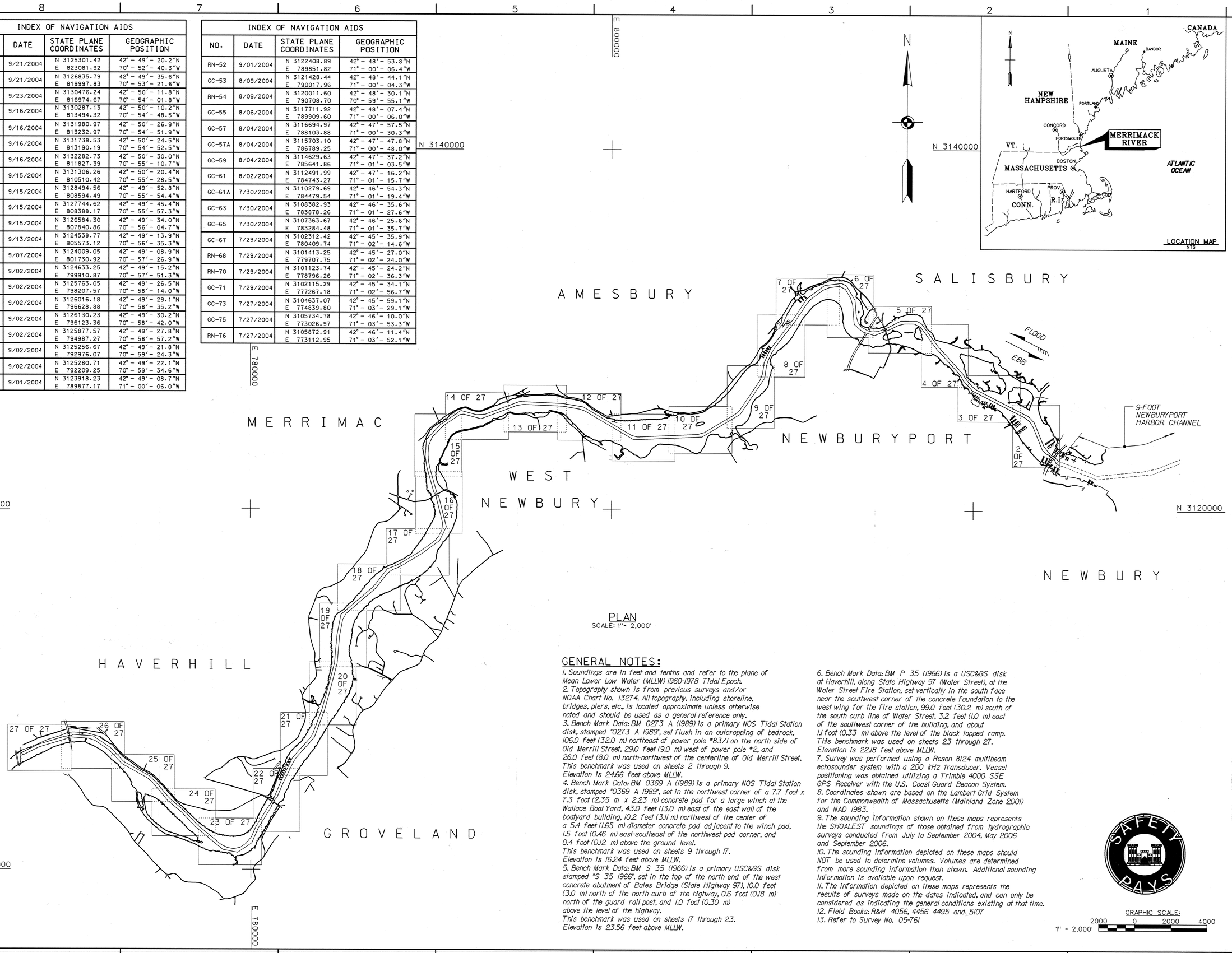
INDEX OF NAVIGATION AIDS			
NO.	DATE	STATE PLANE COORDINATES	GEOGRAPHIC POSITION
RN-24	9/21/2004	N 3125301.42 E 823081.92	42° - 49′ - 20.2″N 70° - 52′ - 40.3″W
RG-N	9/21/2004	N 3126835.79 E 819997.83	42° - 49′ - 35.6″N 70° - 53′ - 21.6″W
GC-27	9/23/2004	N 3130476.24 E 816974.67	42° - 50′ - 11.8″N 70° - 54′ - 01.8″W
GR-C SCN	9/16/2004	N 3130287.13 E 813494.32	42° - 50′ - 10.2″N 70° - 54′ - 48.5″W
RN-30	9/16/2004	N 3131980.97 E 813232.97	42° - 50′ - 26.9″N 70° - 54′ - 51.9″W
GC-31	9/16/2004	N 3131738.53 E 813190.19	42° - 50′ - 24.5″N 70° - 54′ - 52.5″W
RN-32	9/16/2004	N 3132282.73 E 811827.39	42° - 50′ - 30.0″N 70° - 55′ - 10.7″W
RN-34	9/15/2004	N 3131306.26 E 810510.42	42° - 50′ - 20.4″N 70° - 55′ - 28.5″W
GC-35	9/15/2004	N 3128494.56 E 808594.49	42° - 49′ - 52.8″N 70° - 55′ - 54.4″W
RN-36	9/15/2004	N 3127744.62 E 808388.17	42° - 49′ - 45.4″N 70° - 55′ - 57.3″W
RN-38	9/15/2004	N 3126584.30 E 807840.86	42° - 49′ - 34.0″N 70° - 56′ - 04.7″W
RN-40	9/13/2004	N 3124538.77 E 805573.12	42° - 49′ - 13.9″N 70° - 56′ - 35.3″W
RN-42	9/07/2004	N 3124009.05 E 801730.92	42° - 49′ - 08.9″N 70° - 57′ - 26.9″W
RN-42A	9/02/2004	N 3124633.25 E 799910.87	42° - 49′ - 15.2″N 70° - 57′ - 51.3″W
GC-43	9/02/2004	N 3125763.05 E 798207.57	42° - 49′ - 26.5″N 70° - 58′ - 14.0″W
GC-43A	9/02/2004	N 3126016.18 E 796628.88	42° - 49′ - 29.1″N 70° - 58′ - 35.2″W
RN-44	9/02/2004	N 3126130.23 E 796123.36	42° - 49′ - 30.2″N 70° - 58′ - 42.0″W
GC-45	9/02/2004	N 3125877.57 E 794987.27	42° - 49′ - 27.8″N 70° - 58′ - 57.2″W
GC-47	9/02/2004	N 3125256.67 E 792976.07	42° - 49′ - 21.8″N 70° - 59′ - 24.3″W
GC-49	9/02/2004	N 3125280.71 E 792209.25	42° - 49′ - 22.1″N 70° - 59′ - 34.6″W
GC-51	9/01/2004	N 3123918.23 E 789877.17	42° - 49′ - 08.7″N 71° - 00′ - 06.0″W

INDEX OF NAVIGATION AIDS			
NO.	DATE	STATE PLANE COORDINATES	GEOGRAPHIC POSITION
RN-52	9/01/2004	N 3122408.89 E 789851.82	42° - 48′ - 53.8″N 71° - 00′ - 06.4″W
GC-53	8/09/2004	N 3121428.44 E 790017.96	42° - 48′ - 44.1″N 71° - 00′ - 04.3″W
RN-54	8/09/2004	N 3120011.60 E 790708.70	42° - 48′ - 30.1″N 70° - 59′ - 55.1″W
GC-55	8/06/2004	N 3117711.92 E 789909.60	42° - 48′ - 07.4″N 71° - 00′ - 06.0″W
GC-57	8/04/2004	N 3116694.97 E 788103.88	42° - 47′ - 57.5″N 71° - 00′ - 30.3″W
GC-57A	8/04/2004	N 3115703.10 E 786789.25	42° - 47′ - 47.8″N 71° - 00′ - 48.0″W
GC-59	8/04/2004	N 3114629.63 E 785641.86	42° - 47′ - 37.2″N 71° - 01′ - 03.5″W
GC-61	8/02/2004	N 3112491.99 E 784743.27	42° - 47′ - 16.2″N 71° - 01′ - 15.7″W
GC-61A	7/30/2004	N 3110279.69 E 784479.54	42° - 46′ - 54.3″N 71° - 01′ - 19.4″W
GC-63	7/30/2004	N 3108382.93 E 783878.26	42° - 46′ - 35.6″N 71° - 01′ - 27.6″W
GC-65	7/30/2004	N 3107363.67 E 783284.48	42° - 46′ - 25.6″N 71° - 01′ - 35.7″W
GC-67	7/29/2004	N 3102312.42 E 780409.74	42° - 45′ - 35.9″N 71° - 02′ - 14.6″W
RN-68	7/29/2004	N 3101413.25 E 779707.75	42° - 45′ - 27.0″N 71° - 02′ - 24.0″W
RN-70	7/29/2004	N 3101123.74 E 778796.26	42° - 45′ - 24.2″N 71° - 02′ - 36.3″W
GC-71	7/29/2004	N 3102115.29 E 777267.18	42° - 45′ - 34.1″N 71° - 02′ - 56.7″W
GC-73	7/27/2004	N 3104637.07 E 774839.80	42° - 45′ - 59.1″N 71° - 03′ - 29.1″W
GC-75	7/27/2004	N 3105734.78 E 773026.97	42° - 46′ - 10.0″N 71° - 03′ - 53.3″W
RN-76	7/27/2004	N 3105872.91 E 773112.95	42° - 46′ - 11.4″N 71° - 03′ - 52.1″W



PLAN
SCALE: 1"= 2,000'

GENERAL NOTES:

1. Soundings are in feet and tenths and refer to the plane of Mean Lower Low Water (MLLW) 1960-1978 Tidal Epoch.
2. Topography shown is from previous surveys and/or NOAA Chart No. 13274. All topography, including shoreline, bridges, piers, etc., is located approximate unless otherwise noted and should be used as a general reference only.
3. Bench Mark Data: BM 0273 A (1989) is a primary NOS Tidal Station disk, stamped "0273 A 1989", set flush in an outcropping of bedrock, 106.0 feet (32.0 m) northeast of power pole #83/1 on the north side of Old Merrill Street, 29.0 feet (9.0 m) west of power pole #2, and 26.0 feet (8.0 m) north-northwest of the centerline of Old Merrill Street. This benchmark was used on sheets 2 through 9. Elevation is 24.66 feet above MLLW.
4. Bench Mark Data: BM 0369 A (1989) is a primary NOS Tidal Station disk, stamped "0369 A 1989", set in the northwest corner of a 7.7 foot x 7.3 foot (2.35 m x 2.23 m) concrete pad for a large winch at the Wallace Boat Yard, 43.0 feet (13.0 m) east of the east wall of the boatyard building, 10.2 feet (3.1 m) northwest of the center of a 5.4 feet (1.65 m) diameter concrete pad adjacent to the winch pad, 1.5 foot (0.46 m) east-southeast of the northwest pad corner, and 0.4 foot (0.12 m) above the ground level. This benchmark was used on sheets 9 through 17. Elevation is 16.24 feet above MLLW.
5. Bench Mark Data: BM S 35 (1966) is a primary USC&GS disk stamped "S 35 1966", set in the top of the north end of the west concrete abutment of Bates Bridge (State Highway 97), 10.0 feet (3.0 m) north of the north curb of the highway, 0.6 foot (0.18 m) north of the guard rail post, and 1.0 foot (0.30 m) above the level of the highway. This benchmark was used on sheets 17 through 23. Elevation is 23.56 feet above MLLW.
6. Bench Mark Data: BM P 35 (1966) is a USC&GS disk at Haverhill, along State Highway 97 (Water Street), at the Water Street Fire Station, set vertically in the south face near the southwest corner of the concrete foundation to the west wing for the fire station, 99.0 feet (30.2 m) south of the south curb line of Water Street, 3.2 feet (1.0 m) east of the southwest corner of the building, and about 1.1 foot (0.33 m) above the level of the black topped ramp. This benchmark was used on sheets 23 through 27. Elevation is 22.18 feet above MLLW.
7. Survey was performed using a Reson 8124 multibeam echosounder system with a 200 kHz transducer. Vessel positioning was obtained utilizing a Trimble 4000 SSE GPS Receiver with the U.S. Coast Guard Beacon System.
8. Coordinates shown are based on the Lambert Grid System for the Commonwealth of Massachusetts (Mainland Zone 2001) and NAD 1983.
9. The sounding information shown on these maps represents the SHOALEST soundings of those obtained from hydrographic surveys conducted from July to September 2004, May 2006 and September 2006.
10. The sounding information depicted on these maps should NOT be used to determine volumes. Volumes are determined from more sounding information than shown. Additional sounding information is available upon request.
11. The information depicted on these maps represents the results of surveys made on the dates indicated, and can only be considered as indicating the general conditions existing at that time.
12. Field Books: R&H 4056, 4456 4495 and 5107
13. Refer to Survey No. 05-761

SAFETY PAYS

GRAPHIC SCALE:
1" = 2,000'
2000 0 2000 4000

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

Surveyed By: Jeffrey W. Preston, Hydrographer
Plotted By: Stephen Wickley
Asst. Chief, Survey Section
Chief, Survey Section

