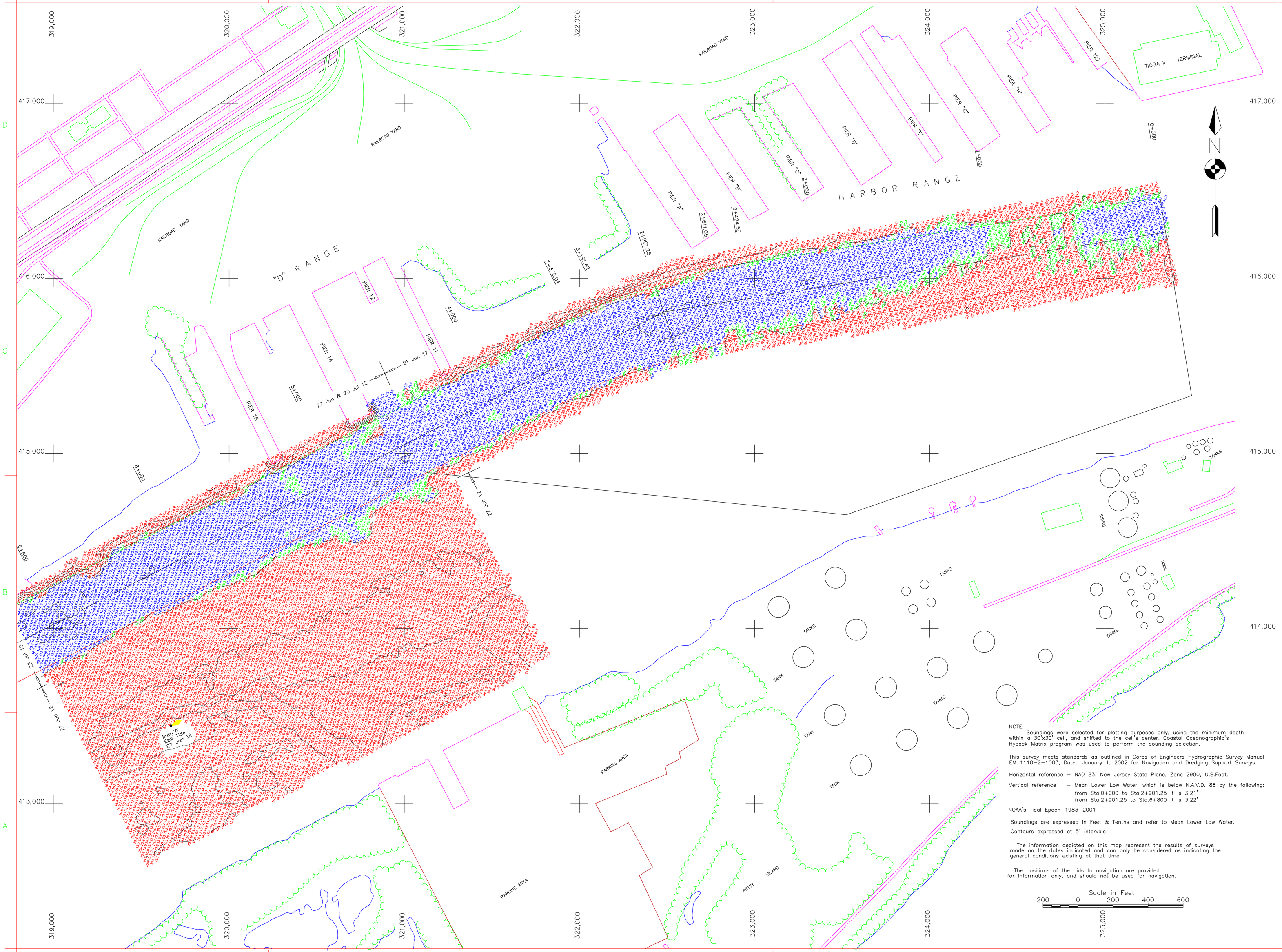


NOTE:

Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.

Vertical reference – Mean Lower Low Water, which is below N.A.V.D. 88 by the following:
from Sta.0+000 to Sta.2+901.25 it is 3.21'
from Sta.2+901.25 to Sta.6+800 it is 3.22'

NOAA's Tidal Epoch–1983–2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours expressed at 5' intervals

The information depicted on this map represent the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

The positions of the aids to navigation are provided for information only, and should not be used for navigation.

