

TP-00257

TP- 00257

NOAA FORM 76-35 (3-76) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00257	Edition No. 1
Job No. CM-7902	
Map Classification Final (Field Edited Map)	
Type of Survey Shoreline	
LOCALITY	
State Wisconsin	
General Locality Lake Michigan	
Locality Manitowoc	
1979 TO 1981	
REGISTRY IN ARCHIVES	
DATE	

NOAA FORM 75-36A (3-72) U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED		SURVEY TP-00257 MAP EDITION NO. (1) MAP CLASS Final Field Edited JOB xBNCM-7902					
PHOTOGRAMMETRIC OFFICE Photogrammetry- Rockville, Md.		LAST PRECEEDING MAP EDITION <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"> TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED </td> <td style="width:50%;"> JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__ </td> </tr> </table>				TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__		
TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__								
OFFICER-IN-CHARGE Commander Walter S. Simmons									
I. INSTRUCTIONS DATED									
1. OFFICE			2. FIELD						
Aerotriangulation 9/30/80 Compilation----- 5/1/81			Field 2/15/80						
II. DATUMS									
1. HORIZONTAL: ☒ 1927 NORTH AMERICAN			OTHER (Specify)						
2. VERTICAL: ☐ MEAN HIGH-WATER ☐ MEAN LOW-WATER ☐ MEAN LOWER LOW-WATER ☐ MEAN SEA LEVEL			OTHER (Specify) International Great Lakes Datum 1955						
3. MAP PROJECTION Lambert Conformal			4. GRID(S) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">STATE Wisconsin</td> <td style="width:50%;">ZONE South</td> </tr> <tr> <td>STATE</td> <td>ZONE</td> </tr> </table>			STATE Wisconsin	ZONE South	STATE	ZONE
STATE Wisconsin	ZONE South								
STATE	ZONE								
5. SCALE 1:10,000									
III. HISTORY OF OFFICE OPERATIONS									
OPERATIONS		NAME		DATE					
1. AEROTRIANGULATION METHOD: Analytic		BY L.W. Harrod LANDMARKS AND AIDS BY L.W. Harrod		Feb. 81 Feb. 81					
2. CONTROL AND BRIDGE POINTS METHOD: Coradi		PLOTTED BY L.W. Harrod CHECKED BY N/A		Mar. 81					
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: Wild B-8 SCALE: 1:10,000		PLANIMETRY BY J.H. Taylor CHECKED BY P. Dempsey CONTOURS BY N/A CHECKED BY N/A		June 81 June 81					
4. MANUSCRIPT DELINEATION METHOD: Smooth Drafted SCALE: 1:10,000		PLANIMETRY BY J.H. Taylor CHECKED BY P. Dempsey CONTOURS BY N/A CHECKED BY N/A HYDRO SUPPORT DATA BY N/A CHECKED BY N/A		June 81 June 81					
5. OFFICE INSPECTION PRIOR TO FIELD EDIT		BY P. Dempsey		July 81					
6. APPLICATION OF FIELD EDIT DATA		BY J.H. Taylor CHECKED BY E. Wright		Feb. 82 Feb. 82					
7. COMPILATION SECTION REVIEW		BY E. Wright		Feb. 82					
8. FINAL REVIEW		BY P. Dempsey		June 82					
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH		BY							
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH		BY E.D. Allen		May 84					
11. MAP REGISTERED - COASTAL SURVEY SECTION		BY E. DAUGHERTY		ABU, 1984					

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

COMPILATION SOURCES

TP-00257

1. COMPILATION PHOTOGRAPHY

CAMERA(S) "B" RC-10		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE	
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☒ REFERENCE STATION RECORDS ☐ TIDE CONTROLLED PHOTOGRAPHY				ZONE Central MERIDIAN 75th	☐ STANDARD ☒ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
79-BC-1394 thru 1396	7/2/79	1419	1:30,000	3.1 feet above Lake Michigan Low Water Datum.	

REMARKS

2. SOURCE OF ~~MEAN HIGH WATER LINE~~ Shoreline

The source of the compiled shoreline was the photographs listed in Item #1 above.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

N/A

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED
N/A		N/A	N/A		N/A

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
N/A	N/A	N/A	N/A

REMARKS

No contemporary surveys.