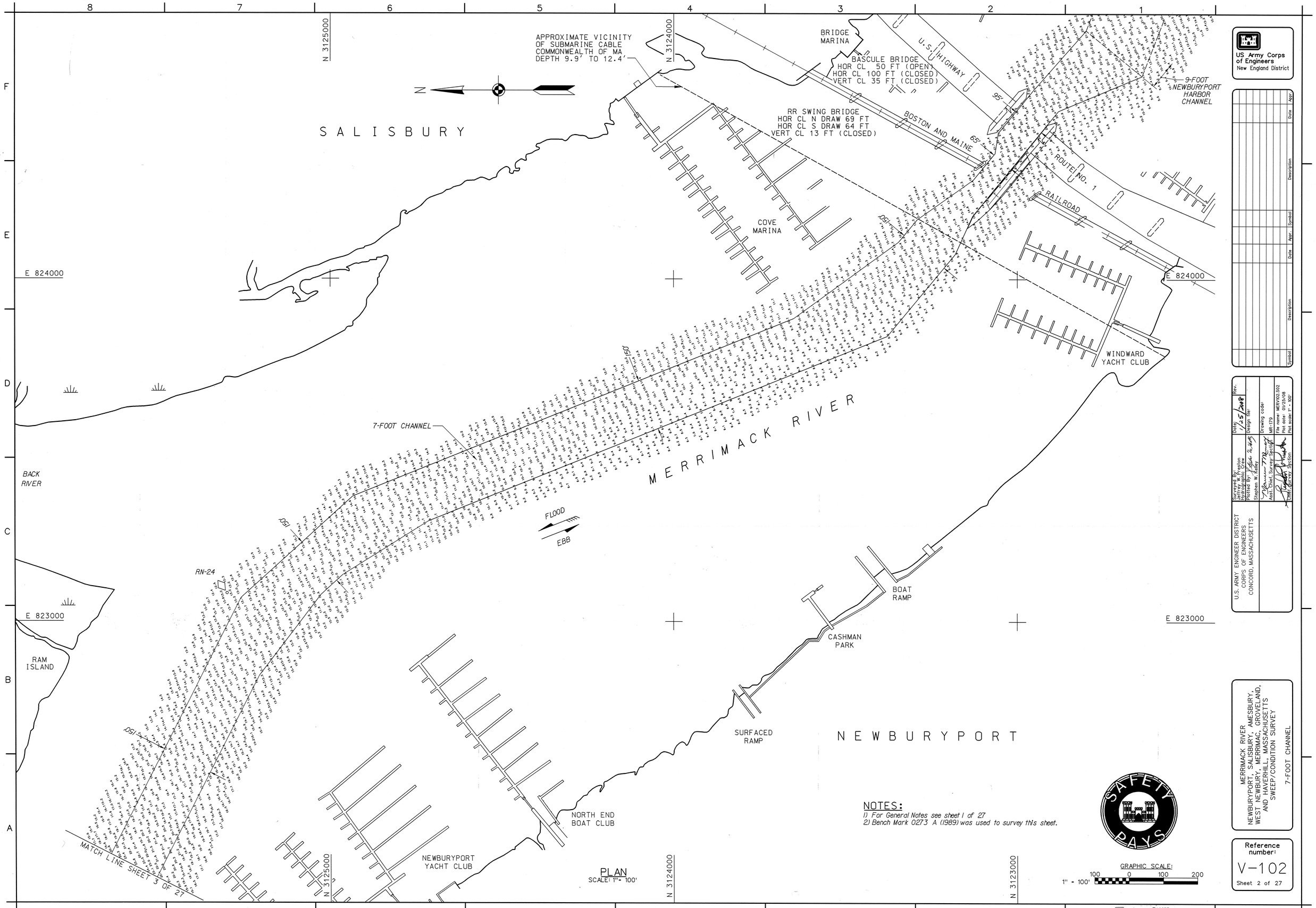
Date: 1/15/2008
Rev.
Drawing code: MR-179
File name: MERV01S01
Plot date: 01/25/08
Plot scale: 1" = 2000'

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

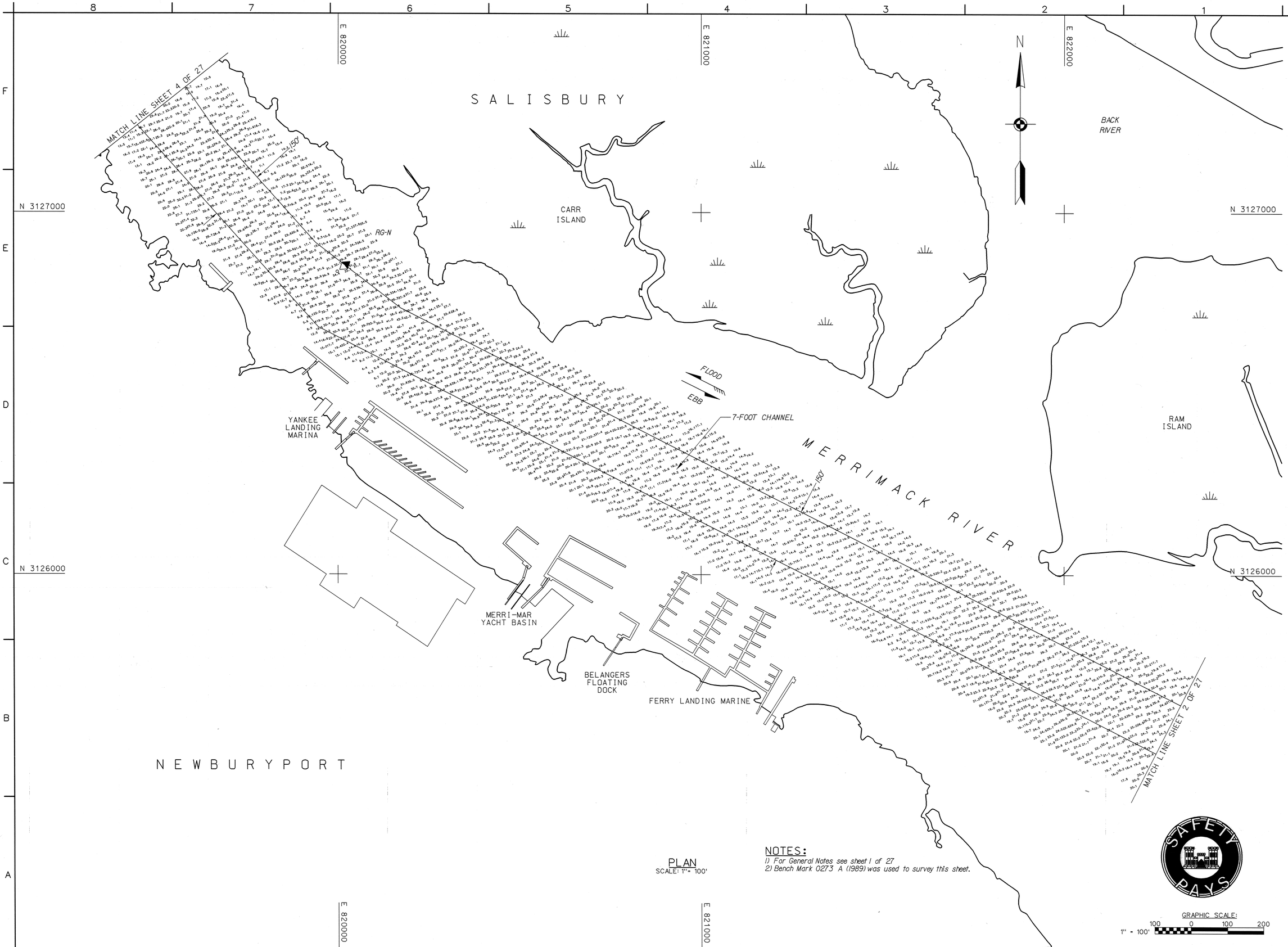
Reference number:
V-101
Sheet 1 of 27

SCANNED RECORD
JAN-2008



NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

PLAN
SCALE: 1" = 100'



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

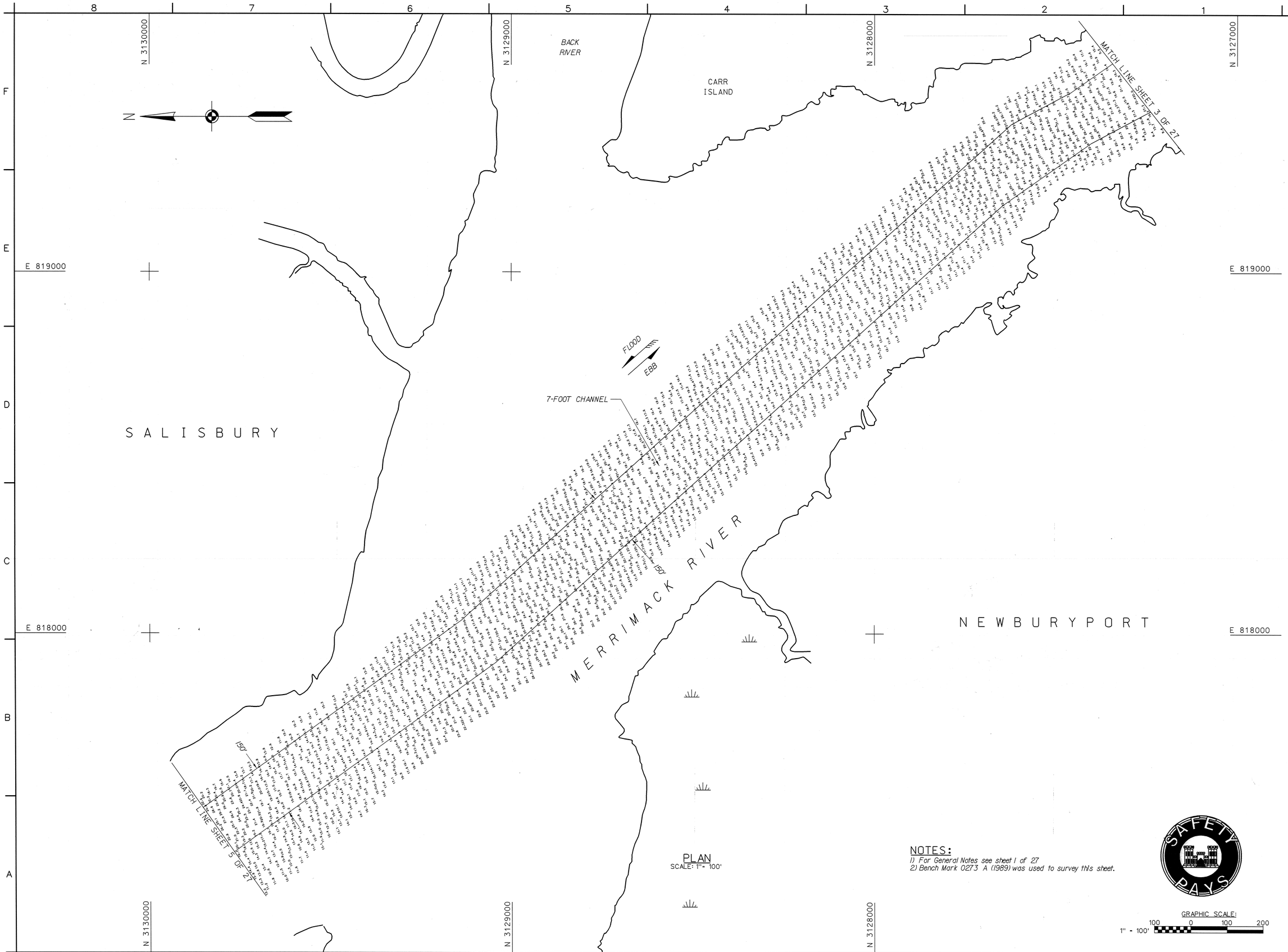
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV103.S03
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-103
Sheet 3 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

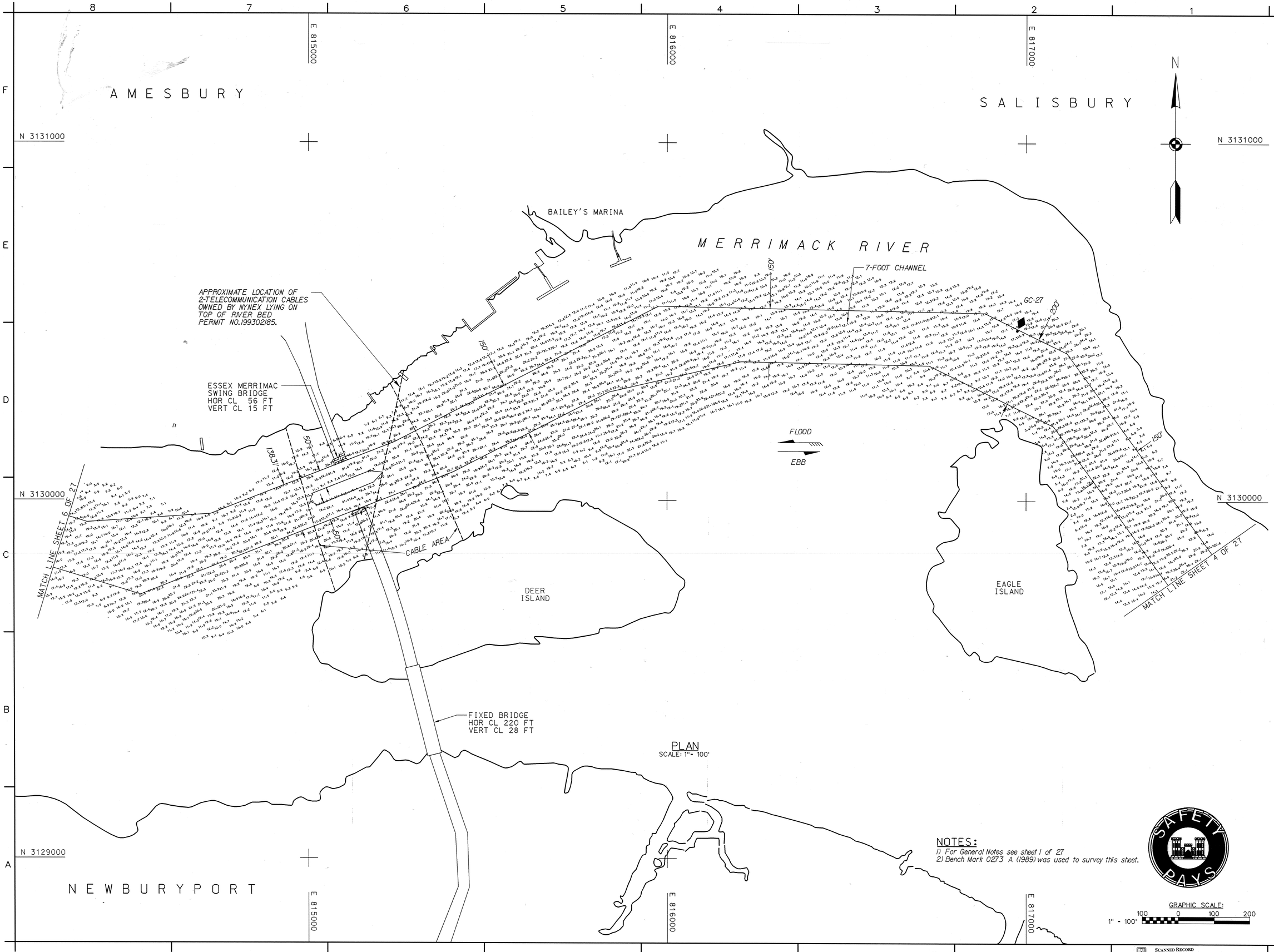
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV104.S04
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-104
Sheet 4 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