Scale in Feet
200 0 200 400 600

US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

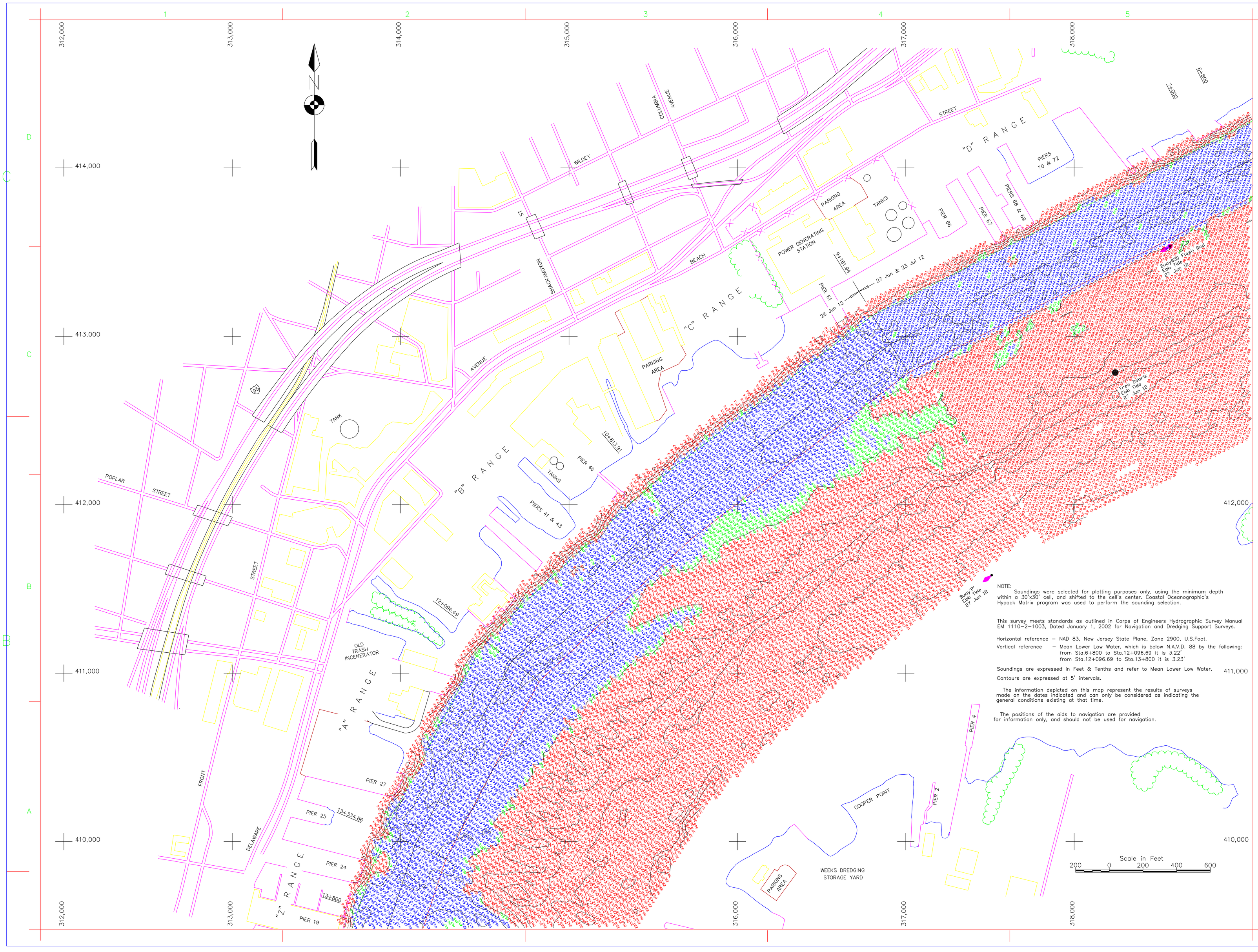
TRACED BY J.A.Groch	PLOTTED BY M.Gaughan	DRAWING NO. 63454	
SURVEYED BY G.Griffith	DATE SURVEYED as shown	APPROVED	

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | IFB W912BU1-
Reviewed by: | Quadrangle Name:
Submitted by: | File name: | Plot date: 07/30/2012 | Plot scale: 1in to 200 ft
Chief, Arch. Branch

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION
PHILADELPHIA HARBOR
STA.0+000 TO STA.6+800

Sheet reference number:

Sheet 1 of 7



NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.
Vertical reference – Mean Lower Low Water, which is below N.A.V.D. 88 by the following:
from Sta.6+800 to Sta.12+096.69 it is 3.22'
from Sta.12+096.69 to Sta.13+800 it is 3.23'

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

The information depicted on this map represent the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

The positions of the aids to navigation are provided for information only, and should not be used for navigation.

