey Position:** 40° 45' 39.2" N, 073° 56' 50.4" W  
**Least Depth:** 6.95 m (= 23.68 ft = 3.947 fm = 3 fm 5.68 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)**  $\pm 1.100$  m ; **TVU (TPEv)**  $\pm 0.142$  m  
**Timestamp:** 2007-078.16:00:56.469 (03/19/2007)  
**Survey Line:** f00538 / 3002\_mbes / 2007-078 / 009\_1558  
**Profile/Beam:** 1708/102  
**Charts Affected:** 12339\_1, 12327\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Object in agreement with charted depths

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00538/3002_mbes/2007-078/009_1558	1708/102	0.00	000.0	Primary
f00538/3002sss500k/2007-072/sonar_data070313150000	0002	6.52	186.8	Secondary
f00538/3002sss500k/2007-072/sonar_data070313144200	0004	8.58	184.7	Secondary

### Hydrographer Recommendations

Object is a rock with a height above the seafloor of 6-8 ft.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 7.219 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a least depth of 23 ft. (6.95 m) in Latitude 40-45-39.22 N, Longitude 73-56-50.38 W.



Subject: Re: [Fwd: NOAA Response to inquiry sent on 11/4/2008]  
From: "Jesse.Feyen" <Jesse.Feyen@noaa.gov>  
Date: Tue, 06 Nov 2008 08:14:42 -0500  
To: Bryan.Chauveau <Bryan.Chauveau@noaa.gov>  
CC: John.Whiddon <John.Whiddon@noaa.gov>

Dear Mr. Chauveau -

I believe the information you require is listed at the bottom of the message under the "Resolution/Response" heading. If you need further information please let me know.

Sincerely,  
Jesse Feyen

Dear Mr. Chauveau -

Here is the response I received regarding your inquiry of the defined area east of Roosevelt Island in New York. This was generated by the Nautical Data Branch through our inquiry tracking system. I hope this addresses your concern, and please don't hesitate to submit any further questions to us using the online system.

Sincerely,  
Jesse Feyen

--

Jesse C. Feyen, Ph.D.  
Acting Chief, Nautical Data Branch (through Feb 2009)  
Marine Chart Division/Office of Coast Survey  
National Oceanic and Atmospheric Administration  
1315 East West Highway - N/CS26  
Silver Spring, MD 20910-3282  
ph. (301) 713-2737 X123  
fax (301) 713-4516

Resolution/Response

The area you are referring to (approx. 40 45 30.5N, 73 56 54.6W to 40 45 46.50N to 73 56 41.70W) was originally permitted as a maintenance dredging area by the New York District US Army Corps of Engineers (USACE) through Chart Letter L2242-1975 and was updated through L208-1997. The original permit was issued to Consolidated Edison Company of New York, Inc. as a tanker berthing area. There have been no updates to the USACE permit since 1997.

In 2004, hydrographic survey H11353 (REF:DD7266) led to the legend change from "20 ft rep Jun 1991" to the currently charted "17 ft Aug 2004". NDB, 11/5/2008

Thank you for your interest in NOAA's Nautical Chart Products. We appreciate you taking the time to bring this matter to our attention.

Subject: [Fwd: [Fwd: Question about a chart feature]]  
From: "Jesse.Feyen" <Jesse.Feyen@noaa.gov>  
Date: Tue, 04 Nov 2008 16:12:35 -0500  
To: Bryan.Chauveau <Bryan.Chauveau@noaa.gov>

Dear Mr. Chauveau -

As acting chief of OCS' Nautical Data Branch I have received your request for information regarding charting near the tunnel around Roosevelt Island, NY. I have submitted it to NDB's research staff via the online OCS inquiry system at <http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx> and we will determine a response to your question. Please feel free to contact us again for further requests using this new system - it allows us to easily track your request and respond to it in a prompt fashion.