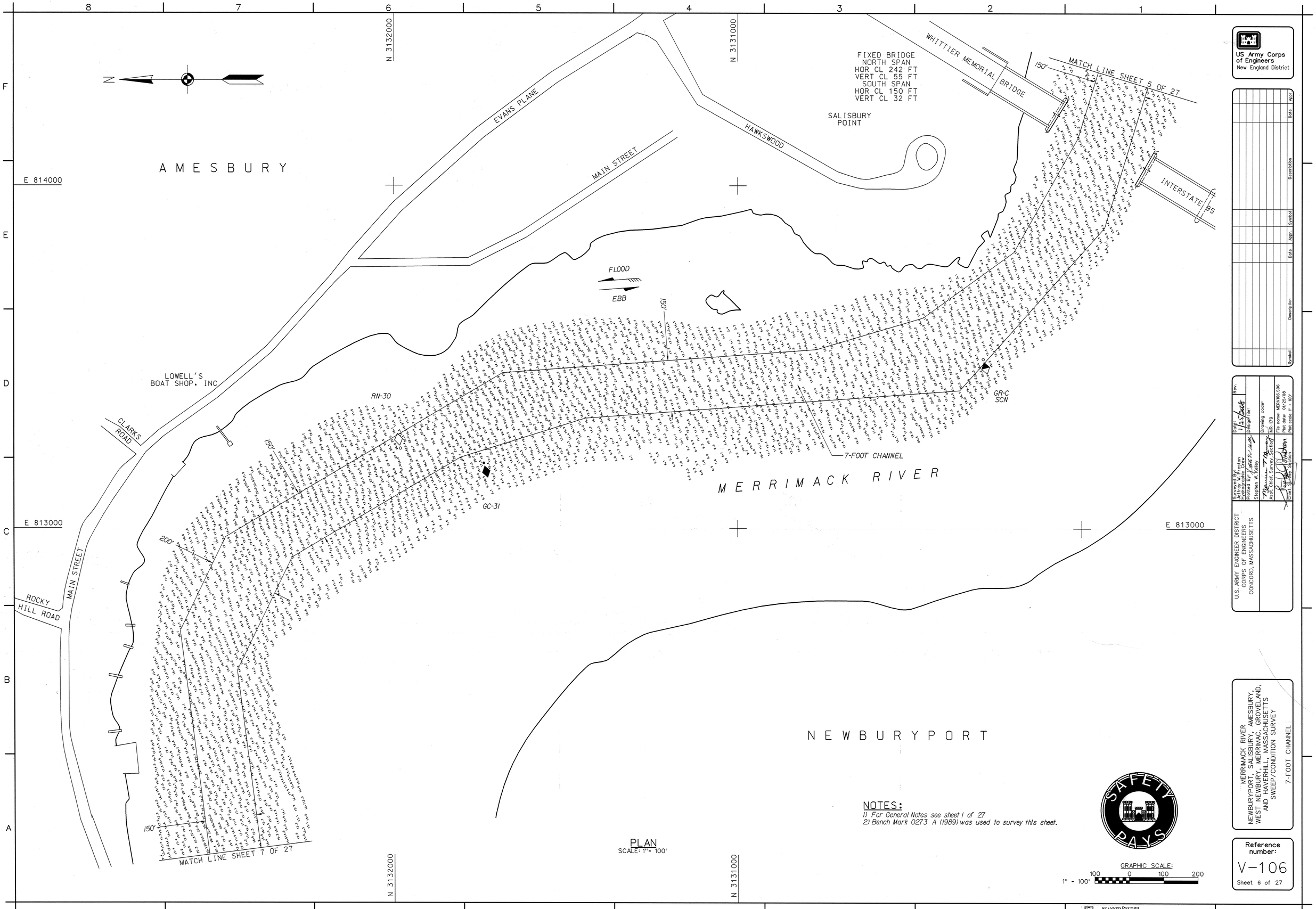
Surveyed By: Jeffrey W. Preston
Plotted By: Stephen W. Kelley
Date: 1/25/2008
Design file:
Drawing code:
MR-179
File name: MERV05.505
Plot date: 01/25/08
Plot scale: 1" = 100'
Asst. Chief, Survey Section
Chief, Survey Section

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-105
Sheet 5 of 27

SAFETY PAYS

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 11/25/2008
Design file:
Drawing code: MR-179
File name: MERV106.S06
Plot date: 01/25/08
Plot scale: 1" = 100'
Rev.

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-106
Sheet 6 of 27

SCANNED RECORD
JAN-2008

PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

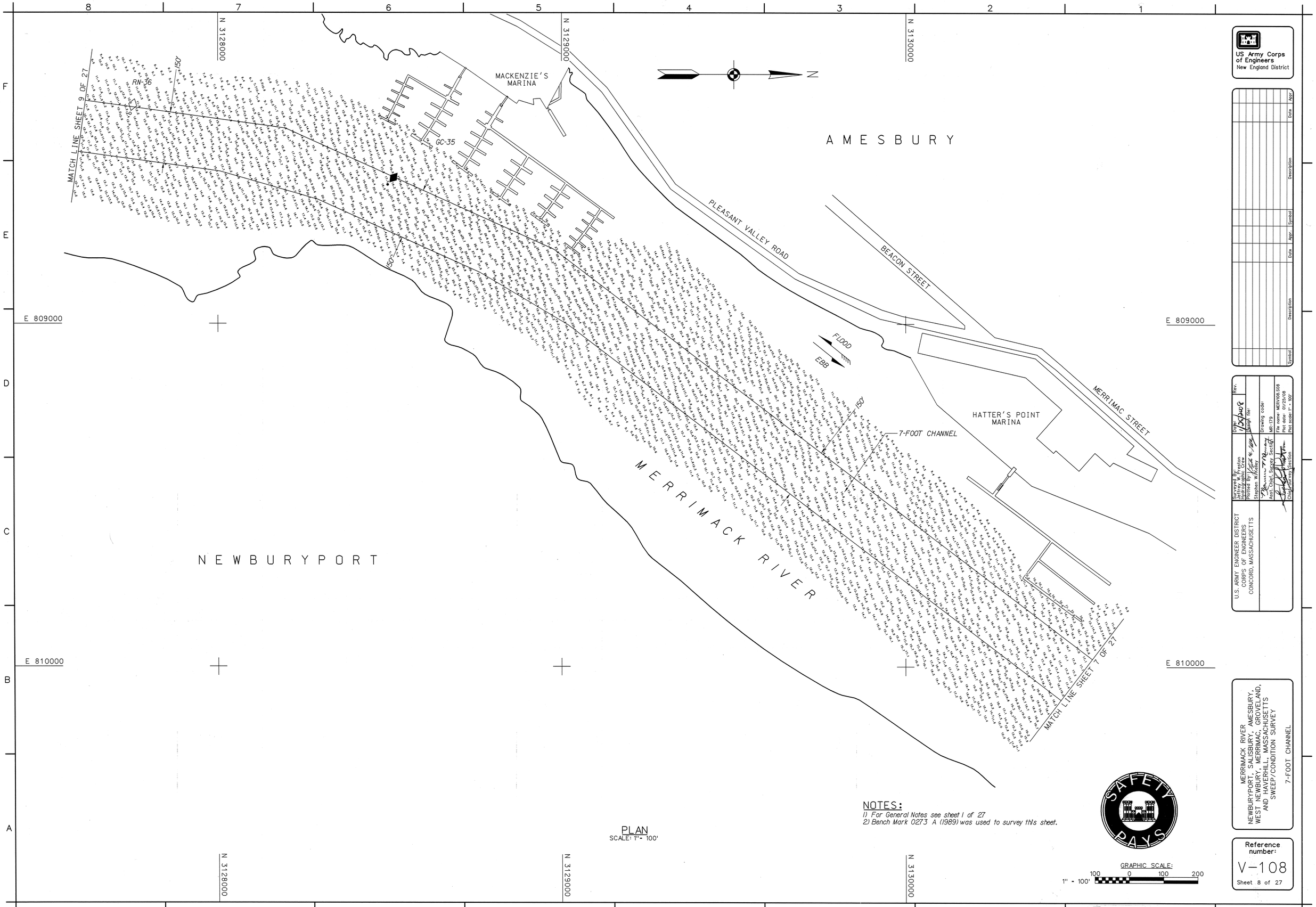
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV107.S07
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-107
Sheet 7 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
100 0 100 200
1" = 100'

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

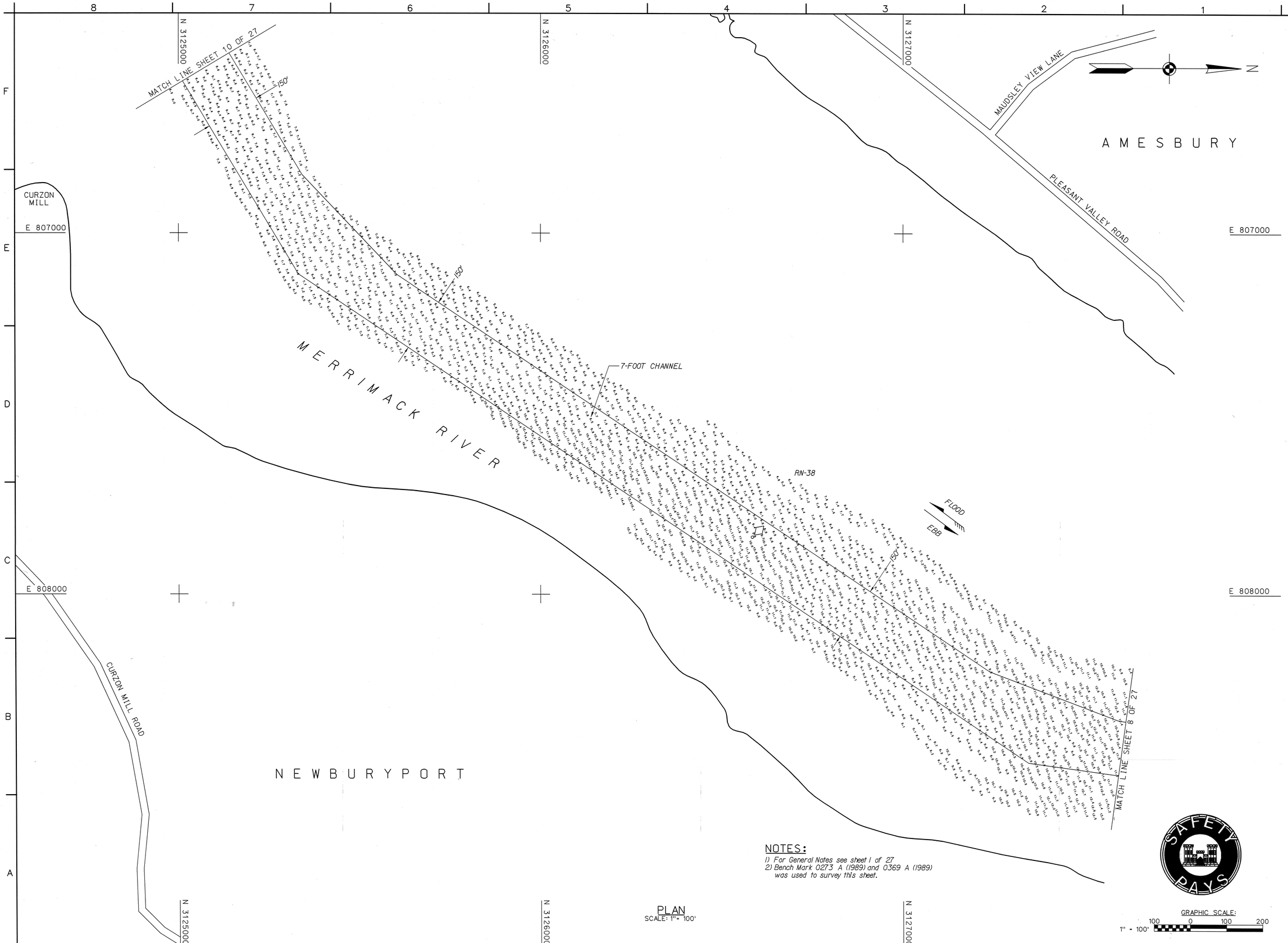
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographer
Plotted By: Stephen W. Kelley
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV108.508
Plot date: 01/25/08
Plot scale: 1" = 100'
Asst. Chief, Survey Section
Chief, Survey Section

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-108
Sheet 8 of 27

SCANNED RECORD
JAN-2008



NOTES:

1) For General Notes see sheet 1 of 27
2) Bench Mark 0273 A (1989) and 0369 A (1989) was used to survey this sheet.