US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.
Mark	Description	Date	Appr.

Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by:
Chief, Arch. Branch
Date:
IFB W912BU1-
Quadrangle Name:
File name:
Plot date: 07/30/2012
Plot scale: 1in. to 200 ft.
Rev.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

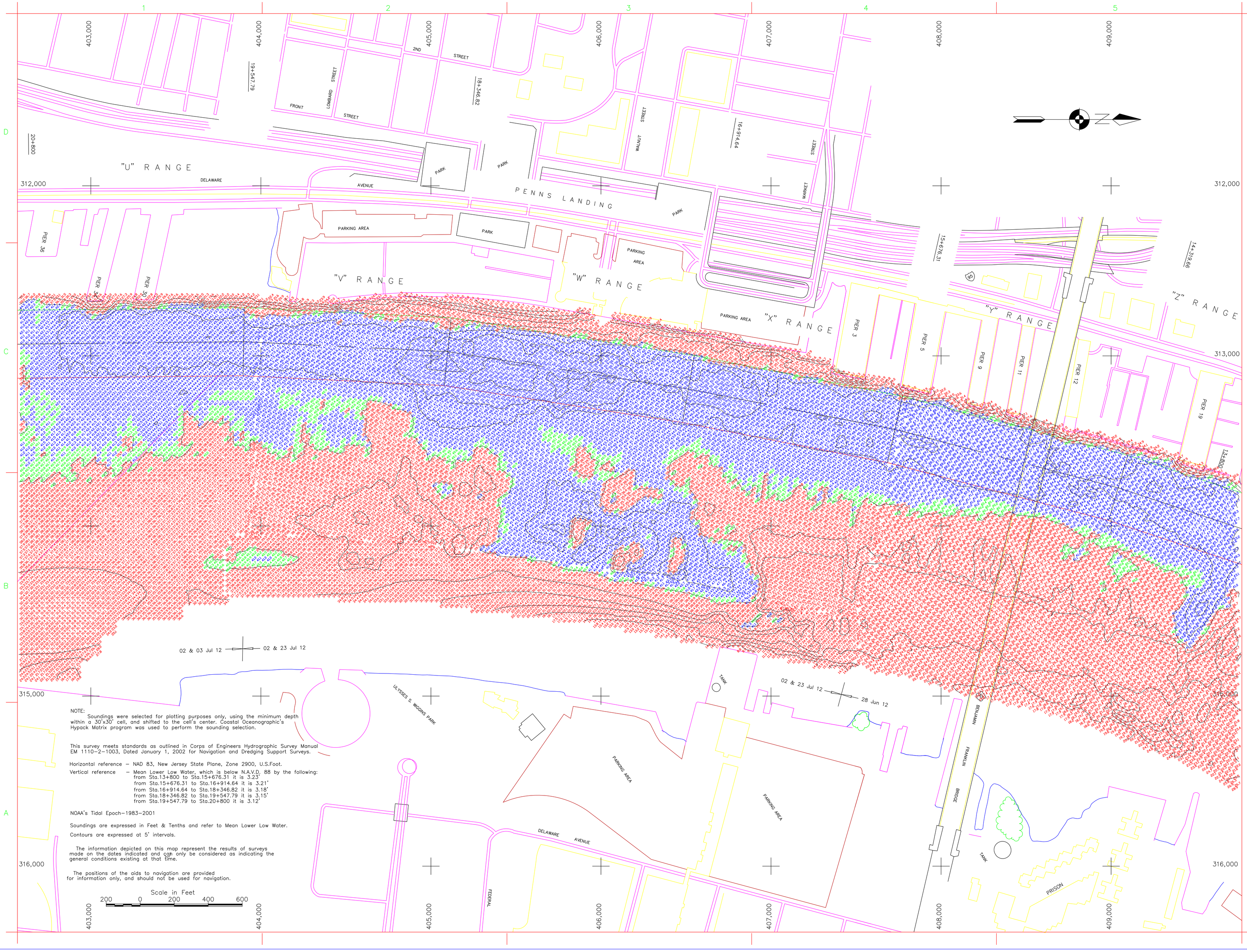
TRACED BY J.A.Grach
PLOTTED BY M.Gaughan
DRAWING NO. 63455
SURVEYED BY G.Griffith
DATE SURVEYED as shown
APPROVED CHIEF, SURVEY BRANCH

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION

PHILADELPHIA HARBOR
STA.6+800 TO STA.13+800

Sheet reference number:

Sheet 2 of 7



NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.