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

HISTORY OF FIELD OPERATIONS

TP-00257

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	Lawrence H Davis	July 80
2. HORIZONTAL CONTROL	RECOVERED BY L. H. Davis	80
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY L. H. Davis	80
3. VERTICAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY	
	LOCATED (Field Methods) BY	
	IDENTIFIED BY	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE BY ☐ SPECIFIC NAMES ONLY ☐ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED
5 Station (Premarked)

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
79BC-1389	LIGHTHOUSE 1953 Sub Sta A & B		
79BC-1392	TWO RIVERS E MUNICIPAL WATER TANK 1953 Sub Sta A & B		
79BC-1394	MANITOWOC, RADIO STATION WOC, MAST 1953 Sub Sta A & B		
79BC-1396	MANITOWOC 1953 Sub Sta A & RRM 2		
79BC-1400	NEWTON 2 1956 Sub Sta A & B		

3. PHOTO NUMBERS (Clarification of details)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Field Notebook:

6-Control Station Identification Cards
 6-NOAA forms 76-67 2-NOAA forms 75-63
 11-NOAA forms 75-82A 1-C&GS 25a form

1-C&GS 25g form
 4-C&GS 266 forms
 5-Solar Information forms
 3-76-40 forms (field)

NOAA FORM 76-36C
(3-72)

TP-00257

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

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. S. Tibbetts	8-81
2. HORIZONTAL CONTROL	RECOVERED BY R. Daniel, D. Butler	8-81
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY R. Daniel, D. BUTLER	8-81
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY D. Butler	8-81
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☐ NO INVESTIGATION	BY D. Butler 8--81
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY D. Butler, R. Daniel	8-81
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED
None

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)
79B(c)1395

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
79B(c)1395	Elevator		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

Blueprint copy of Manitowoc public utilities

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Field Edit Report
Discrepancy Print
Master Film Print

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RECORD OF SURVEY USE

TP-00257

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Final (Field Edited Map)	Feb 82		JUN 5 1984	

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
4 Pages		JUN 5 1984	NOAA Form 76-40's

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____
3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:
4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT

This 1:10,000 scale shoreline manuscript comprises project CM-7902, which covers the shoreline harbor area at Manitowoc. This map was field edited and reviewed. The field edit was accomplished by AMC personnel in August 1981.

The initial purpose of this map was to provide basic specifications for the compilation of data for use in nautical chart maintenance.

A field investigation was performed, prior to compilation, in July 1980. This investigation consisted of the recovery, establishment, and photoidentification of horizontal control. There was no field inspection performed.

Photo coverage for compilation and aerotriangulation was flown in July 1979 with the Wild RC-10"B" camera at a scale of 1:30,000, natural color. Ratio photographs were made for use in field edit operations and to supplement the base compilation.

Analytic aerotriangulation was adequately provided by the Rockville Office.

The compilation and the field edit for this map was performed in the Rockville Office.

Final review was performed in the Rockville Office in June 1982.

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PHOTO IDENTIFICATION REPORT
JOBS CM-7902, CM-7903, CM-7904, CM-7905
LAKE MICHIGAN, WISCONSIN

3. HORIZONTAL CONTROL

JOB CM-7902:

Five stations were recovered and two Sub Points were identified at each station. All are reported on Form 76-53. All are pricked on Photos 79BC-1389, 79BC-1392, 79BC-1394, 79BC-1396, 79BC-1400. TWO RIVERS E MUNICIPAL WATER TANK 1953 was substituted for TWO RIVERS 1953 because it is located in heavy woods. No sub points available.

JOB CM-7903:

Three stations were recovered and two Sub Points were identified at each station. All are reported on Form 76-53. All sub points are pricked on the following Photos 79BC-1415, 79BC-1417, 79BC-1418.

JOB CM-7904:

Four stations were recovered and two Sub Points were identified at each station. All are reported on Form 76-53. All are pricked on Photos 79BC-1380, 79BC-1382, 79BC-1383, and 79BC-1385. HILLS POINT LIGHT 25, 1953 was omitted. SHERWOOD POINT LIGHT, 1953 has a no check position. STURGEON BAY 1953 was substituted for STURGEON BAY RADIO STA WDOR MAST, 1953 because no sub point available at radio mast.