PLAN
SCALE: 1" = 100'

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section

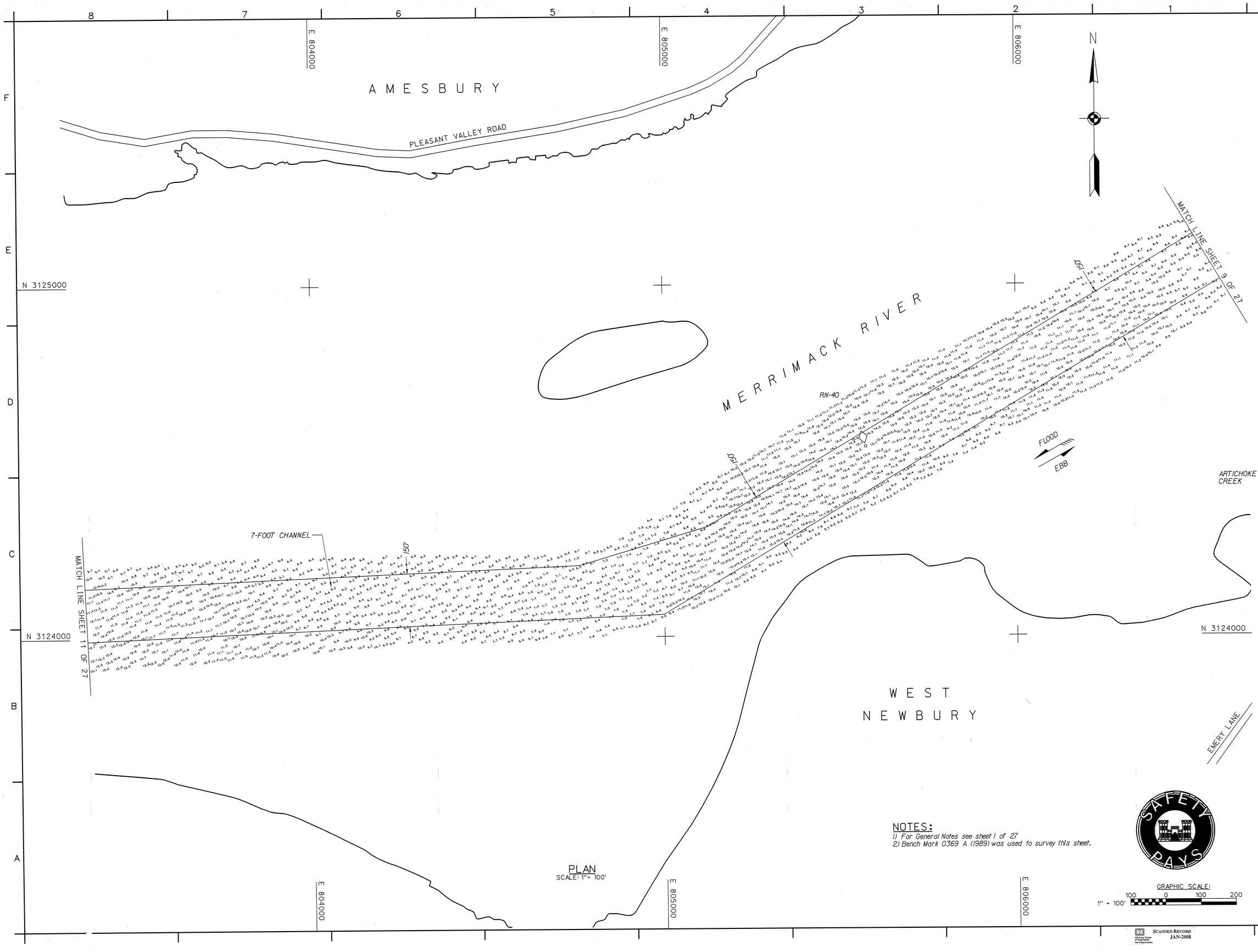
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV109.S09
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY,
WEST NEWBURY, MERRIMAC, GROVELAND,
AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-109
Sheet 9 of 27

SAFETY PAYS

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

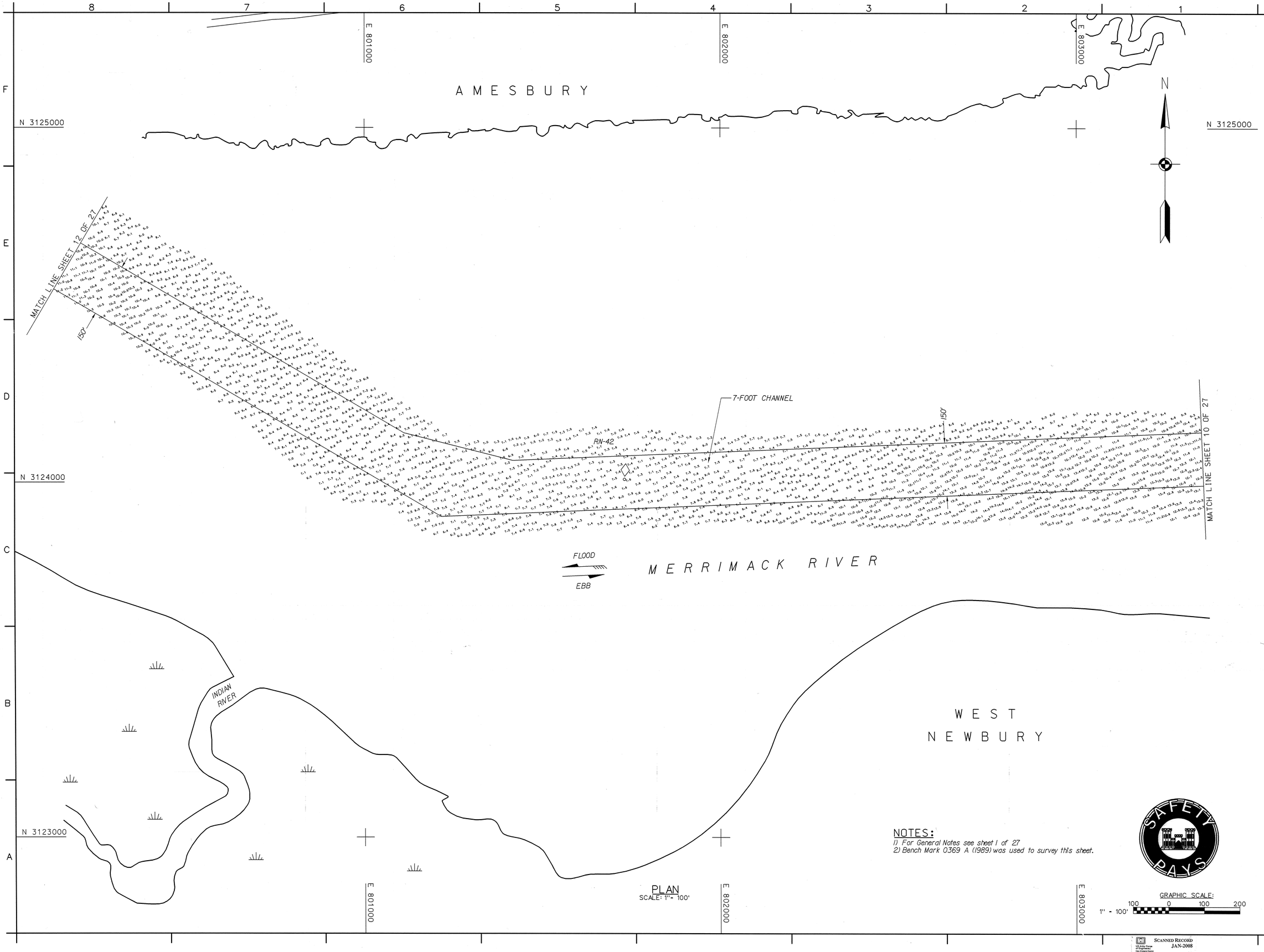
Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV110.S10
Plot date: 01/25/08
Plot scale: 1" = 100'

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-110
Sheet 10 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Stephen W. Kelley
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section

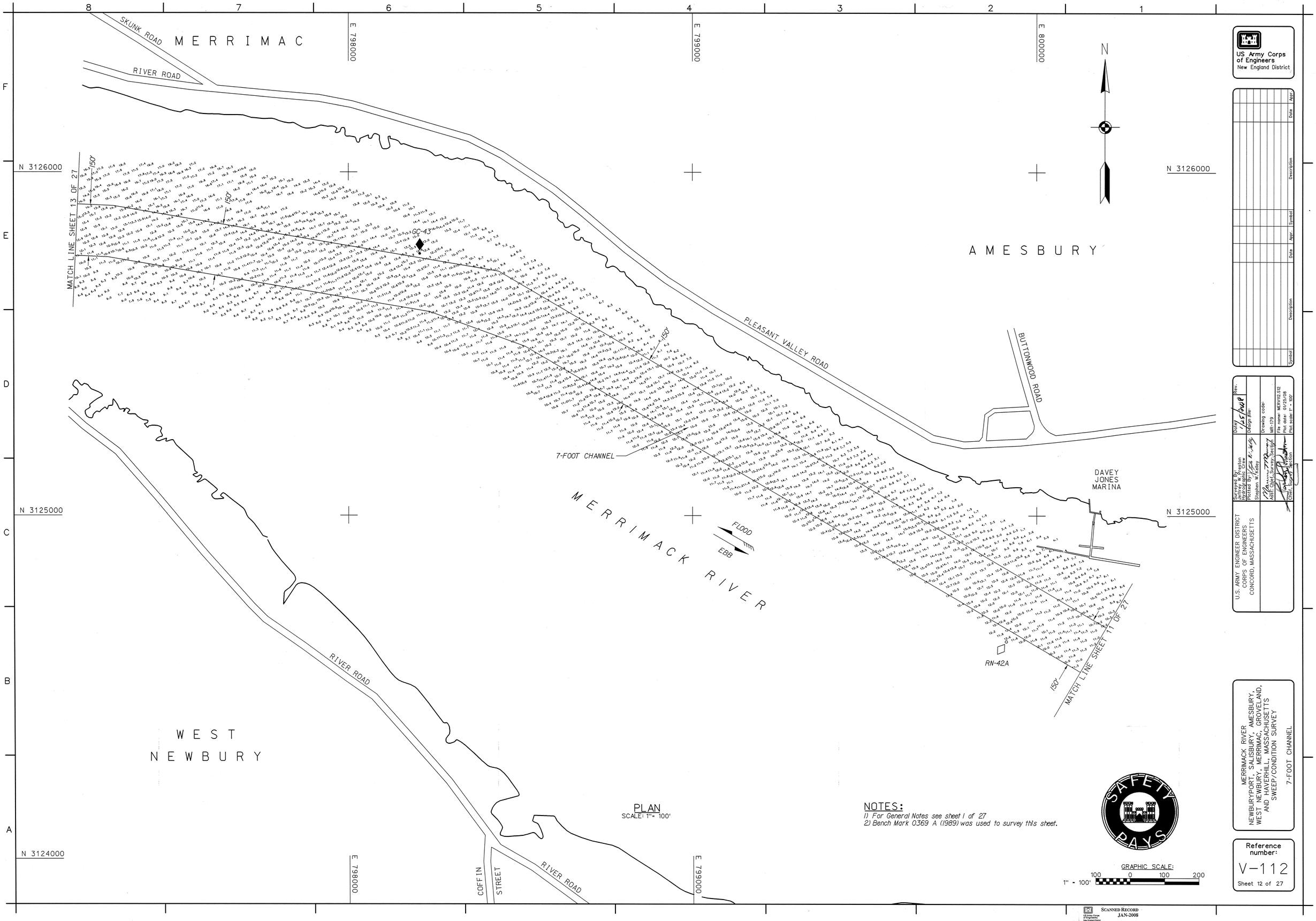
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERVIII.S11
Plot date: 01/29/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-111
Sheet 11 of 27

SAFETY PAYS

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston
Hydrographic Surveyor
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV112-S12
Plot date: 01/25/08
Plot scale: 1" = 100'
Rev.
Chief, Survey Section

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY,
WEST NEWBURY, MERRIMAC, GROVELAND,
AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-112
Sheet 12 of 27

PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

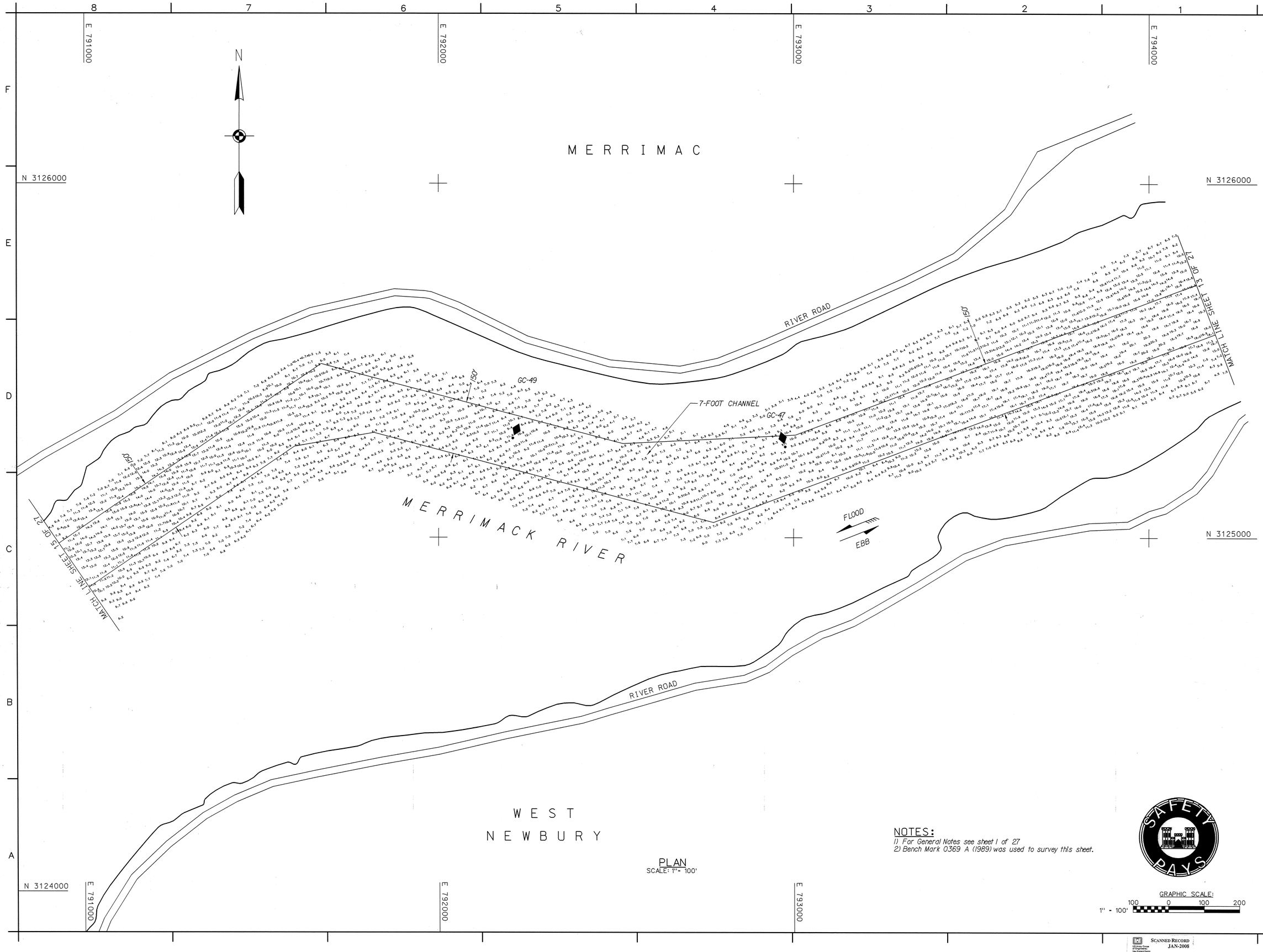
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV113.S13
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-113
Sheet 13 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

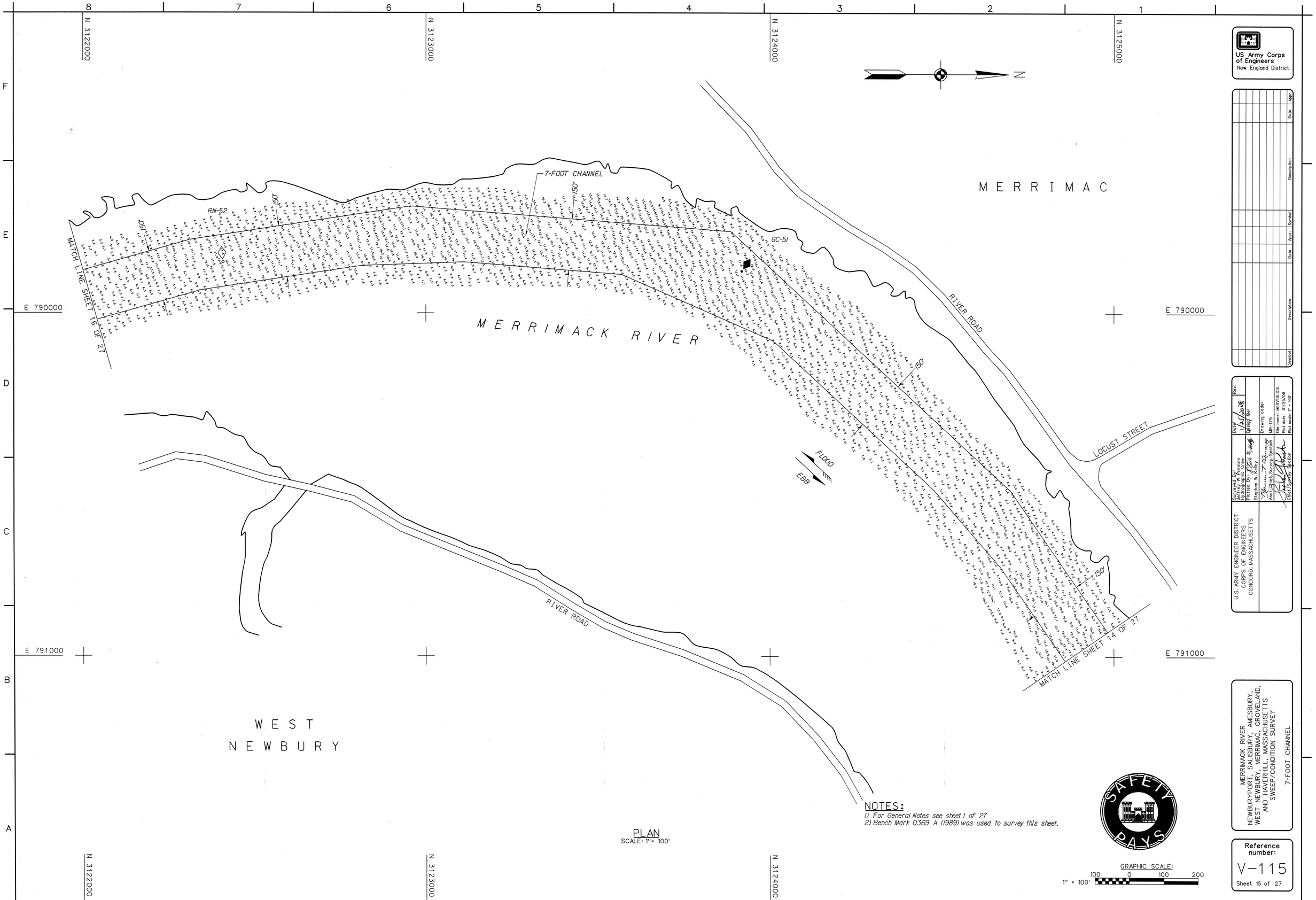
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV114.S14
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-114
Sheet 14 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

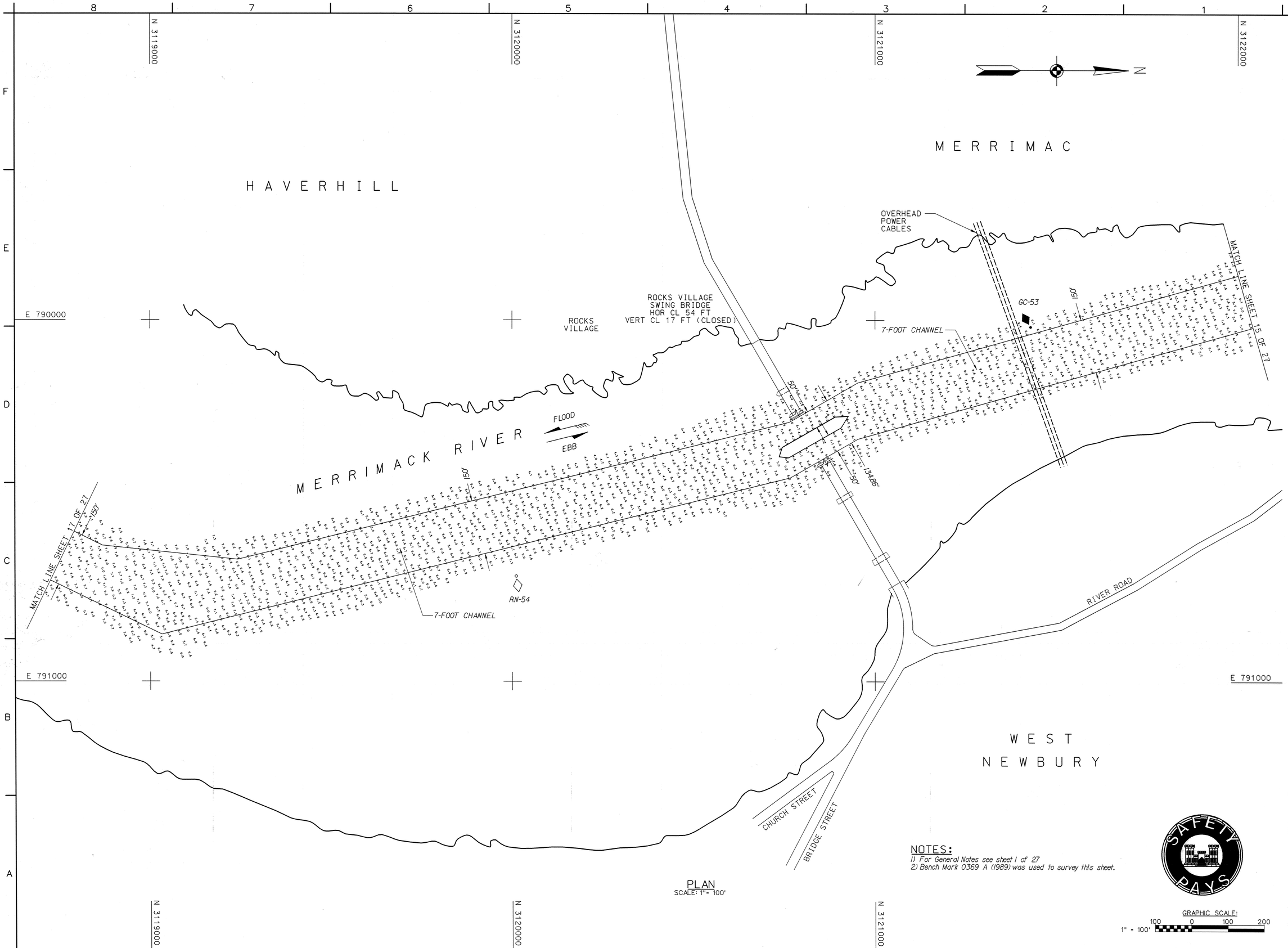
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV115.S15
Plot date: 01/25/08
Plot scale: 1" = 100'
Rev.

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-115
Sheet 15 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

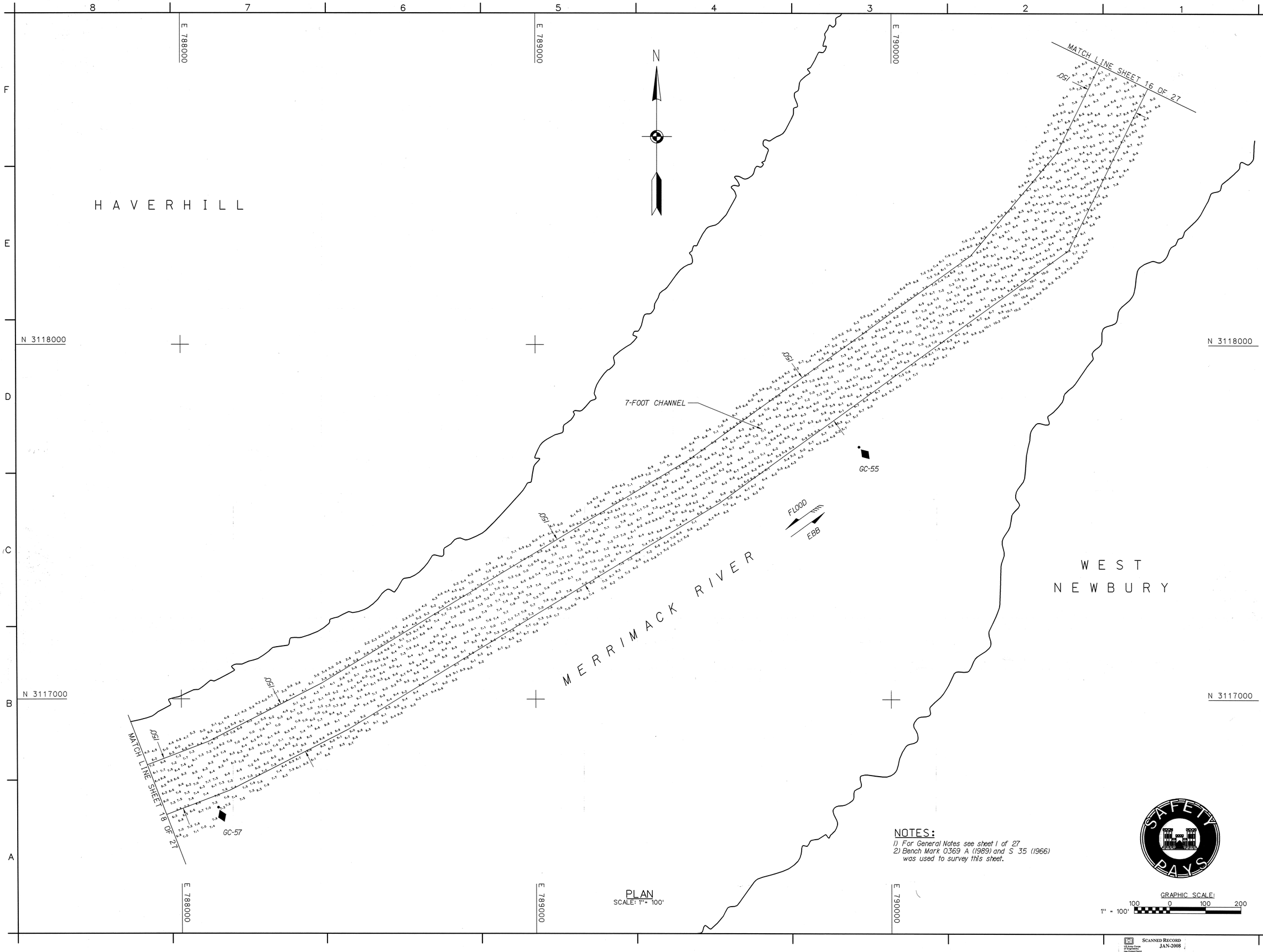
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV116.S16
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-116
Sheet 16 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark 0369 A (1989) and S 35 (1966) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