Vertical reference – Mean Lower Low Water, which is below N.A.V.D. 88 by the following:
from Sta.13+800 to Sta.15+676.31 it is 3.23'
from Sta.15+676.31 to Sta.16+914.64 it is 3.21'
from Sta.16+914.64 to Sta.18+346.82 it is 3.18'
from Sta.18+346.82 to Sta.19+547.79 it is 3.15'
from Sta.19+547.79 to Sta.20+800 it is 3.12'

NOAA's Tidal Epoch-1983-2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

The information depicted on this map represent the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

The positions of the aids to navigation are provided for information only, and should not be used for navigation.

Scale in Feet
200 0 200 400 600

US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.
Mark	Description	Date	Appr.

Designed by:
Dwn by: Ckd by:
Reviewed by:
Submitted by: Chief, Arch. Branch
Date: Rev.
FB: W912BU1-
Quadrangle Name:
File name:
Plot date: 07/30/2012
Plot scale: 1in. to 200 ft.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

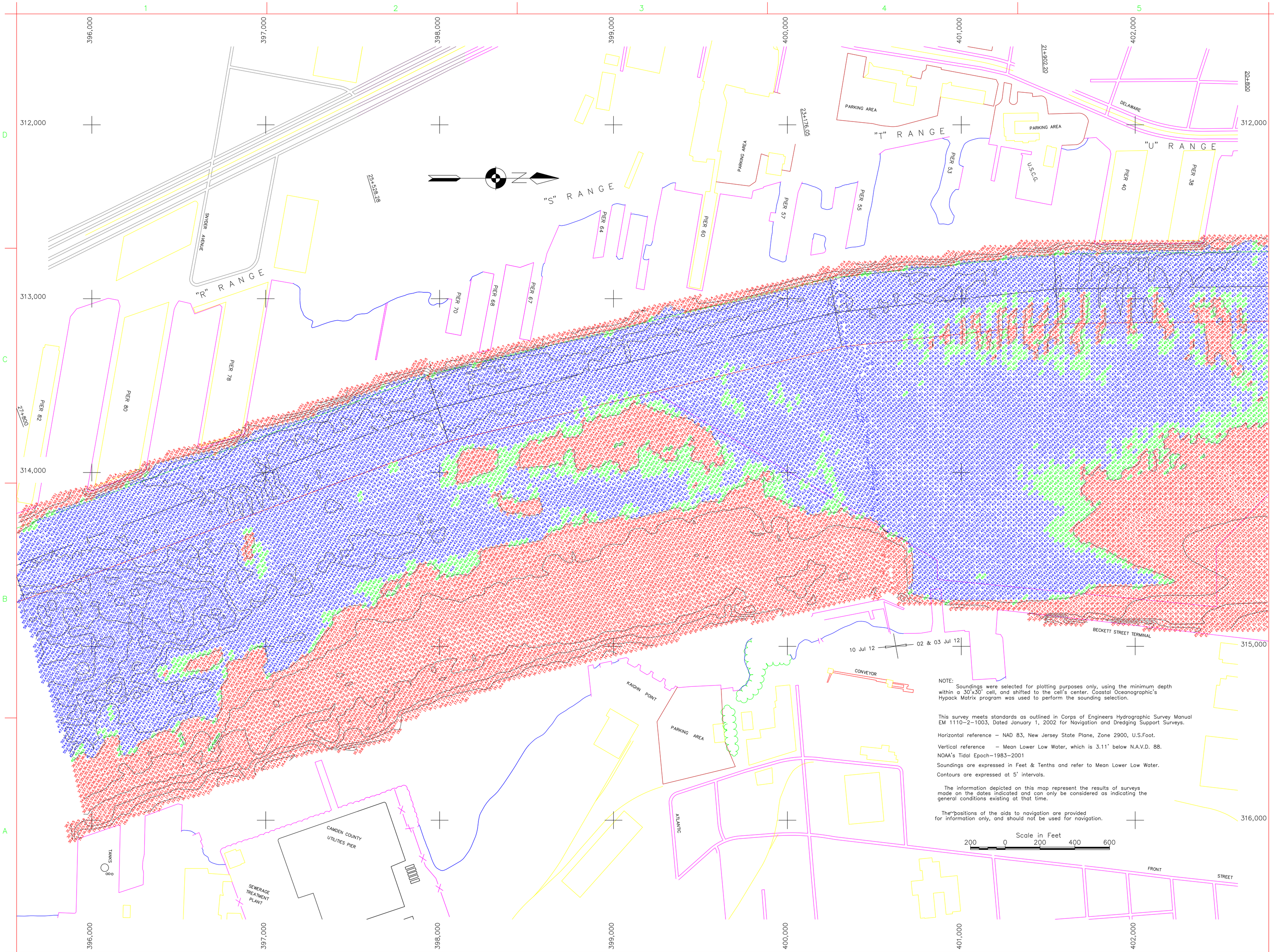
TRACED BY J.A.Groch
PLOTTED BY M.Gaughan
SURVEYED BY G.Griffith
DRAWING NO. 63456
DATE SURVEYED
APPROVED
SCALE as shown