Stations REYNOLDS 1953 and MONUMENT 1953 were recovered as requested.

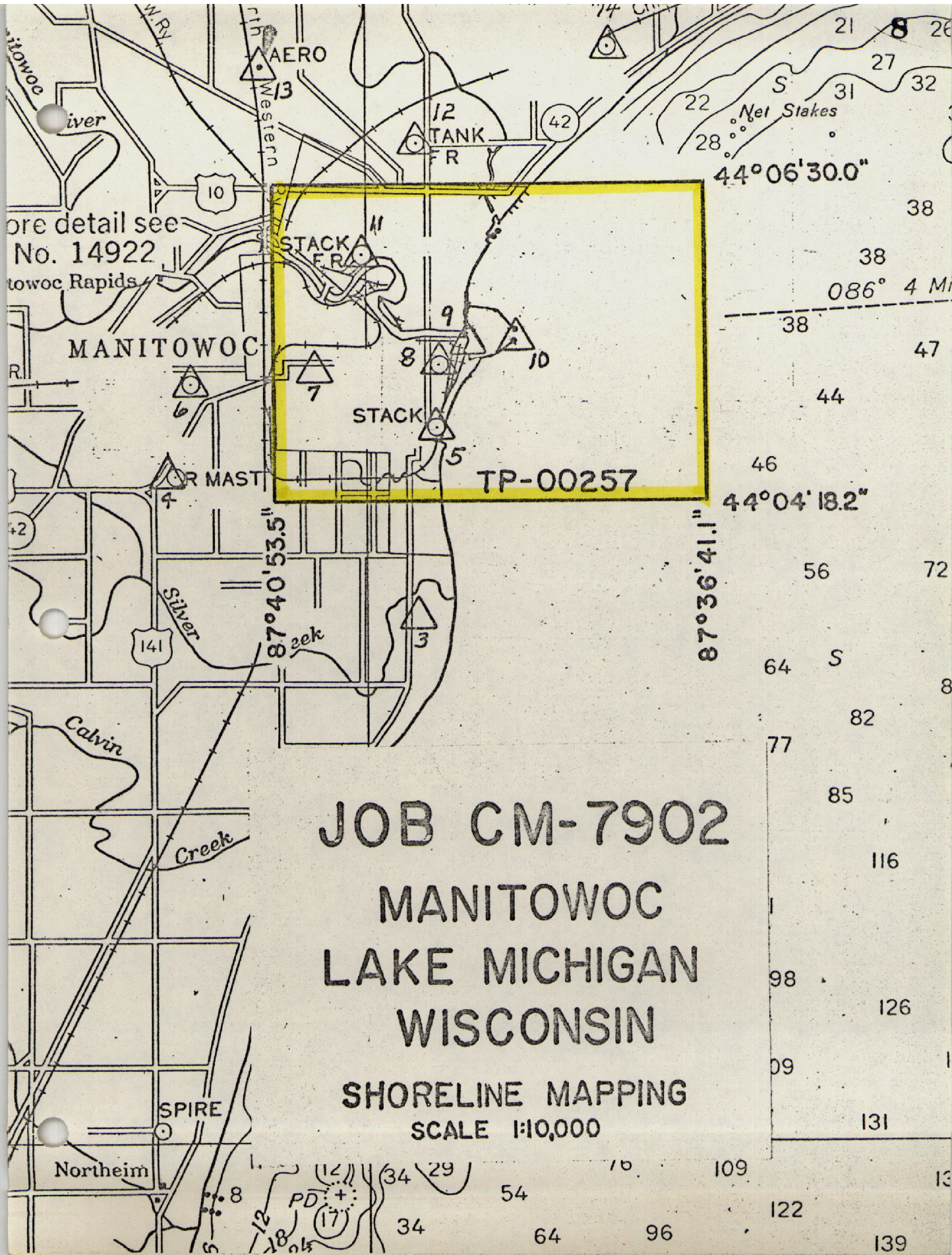
JOB CM-7905:

Three stations recovered and two Sub Points were identified at each station. All are reported on Form 76-53. Sub Points were pricked on the following Photos 79BC-1404, 79BC-1408, 79BC-1412. All Sub Points are reported on Form 76-53.