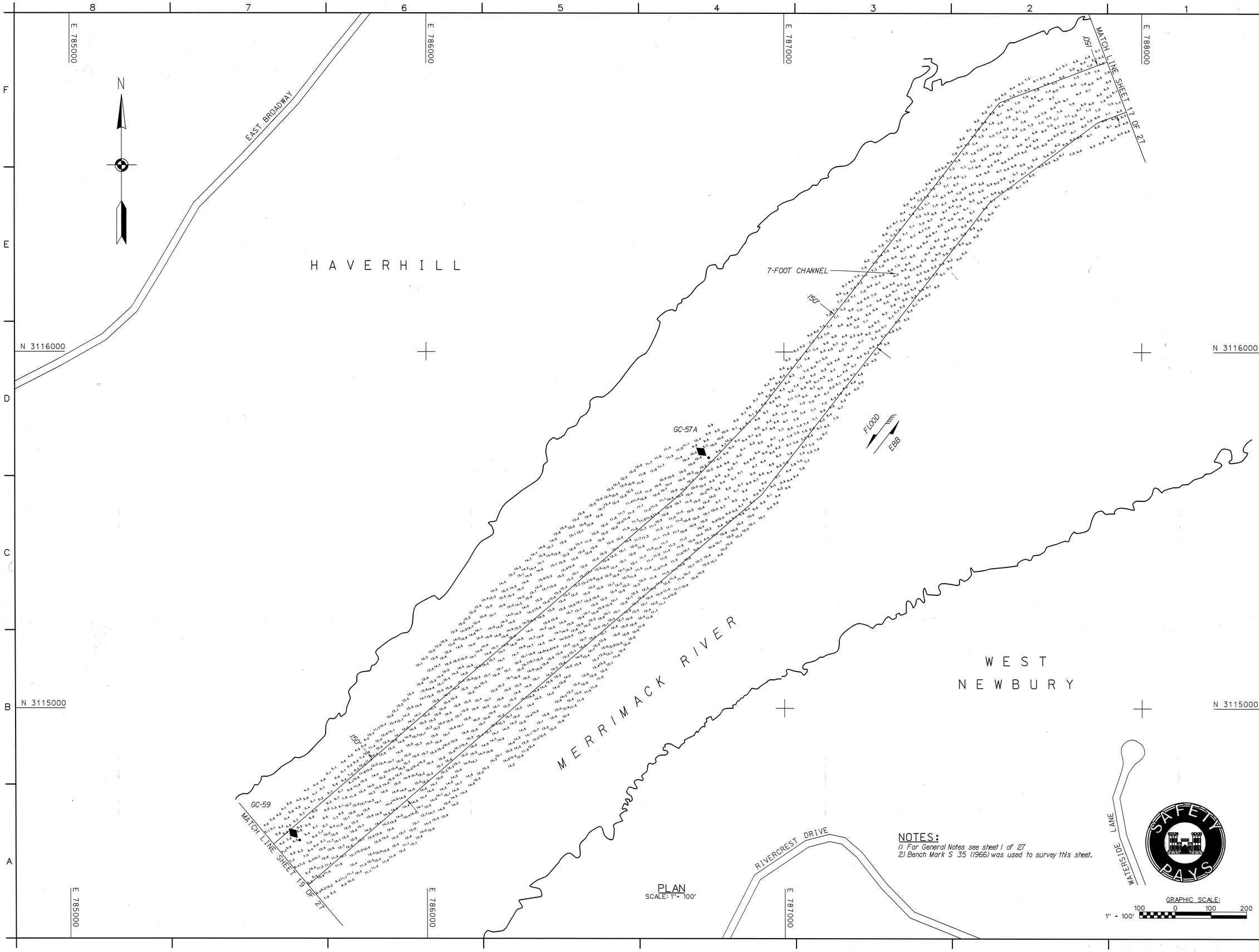
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV117.S17
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-117
Sheet 17 of 27

SCANNED RECORD
JAN-2008



PLAN
SCALE: 1"= 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) was used to survey this sheet.

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

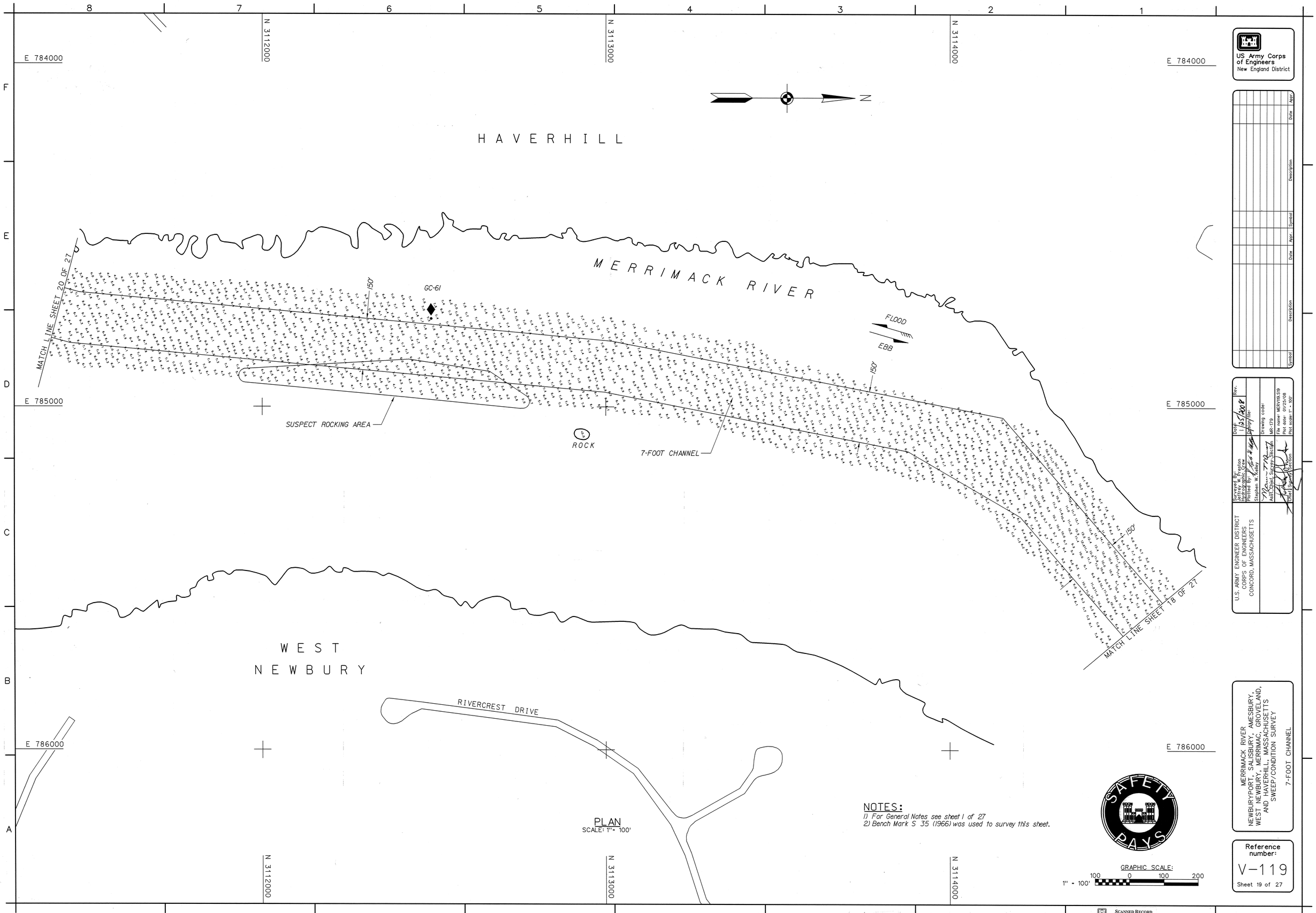
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section

Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV18.STB
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY,
WEST NEWBURY, MERRIMAC, GROVELAND,
AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-118
Sheet 18 of 27



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

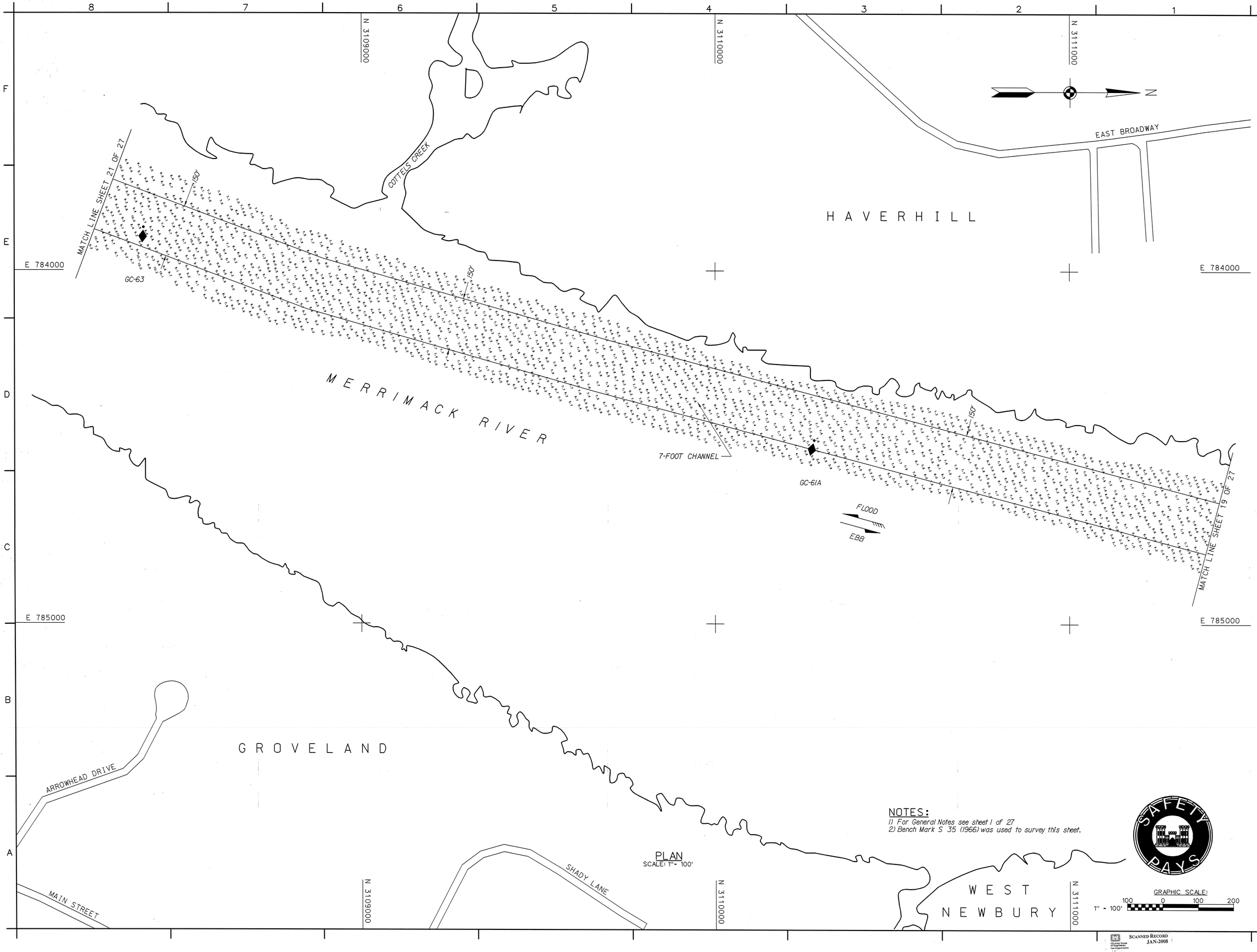
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Rev.
Design file:
Drawing code: MR-179
File name: MERV119.S19
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-119
Sheet 19 of 27

SCANNED RECORD
JAN-2008



NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) was used to survey this sheet.

PLAN
SCALE: 1" = 100'

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

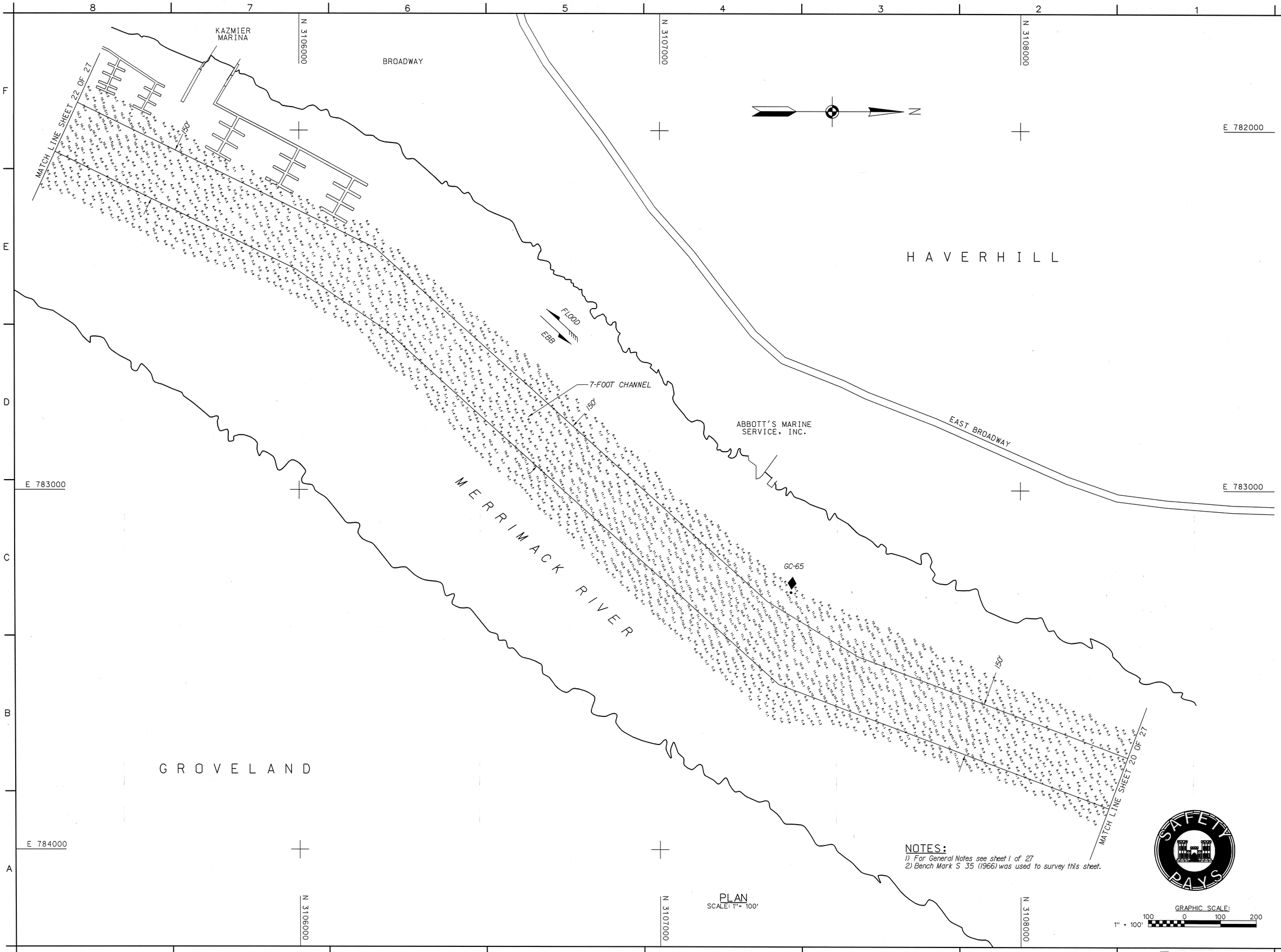
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/2008
Design file:
Drawing code: MR-179
File name: MERV120.S20
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-120
Sheet 20 of 27

SCANNED RECORD
JAN-2008



NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) was used to survey this sheet.