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION

PHILADELPHIA HARBOR
STA.13+800 TO 20+800

Sheet reference number:

Sheet 3 of 7



NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.

Vertical reference – Mean Lower Low Water, which is 3.11' below N.A.V.D. 88.

NOAA's Tidal Epoch-1983-2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

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US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

TRACED BY J.A.Groch	PLOTTED BY M.Gaughan	DRAWING NO. 6345 7	
SURVEYED BY G.Griffith	DATE SURVEYED as shown	APPROVED Chief, Surv. Branch	

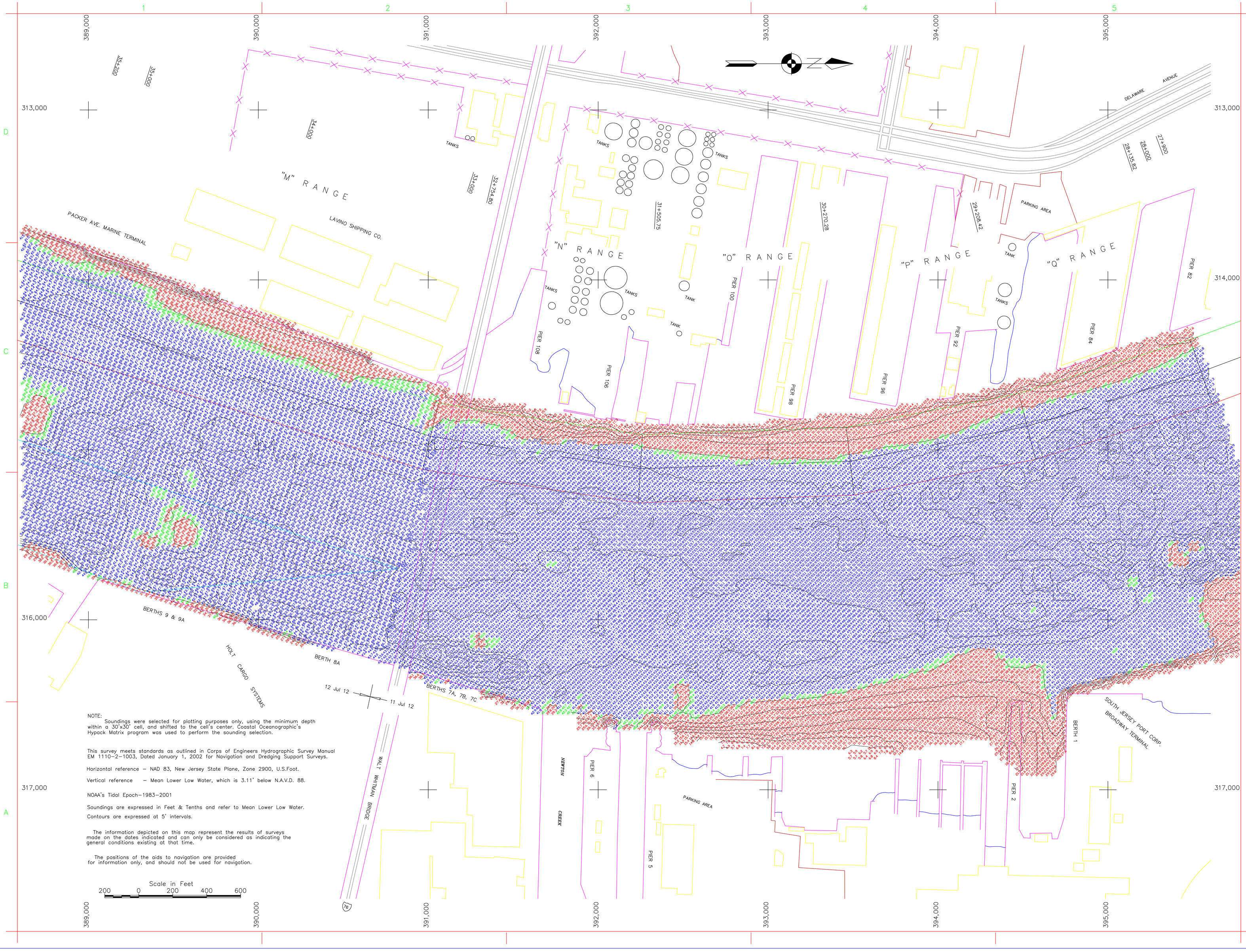
Designed by: | Date:
Dwn by: | Ckd by: | IFB W912BU1-
Reviewed by: | Quadrangle Name:
Submitted by: | File name: | Plot date: 07/30/2012 | Plot scale: 1in to 200 ft
Rev.