Respectfully submitted:

Lawrence H. Davis

Lawrence H. Davis
Chief, Photo Party 61
8/14/80



JOB CM-7902
MANITOWOC
LAKE MICHIGAN
WISCONSIN
SHORELINE MAPPING
SCALE 1:10,000

Photogrammetric Plot Report

Manitowoc, Lake Michigan
Wisconsin

CM-7902

February 1981

21. Area Covered

This report covers one 1:10,000 scale sheet TP-00257 of Manitowoc, Lake Michigan, Wisconsin.

22. Method

One strip of 1:30,000 scale photography was bridged by analytic aerotriangulation methods and adjusted to ground on the Wisconsin State Plane Coordinate System, South Zone. This strip will be used to compile the sheet.

Aids and landmarks were located in bridging of the 1:30,000 scale photography. Ratio values were determined of the 1:30,000 scale photography and one each black-and-white print film was ordered for compilation and field edit. Ruling of manuscript and plotting of points were done on the Coradomat.

23. Adequacy of Control

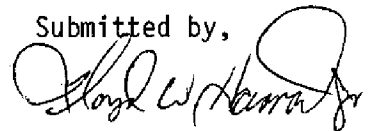
The horizontal control provided was adequate.

24. Supplemental Data

Local shoreline and U.S. Geological Survey quadrangles were used to provide vertical elevations for vertical adjustment of the bridge.

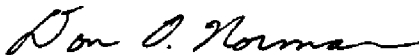
25. The photography was adequate as to coverage and definition.

Submitted by,



Lloyd W. Harrod, Jr.

Approved and Forwarded:

Don O. Norman
Chief, Aerotriangulation Section

Fit to Control
(X, Y) in Feet

Lighthouse, 1953

Sub. pt. A	.27,	.82
▲ Sub. Pt. B	.04,	-.21
Two Rivers Radio Station WTRW, MAST, 1953	2.76,	-2.19
Two Rivers E. Municipal Water Tank, 1953	-.45,	-1.74
▲ Sub. pt. A	.07,	.55
Sub. pt. B	3.33,	.83
Two Rivers W. Municipal Water Tank, 1953	.81,	1.29
Manitowoc, Radio Station WWOC, MAST, 1953	.65,	1.91
▲ Sub. pt. A	-.10,	-.39
Sub. pt. B	2.63,	2.94
Manitowoc, Radio Sta. WRLU, MAST	-1.20,	-2.54
Manitowoc, Portland Cement Co., Stack, 1953	-.42,	1.95
Manitowoc, South Breakwater Light, 1953	-2.29,	1.24
Manitowoc, Public Utilities, Stack, 1953	.27,	1.64
Manitowoc, County Courthouse, Dome, 1953	-2.10,	-2.91
Manitowoc, Radio Sta. WOMT, Mast, 1953	.45,	-.06
Newton 2, 1956		
Sub. pt. A	1.91,	1.05
▲ Sub. pt. B	-.01,	.05