PLAN
SCALE: 1" = 100'

GRAPHIC SCALE:
100 0 100 200
1" = 100'

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

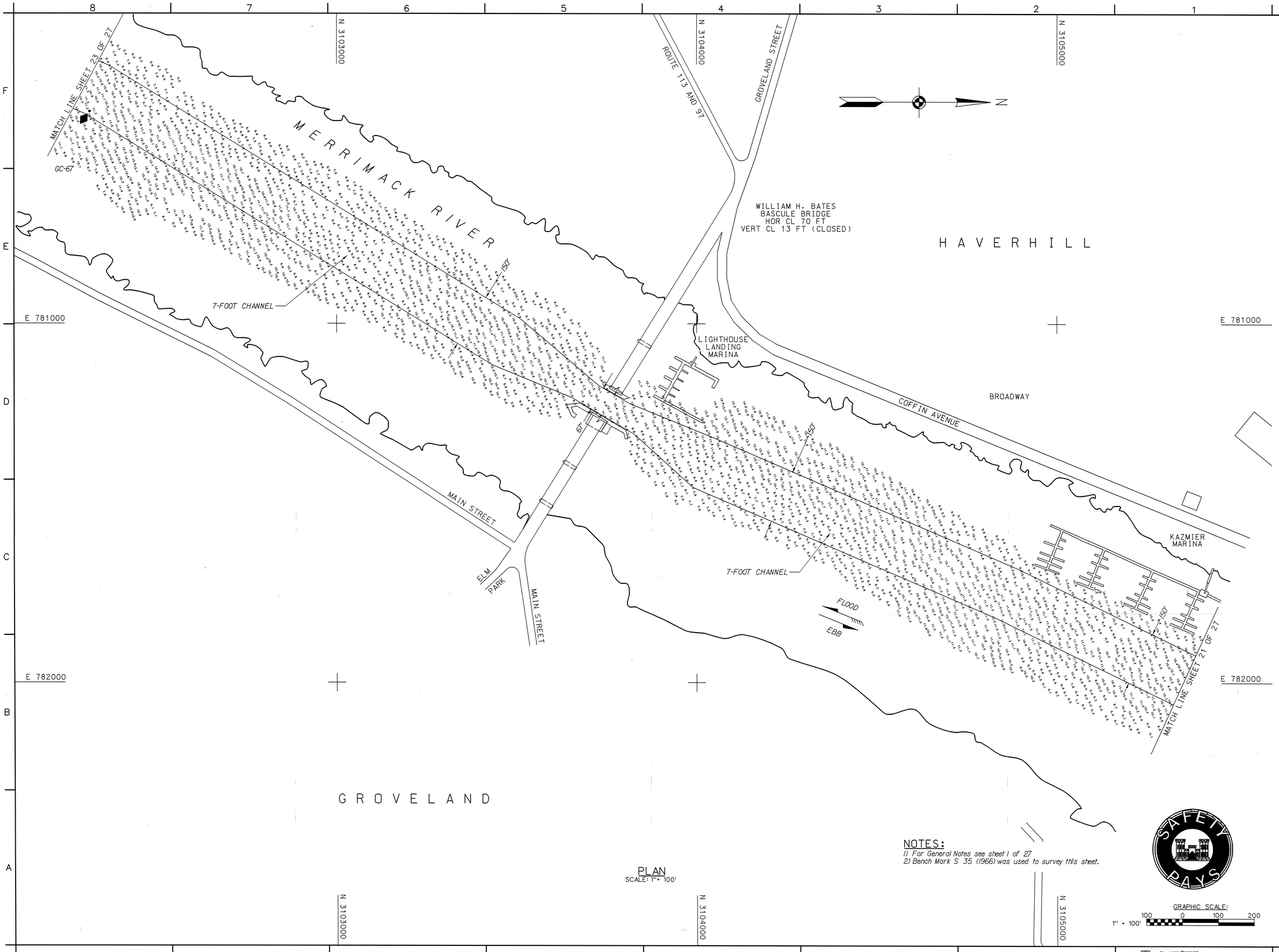
Surveyed By: Jeffrey W. Preston
Hydrographic Surveyor
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 1/25/08
Rev.
Design file:
Drawing code: MR-179
File name: MERV121S21
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-121
Sheet 21 of 27

SAFETY PAYS

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



NOTES:

1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) was used to survey this sheet.

PLAN
SCALE: 1" = 100'

GRAPHIC SCALE:
100 0 100 200
1" = 100'

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed by: Jeffrey W. Preston, Stephen W. Kelley
Plotted by: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section

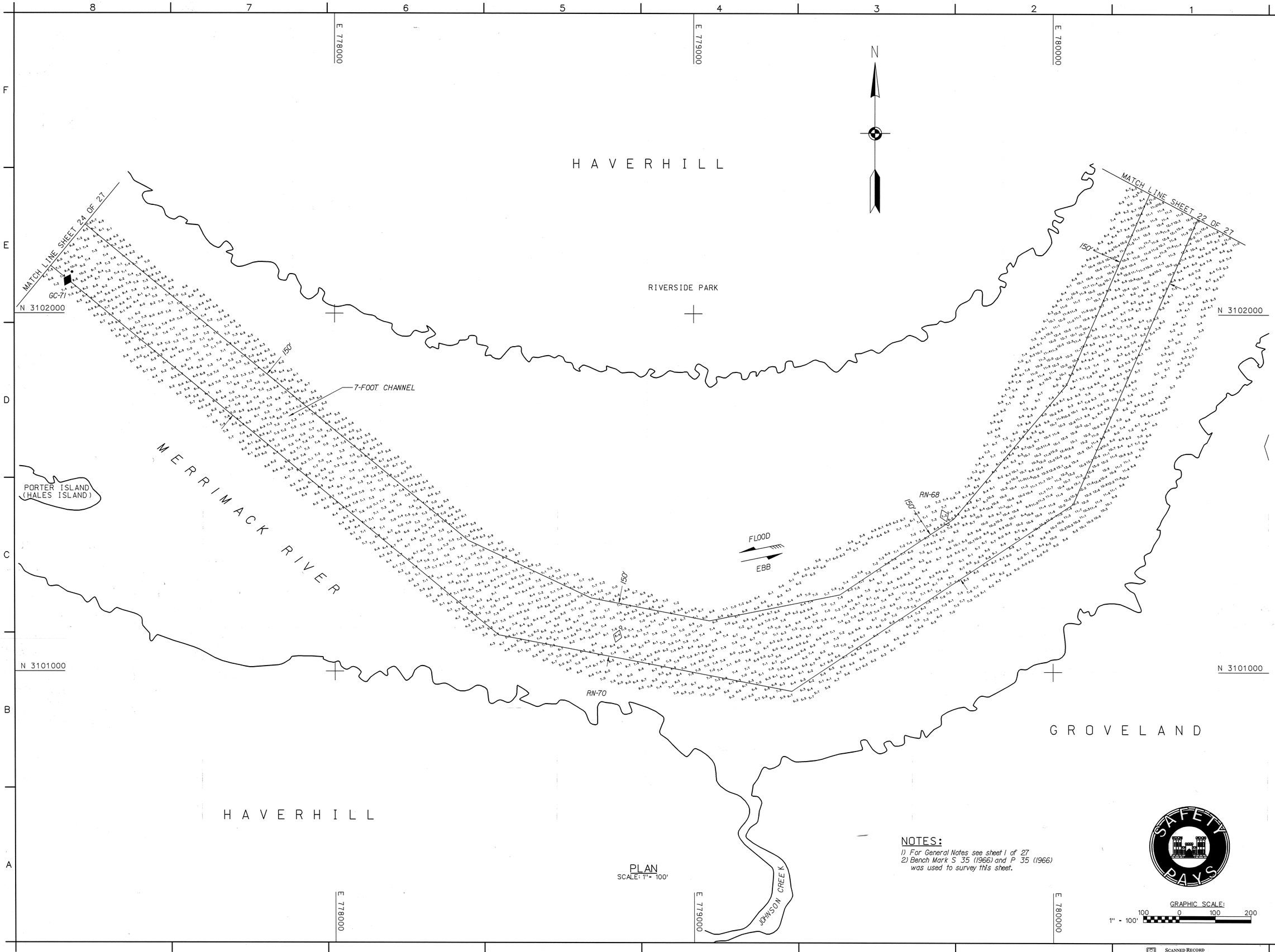
Date: 1/25/2008
Rev.
Design file:
Drawing code:
MR-179
File name: MERV122.S22
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-122
Sheet 22 of 27

SAFETY PAYS

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:

1) For General Notes see sheet 1 of 27
2) Bench Mark S 35 (1966) and P 35 (1966) was used to survey this sheet.

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed by: Jeffrey W. Preston
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section

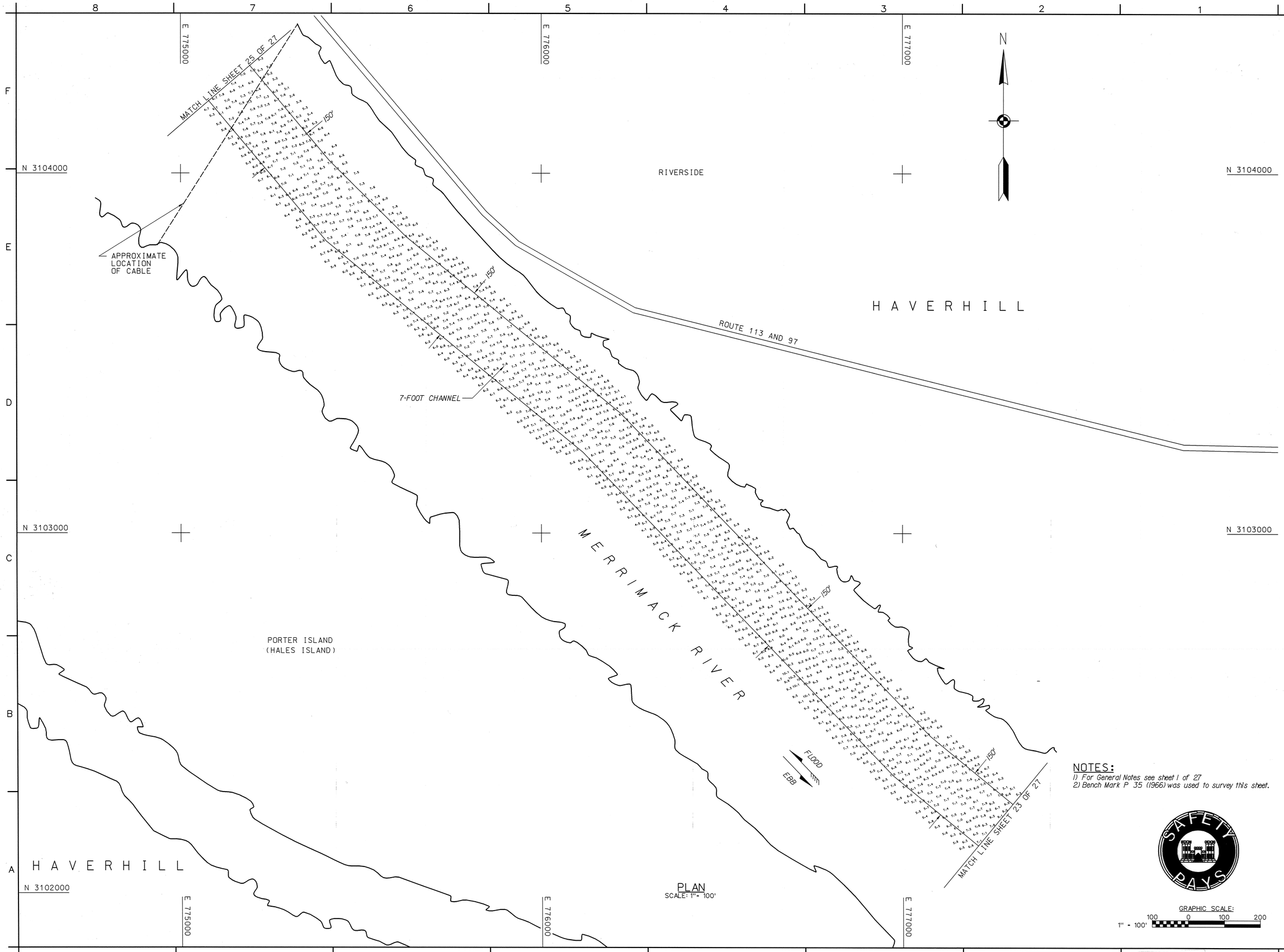
Date: 1/25/08
Rev.
Design Rev.
Drawing code: MR-179
File name: MERV23-S23
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-123
Sheet 23 of 27

SAFETY PAYS

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:

1) For General Notes see sheet 1 of 27
2) Bench Mark P 35 (1966) was used to survey this sheet.