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION

PHILADELPHIA HARBOR
STA.20+800 TO STA.27+800

Sheet reference number:

Sheet 4 of 7



NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.

Vertical reference – Mean Lower Low Water, which is 3.11' below N.A.V.D. 88.

NOAA's Tidal Epoch–1983–2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

The information depicted on this map represent the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

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US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.

Designed by:	Date:	Rev.
Dwn by:	Ckd by:	IFB W912BU1-
Reviewed by:	Quadrangle Name:	
Submitted by:	File name:	
Chief, Arch. Branch	Plot date: 07/30/2012	
	Plot scale: 1in to 200ft	

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

TRACED BY	PLOTTED BY	DRAWING NO.
J.A.Groch	M.Gaughan	63458
SURVEYED BY	DATE SURVEYED	APPROVED
G.Griffith	as shown	

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION
PHILADELPHIA HARBOR
STA.27+900 TO STA.35+200

Sheet reference number:

Sheet 5 of 7

NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.
Vertical reference – Mean Lower Low Water, which is below N.A.V.D. 88 by the following:
from Sta.35+600 to Sta.38+208.82 it is 3.10'
from Sta.38+208.82 to Sta.41+827.16 it is 3.10'

NOAA's Tidal Epoch-1983-2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

The information depicted on this map represent the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

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US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

TRACED BY J.A.Groch | PLOTTED BY M.Gaughan | DRAWING NO. 63459
SURVEYED BY G.Griffith | DATE SURVEYED as shown | APPROVED Chief, Surv. Branch