Sincerely,  
Jesse Feyen

--

Jesse C. Feyen, Ph.D.  
Acting Chief, Nautical Data Branch (through Feb 2009)  
Marine Chart Division/Office of Coast Survey  
National Oceanic and Atmospheric Administration  
1315 East West Highway - N/CS26  
Silver Spring, MD 20910-3282  
ph. (301) 713-2737 X123  
fax (301) 713-4516

---

Subject: [Fwd: Question about a chart feature]  
From: "Lyn.Preston" <Lyn.Preston@noaa.gov>  
Date: Tue, 04 Nov 2008 13:13:03 -0500  
To: Jesse Feyen <Jesse.Feyen@noaa.gov>

Jesse~

Is this the same inquiry that ocs.ndb received this AM regarding the tunnel? If not, please assign out and get back in touch with Bryan.

----- Original Message -----

Subject: Question about a chart feature  
Date: Tue, 04 Nov 2008 12:07:33 -0500  
From: Bryan Chauveau <Bryan.Chauveau@noaa.gov>  
To: [Lyn.Preston@noaa.gov](mailto:Lyn.Preston@noaa.gov)

Ms. Preston,

I am not sure if you are the one to contact, but maybe you can forward me to the one who is. I am working an NRT survey, F00538, up in New York around Roosevelt Island and the 63rd street tunnel.










East of Roosevelt Island near the tunnel is a charted area with defined limits and the note 17 ft. Aug. 2004. How can I find out why this area is limited and its use?

Bryan Chauveau  
Physical Scientist  
Atlantic Hydrographic Branch

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Matthew.Jaskoski@noaa.gov: **Inbox**

         Move message to folder:

From "[McBrady, Mike LCDR](#)" <[Mike.T.McBrady@uscg.mil](mailto:Mike.T.McBrady@uscg.mil)>

Sent Friday, April 6, 2007 3:58 pm

To [Matthew.Jaskoski@noaa.gov](mailto:Matthew.Jaskoski@noaa.gov)

Cc [Christopher Hare <Christopher.Hare@noaa.gov>](mailto:Christopher.Hare@noaa.gov) ,  
[John.F.Tavolaro@nan02.usace.army.mil](mailto:John.F.Tavolaro@nan02.usace.army.mil) ,  
[Thomas.Creamer@nan02.usace.army.mil](mailto:Thomas.Creamer@nan02.usace.army.mil) , [LCDR Rick Fletcher](#)  
<[Rick.Fletcher@noaa.gov](mailto:Rick.Fletcher@noaa.gov)> , [Jake Yoos](#) <[Jake.Yoos@noaa.gov](mailto:Jake.Yoos@noaa.gov)> , "[Yunker, Jeff](#)"  
<[Jeff.M.Yunker@uscg.mil](mailto:Jeff.M.Yunker@uscg.mil)> , "[Mannion, Patrick](#)" <[Patrick.J.Mannion@uscg.mil](mailto:Patrick.J.Mannion@uscg.mil)>

Bcc

Subject RE: 63rd Street Tunnel Soundings Issue

Attachments [Fax63rdRev10.doc](#) 399K

Matt,

Attached is what we propose from the information that you provided us. Simply put, the idea is to notify everybody of the new depths over the tunnel and remove the inaccurate notes on the chart indicating that the MLLW depths over the tunnel are 45 and 35 feet in the West and East channels, respectively.

As we spoke on the phone, although the depths over the tunnel have decreased significantly from what's stipulated in the note, I'm not sure it's a major problem because we are still at or below the project depth. More importantly, those depths are adequate to meet the needs of commercial mariners from the information that I have.

The USACE, copied on this email, may have a different read and perhaps we should discuss it further if they do, prior to making a decision.