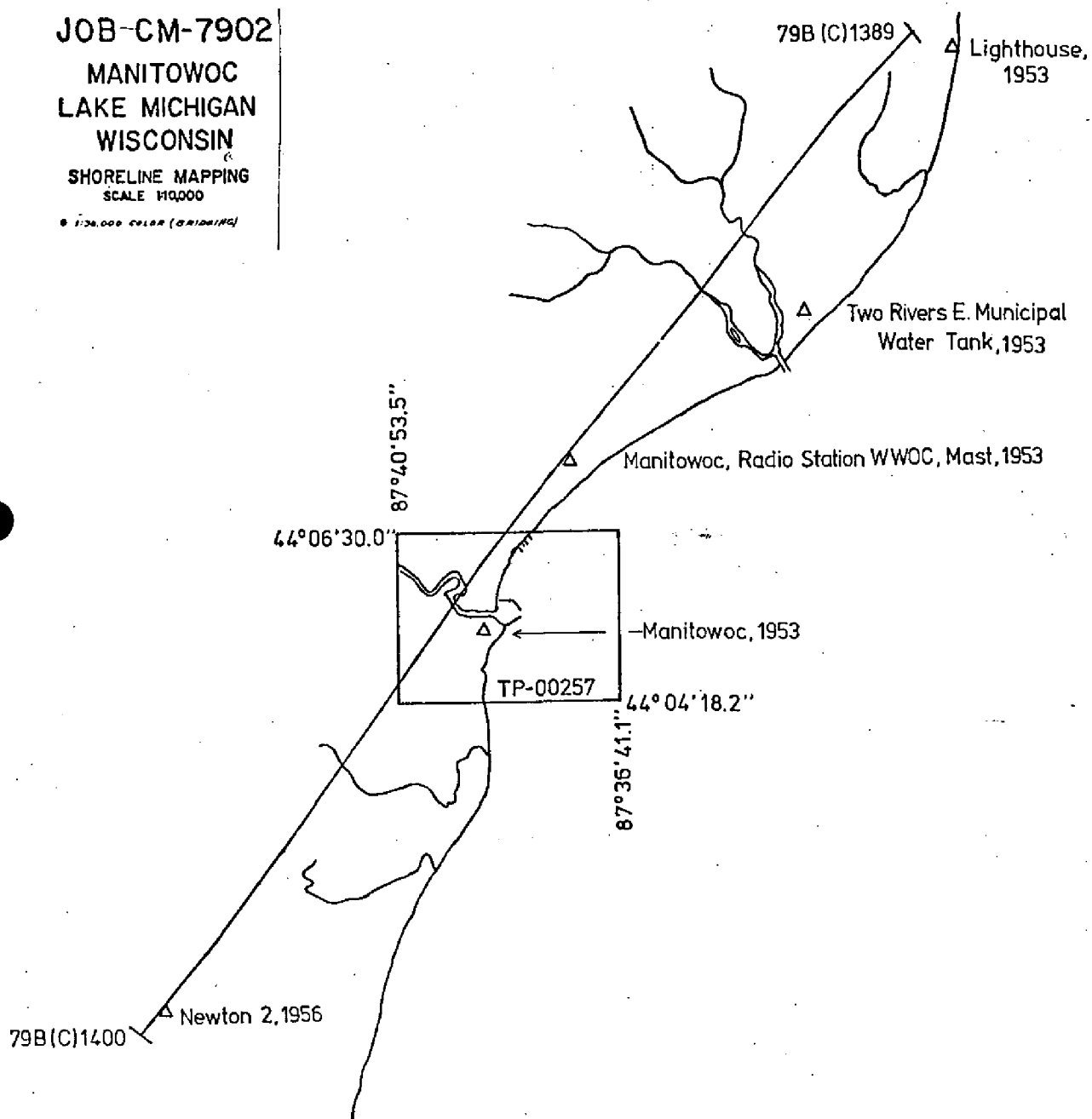
▲ HORIZONTAL CONTROL USED FOR ADJUSTMENT

AEROTRIANGULATION SKETCH

JOB-CM-7902

MANITOWOC
LAKE MICHIGAN
WISCONSINSHORELINE MAPPING
SCALE 1:10,000

© 1:250,000 COLOR (A-100/100)



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETTIC DATUM		ORIGINATING ACTIVITY			
		CM-7902	N.A. 1927	Compilation			
STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI-ANGULATION POINT NUMBER	COORDINATES IN FEET		GEOGRAPHIC POSITION		REMARKS
			STATE Wisconsin	ZONE South	ϕ LATITUDE	λ LONGITUDE	
Manitowoc, Portland Cement Co. Stack, 1953	Quad 440873	395111	x= 2,612,497.35		ϕ 44°06'04.387"		
	Sta. 1048		y= 774,412.60	λ 87°40'05.493"			
Manitowoc South Breakwater Light, 1953	Sta. 1054	395199	x= 2,619,021.00		ϕ 44°05'28.85"		
			y= 770,996.00	λ 87°38'37.46"			
Manitowoc, Radio Station WRLU Mast, 1953	Sta. 1050	395109	x= 2,616,992.00		ϕ 44°05'24.28"		
			y= 770,476.00	λ 87°39'05.45"			
Manitowoc, 1953	Sta. 1017	8	x= 2,615,340.62		ϕ 44°05'19.21"		
			y= 769,916.08	λ 87°39'28.27"			
Manitowoc, County Court-house Dome, 1953	Sta. 1045	396198	x= 2,615,222.54		ϕ 44°05'18.32"		
			y= 769,822.60	λ 87°39'29.92"			
Manitowoc, Public Utilities Stack, 1953	Sta. 1049	396105	x= 2,615,805.06		ϕ 44°04'52.83"		
			y= 767,256.88	λ 87°39'22.93"			
			x=		ϕ		
			y=		λ		
			x=		ϕ		
			y=		λ		
			x=		ϕ		
			y=		λ		
			x=		ϕ		
			y=		λ		
COMPUTED BY			COMPUTATION CHECKED BY				DATE
LISTED BY J. Taylor			LISTING CHECKED BY P. Dempsey				DATE
			HAND PLOTTING CHECKED BY				DATE