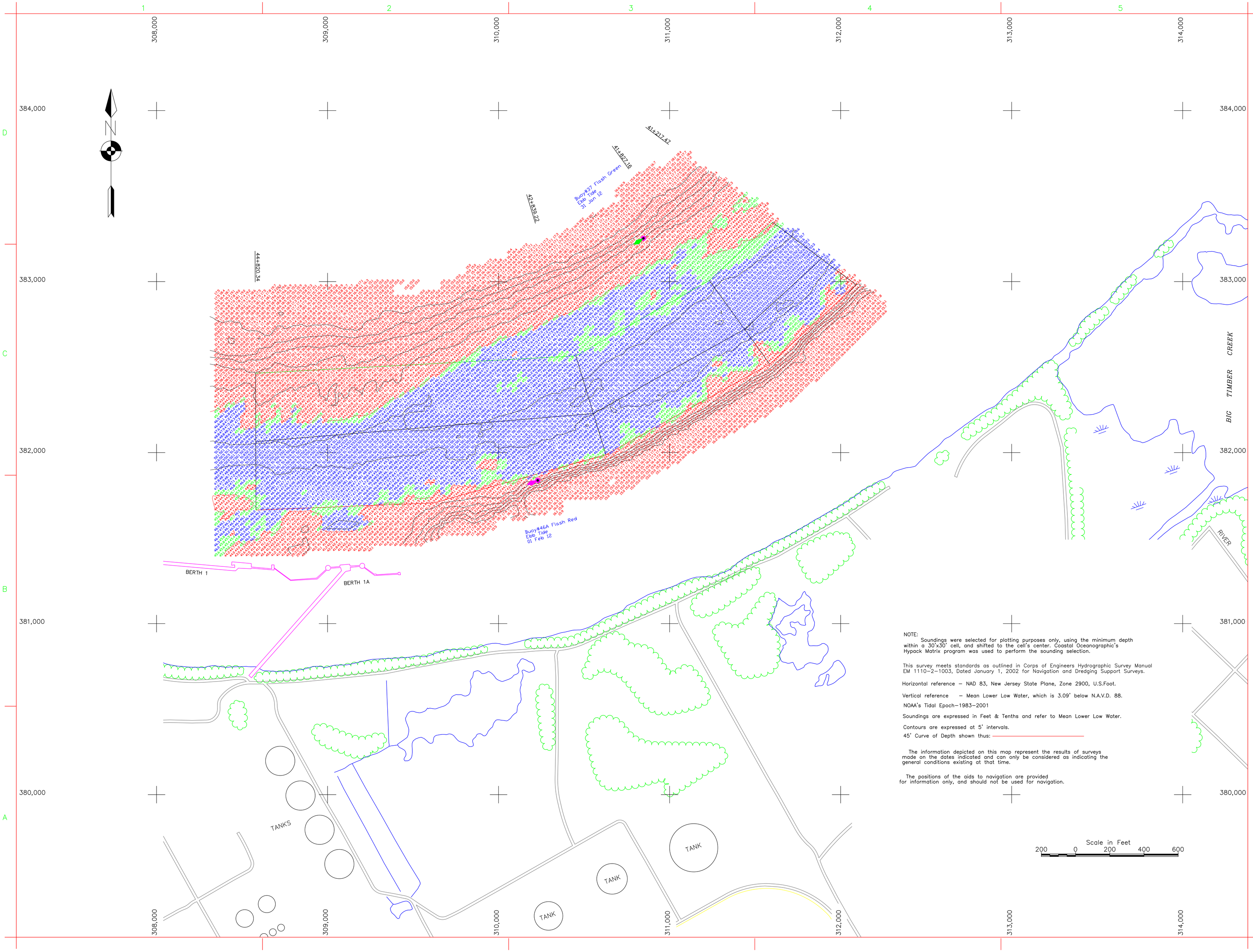
Designed by: | Date: | Rev.
Dwn by: | Ckd by: | IFB W912DJ1-
Reviewed by: | Quadrangle Name:
Submitted by: Chief, Arch. Branch | File name: | Plot date: 07/30/2012 | Plot scale: 1in to 200 ft

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION

PHILADELPHIA HARBOR
STA.35+600 TO STA.41+827.16

Sheet reference number:

Sheet 6 of 7



NOTE:
Soundings were selected for plotting purposes only, using the minimum depth within a 30'x30' cell, and shifted to the cell's center. Coastal Oceanographic's Hypack Matrix program was used to perform the sounding selection.

This survey meets standards as outlined in Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003, Dated January 1, 2002 for Navigation and Dredging Support Surveys.

Horizontal reference – NAD 83, New Jersey State Plane, Zone 2900, U.S.Foot.

Vertical reference – Mean Lower Low Water, which is 3.09' below N.A.V.D. 88.

NOAA's Tidal Epoch-1983-2001

Soundings are expressed in Feet & Tenths and refer to Mean Lower Low Water.

Contours are expressed at 5' intervals.

45' Curve of Depth shown thus:

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US Army Corps of Engineers
Philadelphia District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

Remarks
East Half of channel was surveyed on 01 Feb 12.
West Half of channel was surveyed on 31 Jan 12.

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

TRACED BY J.A.Groch
PLOTTED BY M.Gaughan
DRAWING NO. 63188
SURVEYED BY G.Griffith
DATE SURVEYED 31 Jan 12 & 01 Feb 12
APPROVED Chief, Surv. Branch

Designed by:
Dwn by:
Ckd by:
Reviewed by:
Submitted by: Chief, Arch. Branch
Date:
Rev.
IFB DACW61-
Drawing code:
File name:
Plot date: 02/09/2012
Plot scale: 1in to 200 ft

DELAWARE RIVER
PHILADELPHIA TO THE SEA
EXAMINATION
PHILADELPHIA HARBOR
STA.41+217.47 TO STA.44+820.34

Sheet reference number:
Sheet 7 of 7