Request some feedback from NOAA and the USACE before I proceed. We can do a conference call if desired.

regards,

LCDR Mike McBrady  
Sector New York  
Waterways Management  
work: 718 354 2353  
cell: 347 682 0518  
[mike.t.mcbrady@uscg.mil](mailto:mike.t.mcbrady@uscg.mil)

-----Original Message-----  
From: [Matthew.Jaskoski@noaa.gov](mailto:Matthew.Jaskoski@noaa.gov) [<mailto:Matthew.Jaskoski@noaa.gov>]  
Sent: Friday, April 06, 2007 1:41 PM  
To: McBrady, Mike LCDR  
Cc: Christopher Hare  
Subject: 63rd Street Tunnel



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
National Ocean Service  
Silver Spring, Maryland 20910





**Final Tidal Zoning  
for OPR-B310-NRT5-2007, F00538  
East River, NY**

**NY27**  
Time Corrector +84 mins.  
Range Corrector x0.99  
Reference 851-8750

**NY26**  
Time Corrector +66 mins.  
Range Corrector x0.96  
Reference 851-8750

**NY25**  
Time Corrector +54 mins.  
Range Corrector x0.94  
Reference 851-8750

**851-8750 THE BATTERY**



**Final tide zone node point locations for OPR-B310-NRT5-2007, F00538**

Format: Tide Station (in recommended order of use)  
 Average Time Correction (in minutes)  
 Range Correction  
 Longitude in decimal degrees (negative value denotes Longitude West),  
 Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
NY25	851-8750	+54	x0.94
-73.96415 40.719412			
-73.957132 40.724199			
-73.960032 40.735678			
-73.961746 40.739192			
-73.975379 40.744368			
-73.978083 40.722979			
-73.96415 40.719412			
NY26	851-8750	+66	x0.96
-73.961746 40.739192			
-73.943689 40.75665			
-73.960384 40.764066			
-73.975379 40.744368			
-73.961746 40.739192			
NY27	851-8750	+84	x0.99
-73.943689 40.75665			
-73.935643 40.767006			
-73.948638 40.772535			
-73.960384 40.764066			
-73.943689 40.75665			

**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT to Accompany  
Survey F00538 (2007)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

**B. DATA ACQUISITION AND PROCESSING**

**B.1 DATA PROCESSING**

The following software was used to process and review data at the Atlantic Hydrographic Branch (AHB):

CARIS HIPS/SIPS version 6.1 SP2  
CARIS BASE Manager 2.1  
S-57 Composer 2.0  
CARIS HOM 3.3 SP3  
PYDRO, version 8.7 (r2534)  
Dkart Inspector V. 5.1 SP1

**B.2 QUALITY CONTROL**

**H-Cells**

The AHB source depth grid was generated as a 75cm resolution multibeam CUBE surfaces generated by the office personnel. Survey scale soundings were extracted from the CUBE surface at a 1:5000 scale using a radius of 1m. Soundings were selected for charting by hand using the latest raster charts (12339 and 12335) and smooth contours created by hand and used as background for sounding placement. Soundings were then checked for conflicts, corrected to remove conflicts, and edited to allow for proper sounding compilation placement with respect to existing charted depths outside the survey area. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

The compilation products and Stand Alone HOB Files (SAHOB) are detailed in the Compilation Process Log of this document. All individual SAHOB files were assembled in BASE Editor during H-Cell compilation. The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC\_CU.000) with all values measured in feet following NOAA sounding rounding rules.

## F00538

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The F00538 CARIS H-Cell final deliverables include the following products:

US500538_CU.000	1:5,000 Scale	F00538 H-Cell with Chart Scale Selected Soundings
US500538_SS.000	1:5,000 Scale	F00538 Selected Soundings (Survey Scale)
US500538_BlueNtoes.000	1:5,000 Scale	F00538 Cartographic Notes and Depth Curves

### C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by office personnel at the Atlantic Hydrographic Branch. Verified water levels in conjunction with the discrete tidal zoning which was accepted and approved by N/OPSI CO-OPS as the final zoning for F00538. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW)

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements. The horizontal geodetic datum was translated to Latitude and Longitude (LLDG) World Geodetic System-84 (WGS-84) during CARIS HOM processing.

