

D00211

NOAA Form 76-35A

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Survey

DESCRIPTIVE REPORT

Type of Survey: Investigation

Registry Number: D00211

LOCALITY

State: New York

General Locality: Tarrytown

Sub-locality: Tappan Zee Bridge

2016

CHIEF OF PARTY
LT Andrew Clos

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

D00211

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: **Tarrytown**

Sub-Locality: **Tappan Zee Bridge**

Scale: **1: 10,000**

Dates of Survey: **06/06/2016 to 06/08/2016**

Instructions Dated: **06/02/2016**

Project Number: **S-B909-NRT5-16**

Field Unit: **NRT-5**

Chief of Party: **LT Andrew Clos**

Soundings by: **Multibeam Echo Sounder**

Imagery by:

Verification by: **Pacific Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

H-Cell Compilation Units: **N/A**

Remarks:

The purpose of this survey was to respond to a request from USCG to perform an interim survey for vessel traffic during the construction of a new bridge and removal of the existing Tappan Zee bridge structure . All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <http://www.ncei.noaa.gov/>.



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Coast Survey
Silver Spring, Maryland 20910-3282

19 January 2017

MEMORANDUM FOR: Commander Benjamin K. Evans, NOAA
Chief, Pacific Hydrographic Branch

FROM: Lieutenant Andrew R. Clos, NOAA
Team Lead, Navigation Response Team 5

SUBJECT: Submission of Survey D00211

The purpose of this survey was to respond to a United States Coast Guard (USCG) request for a hydrographic survey in the vicinity of the Tappan Zee Bridge. This survey will help vessels safely navigate the area during construction of a new bridge and removal of the existing Tappan Zee Bridge structure. Planned construction will temporarily restrict sections of the channel, requiring vessels to deviate from familiar track lines in the deepest water. Charted sounding data in this area is partial bottom coverage from the early 1900's, and modern depth data is necessary to support continued commerce during this construction. The data from this survey is not intended to be applied to the nautical chart with the exception of hazards to navigation (DTONs).

Data was collected to Object Detection standards using a multibeam echosounder (MBES). Detailed cleaning and feature management was not performed since the data will not be charted. However, blatant fliers that were significantly affecting the BASE surface were removed from the data. Furthermore, close inspection of the data in CARIS Subset Editor was performed to search for any shoals or dangers to navigation since this data may be used by local commercial vessel operators and pilots to navigate the area. Complete coverage of the seafloor could not be achieved in all areas due to presence of barges and construction equipment around both the old and new bridge piers. See photos at the end of this report.

NRT5 processed the data it acquired and then provided the NOAA's Northeast Regional Navigation Manager with several data products for distribution to local constituents. Three of the data products are sounding plots overlaying the chart in PDF form. The final data product is an image of a BASE surface overlaying the chart immediately under the Tappan Zee Bridge. This image was provided to show where MBES data was not collected due to the presence of construction barges and bridge piers in the area. Refer to the Constituent Products folder and the following files for reference: D00211_UnderTheBridge.pdf, D00211_UnderTheBridge_NoContour.pdf, D00211_Overview.pdf and Bridge_BASE_surface.png.

Real Time Kinematic (RTK) positioning was utilized via an Network Transport of RTCM via Internet Protocol (NTRIP) caster software. The CORS station, New York Valhalla (NYVH) was used for the entire survey. Soundings were reduced to the Hudson River Datum (HRD) using VDatum. The following separation model was provided by NOAA’s Navigation Response Branch: S-B909-NRT5-16_SheetsUTM18NAD83_region_xyNAD83-HRD.csar.

No individual Data Acquisition and Processing Report (DAPR) was created for this survey, but the DAPR for OPR-B396-NRT5BH2-16 has been provided with this submission. All descriptions of survey methods and calibrations performed for this survey are covered by this DAPR.

MBES data was initially processed in CARIS HIPS/SIPS 9.0.23, but was later upgraded to HIPS/SIPS 9.1.6.

This survey does not meet charting specifications and is not adequate to supersede prior data.

Metadata	
Project	S-B909-NRT5-16
Survey	D00211
State	New York
Locality	Tarrytown, NY
Sub Locality	Tappan Zee Bridge
Scale of Survey	1:10000
Sonars Used	Kongsberg EM3002
Horizontal Datum	North American Datum of 1983 (NAD83)
Vertical Datum	Hudson River Datum (HRD)
Vertical Datum Correction	S-B909-NRT5-16_SheetsUTM18NAD83_region_xyNAD83-
Projection	Latitude-Longitude (NAD83) - UTM Zone 18N
Field Unit	NRT5
Survey Dates	6/6/2016 – 6/8/2016
Chief of Party	Andrew Clos
Submission Date	1/31/2016



Figure 1. Overview of current Tappan Zee Bridge with new bridge piers under construction nearby.



Figure 2. Barges rafted to bridge pier.

APPROVAL PAGE

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Data did not meet current specifications as determined by the OCS survey acceptance review process. The survey did not meet specifications mainly due to not all correctors being applied to the data. The intent of the survey was to provide the USCG with an interim hydrographic survey of the vicinity during construction of the new bridge and demolition of the old Tappan Zee bridge. A new hydrographic survey will be run in the area upon completion of construction, as such, D00211 will not be applied to NOAA charting products.

The following products will be sent to NGDC for archive:

- D00211_DR_Memo.pdf
- Processed survey data and records
- D00211_GeoImage.pdf

The survey evaluation and verification has been conducted according to current OCS specifications and procedures.

Approved: _____

Grant Froelich

Hydrographic Team Lead, Pacific Hydrographic Branch

The survey has not been approved for chart updates. The data will be archived at NGDC so that it can be made available for other uses.

Approved: _____

Cece Linder

Acting Chief, Pacific Hydrographic Branch