GRAPHIC SCALE:
100 0 100 200
1" = 100'

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

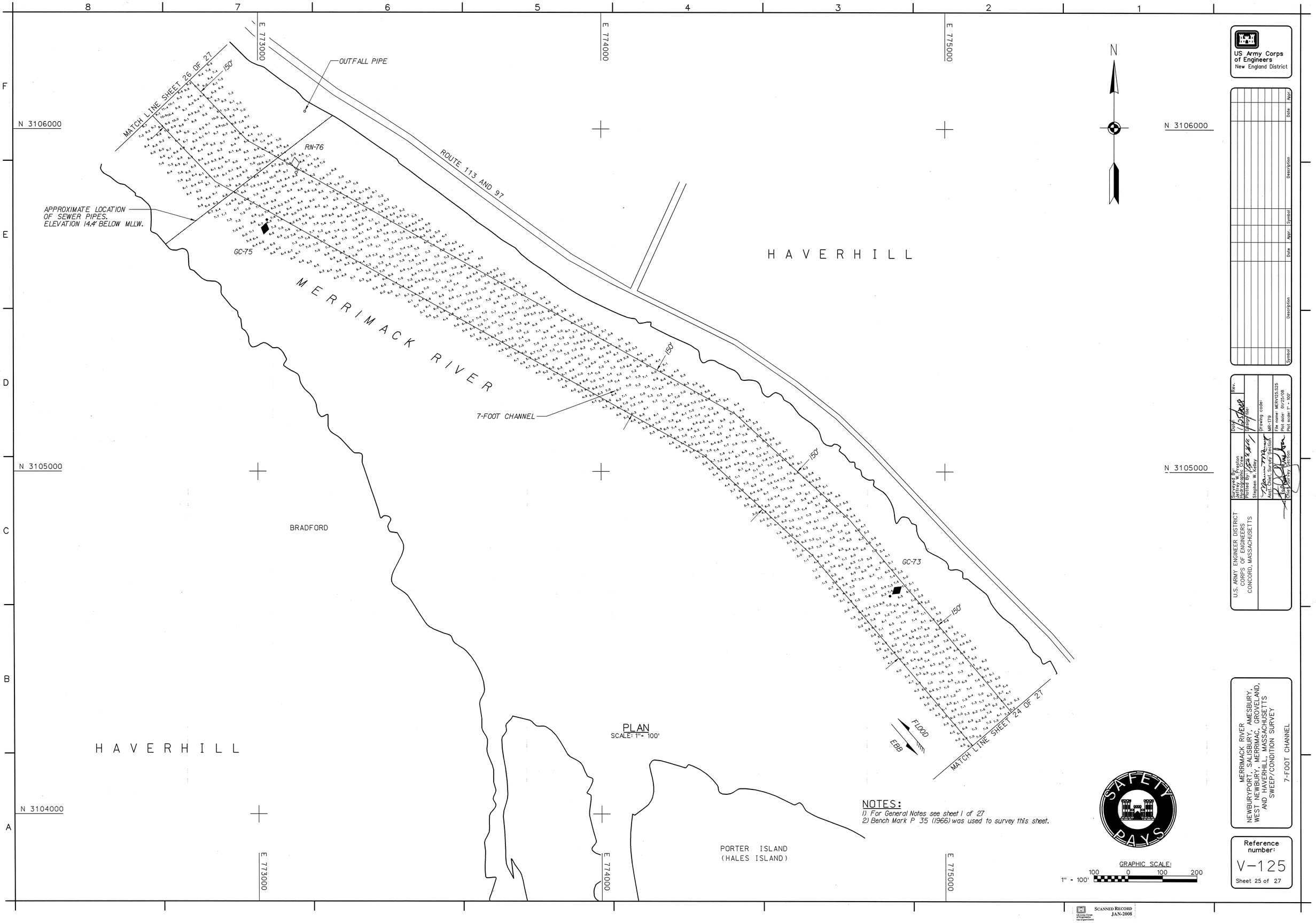
Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Date: 1/25/2008
Design file
Drawing code: MR-179
File name: MERV124.S24
Plot date: 01/25/08
Plot scale: 1" = 100'
Rev.
Asst. Chief, Survey Section
Chief, Survey Section

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY,
WEST NEWBURY, MERRIMAC, GROVELAND,
AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-124
Sheet 24 of 27

SAFETY PAYS

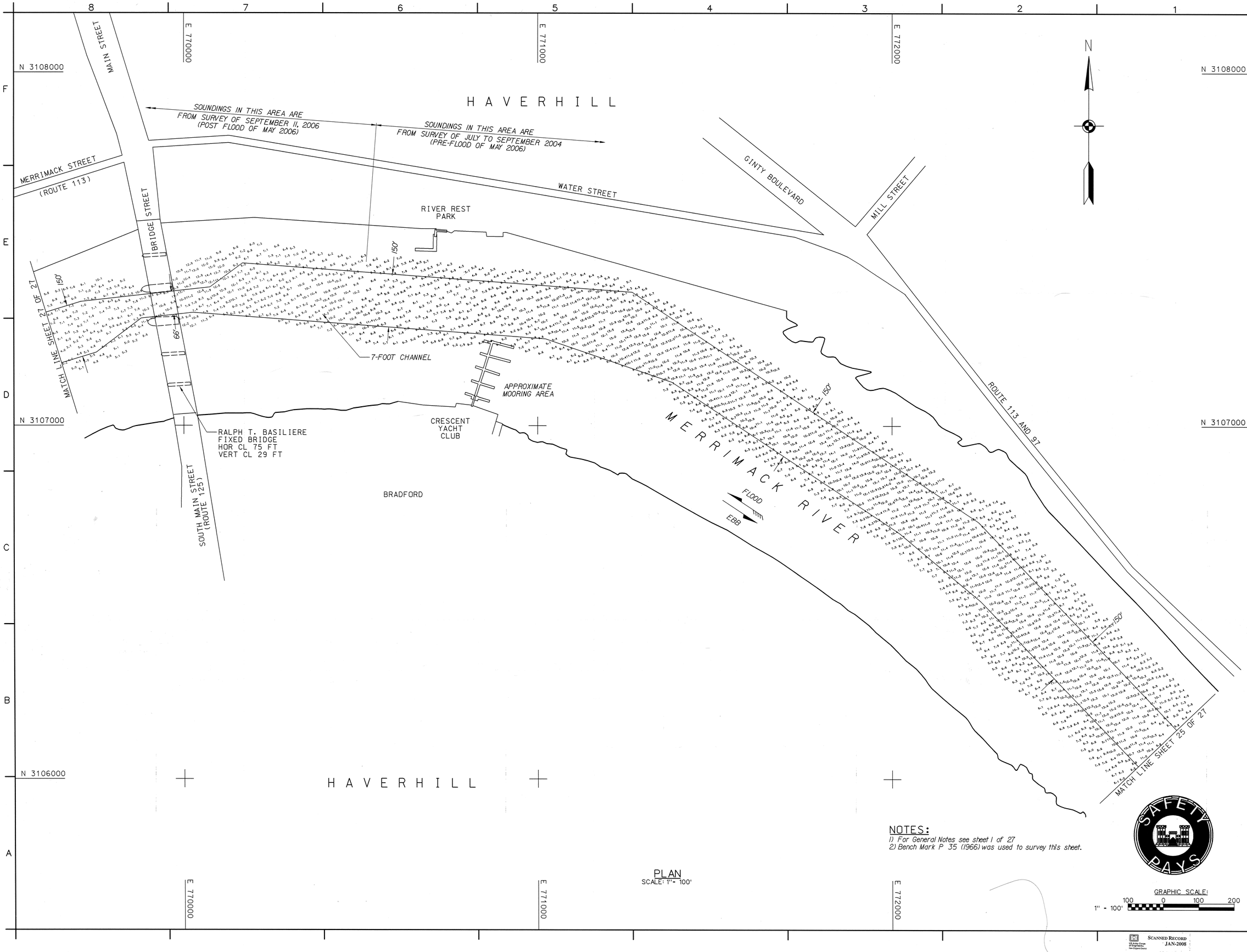
US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark P 35 (1966) was used to survey this sheet.

US Army Corps of Engineers New England District
SCANNED RECORD
JAN-2008



NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark P 35 (1966) was used to survey this sheet.

PLAN
SCALE: 1" = 100'

GRAPHIC SCALE:
1" = 100'
100 0 100 200

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

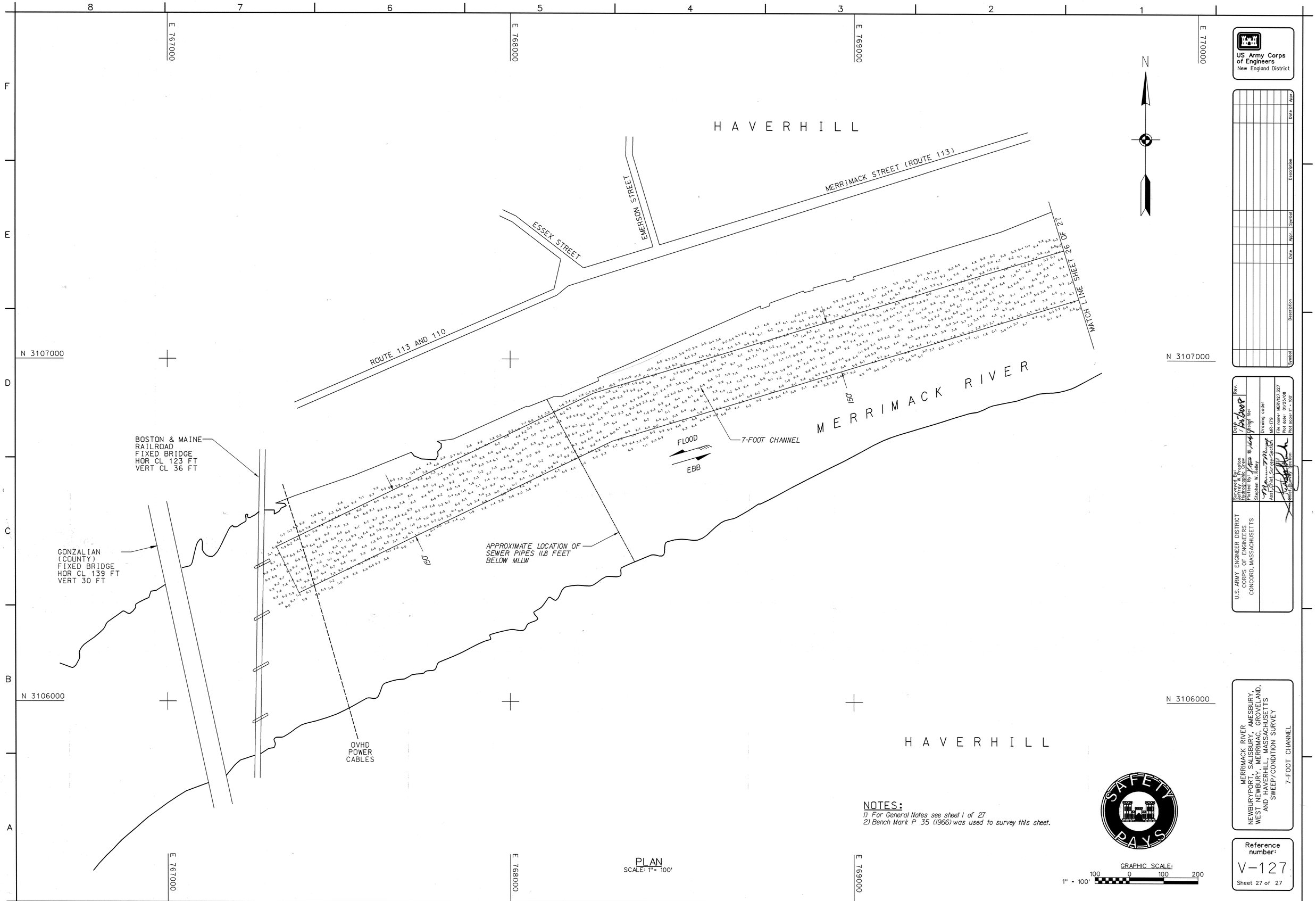
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

Surveyed By: Jeffrey W. Preston, Hydrographic Crew
Plotted By: Stephen W. Kelley
Asst. Chief, Survey Section
Chief, Survey Section
Date: 11/25/2008
Design file:
Drawing code: MR-179
File name: MERV126.S26
Plot date: 01/25/08
Plot scale: 1" = 100'

MERRIMACK RIVER
NEWBURYPORT, SALISBURY, AMESBURY, WEST NEWBURY, MERRIMAC, GROVELAND, AND HAVERHILL, MASSACHUSETTS
SWEEP/CONDITION SURVEY
7-FOOT CHANNEL

Reference number:
V-126
Sheet 26 of 27

SCANNED RECORD JAN-2008



PLAN
SCALE: 1" = 100'

NOTES:
1) For General Notes see sheet 1 of 27
2) Bench Mark P 35 (1966) was used to survey this sheet.