### D. RESULTS AND RECOMMENDATIONS

#### D.1 Chart Comparison

#### 12339 (46th Edition, Jun. /08)

Corrected through NM Jun. 28/08

Corrected through LNM Jun. 17/08

1:10,000 Scale

#### 12335 (42nd Edition, Mar. /08)

Corrected through NM Nov. 01/08

Corrected through LNM Nov. 26/08

1:10,000 Scale



**ENC Comparison**

**US5NY12M**

Tallman Island to Queensboro Bridge  
Edition 10  
Update Application Date 2007-10-23  
Issue Date 2008-05-28  
References: Chart 12339

**US5NY1DM**

Hudson and East Rivers – Governors Island to  
67<sup>th</sup> Street  
Edition 10  
Update Application Date 2007-08-16  
Issue Date 2008-10-28  
References: Chart 12335

**Hydrography**

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Section D. of the Descriptive Report.

**Charted and Uncharted Features**

It is recommended the following notes, F - Chart 12327, B - Chart 12335 and D - Chart 12339, be removed.

Both charted Tunnels for the 63<sup>rd</sup> Street Tunnel on both sides of Roosevelt Island are mischarted on the raster chart and ENC. It is recommended the Tunnel limits be updated as per the current survey.

**Comparison with Prior Surveys**

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

**Adequacy of Survey**

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further survey requirements recommended by the hydrographer.

*Bryan Chauveau*

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Bryan Chauveau  
Physical Scientist  
Verification of Data  
Evaluation and Analysis Report

# AHB COMPILATION PROCESS

Registry No. F00538  
 Project No. OPR-B310-NRT5-07  
 Field Unit NRT5  
 Compilers Bryan Chauveau

**12339 (46th Edition, Jun. /08)**

Corrected through NM Jun. 28/08  
 Corrected through LNM Jun. 17/08  
 1:10,000 Scale

**12335 (42nd Edition, Mar. /08)**

Corrected through NM Nov. 01/08  
 Corrected through LNM Nov. 26/08  
 1:10,000 Scale

Largest Scale **US5NY12M**  
 Chart Tallman Island to Queensboro Bridge  
 Edition 11  
 Update Application Date 2008-11-03  
 Issue Date 2008-11-03  
 References: Chart 12339

**US5NY1DM**

Hudson and East Rivers - Governors Island to 67th Street  
 Edition 10  
 Update Application Date 2007-08-16  
 Issue Date 2008-10-28  
 References: Chart 12335

Survey Scale 1:5000  
 Date Of Survey 3-16 to 3-19-2006

<b>Milestones</b>	<b>File Name</b>
<i>Contours Layer</i>	F00538_Chart_Contours.hob
<i>Survey Scale Soundings</i>	F00538_SS_Soundings.hob
<i>Chart Scale Soundings</i>	F00538_CS_Soundings.hob
<i>Feature Layers</i>	F00538_Features.hob F00538_DepAre.hob F00538_Seabed_Areas.hob F00538_Retained_Features.hob
<i>Meta-objects Layers</i>	F00538_MCovr.hob F00538_MQual.hob
<i>Blue Notes</i>	F00538_Blue_Notes.hob

META-OBJECTS:

M\_COVR attributes

Acronym	Value
CATCOV	1 - coverage available
SORDAT	20070319
SORIND	US,US,survey, F00538

M\_QUAL attributes

Acronym	Value
CATZOC	zone of confidence A2
INFORM	F00538, OPR-B310-NRT5-07, NOAA NRT5, S3002
TECSOU	Multibeam
SURSTA	20070313
SUREND	20070319
POSACC	10
SORDAT	20070319
SORIND	US,US,survey,F00538

Final Grids Listing –

F00538\_AHB\_75cm\_Final.hns

F00538\_AHB\_75cm\_Final.xml

**APPROVAL SHEET**  
**F00538**

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

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Bryan Chauveau  
Physical Scientist,  
Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

I have reviewed the Base Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved: \_\_\_\_\_  
Commander Shepard M. Smith, NOAA  
Chief, Atlantic Hydrographic Branch