FIELD EDIT REPORT
TP-00257
CM-7902

51. METHODS

Field edit was performed as prescribed by the National Ocean Survey Operations Manual Standard Field Edit Instructions as specific project instructions were not sent to the field. The field edit was conducted by skiff, truck and on foot. Few changes in the shoreline have occurred since photography, however, the Army Corps of Engineers have contracted work out for the construction of a small boat marina above the north breakwater and adjacent to the spoil area, and it is scheduled for completion by the summer of 1982. The row piling (fixes #001 - #003) will be removed.

Field Edit annotations will be found on the Discrepancy Print, Master Film Print and the supplemental plans and are cross-referenced to photograph 79B(c) 1395.

52. ADEQUACY OF COMPILATION

Compilation is adequate pending application of field edit.

54. RECOMMENDATIONS

It was ascertained through employees at Manitowoc City Hall and local residents that the name "Manitowoc Harbor" should

- 2 -

refer to the area east of the Manitowoc Pierhead Light to the entrance defined by the North and South Breakwater Lights. The Army Corps of Engineers maintains the dredging of the channel up to the first swing bridge west of the turning basin; however, the Manitowoc River is considered to end at the pierhead light.

56. HORIZONTAL CONTROL

Five horizontal control stations were recovered. One station, Manitowoc Breakwater Light, 1953 was found to be in error. Six NOAA Forms 75-82A are herein submitted.

57. LANDMARKS AND AIDS

No new landmarks were added and in all, fifteen landmarks should be retained for charting, one is to be deleted as a landmark but retained as a map feature, and one is to be deleted entirely. Three nonfloating Aids to navigation were verified and no new ones were added.

Approved and forwarded


Robert S. Tibbetts
Chief, Photo Party 62

Submitted 8-28-81

David P. Butler
Cartographic Technician

Compilation Report

CM-7902

TP-00257

31. Delineation

This map manuscript was compiled using the B-8 stereoplotter holding to pass points established by the Aerotriangulation Section.

32. Control

Refer to the aerotriangulation plot report for the adequacy of the horizontal control.

The vertical control was taken from USGS quadrangle maps and the lake level.

33. Supplemental Data - None34. Contours and Drainage

Contours are not applicable on this map. Drainage was compiled from office interpretation of the photographs.

35. Shoreline and Alongshore Details

The shoreline compiled on this map reflects the water level at the time of photography. The shoreline and alongshore detail was compiled from office interpretation of the photographs.

36. Offshore Details - None compiled37. Landmarks and Aids

There are three aids located on this manuscript. Two of these aids were located in aerotriangulation.

There are a total of 14 landmarks located on this map. Ten of these landmarks were located on the B-8 stereoplotter. Four are triangulation.

Two landmarks that were shown on chart 14922 were not identifiable on the photography and not located on this map.

38. Control for Future Surveys

Inapplicable

39. Junctions

There are no contemporary surveys.

40. thru 45. In applicable

46. Comparison with Existing Maps

Comparison was made with the following USGS 7.5 quadrangle maps:

Manitowoc, Wis., Scale 1:24,000, 1954, photorevised 1973

47. Comparison with Nautical Charts:

A comparison was made with Nautical Chart 14922 dated, Sept. 9, 1978, 14th Edition, Scale 1:10,000.

Items to be applied to Nautical Charts immediately: None

Items to be carried forward: None

Submitted by,

James H. Taylor
James H. Taylor

Approved and Forwarded:

Frank A. Wright
Frank A. Wright
Chief, Coastal Mapping Section

Review Report

TP-00257

Shoreline

61. General Statement

In the field edit application, the field editor indicated a new building on the north shore of the Manitowoc River at approximate latitude $44^{\circ}05'35''$ and longitude $87^{\circ}39'35''$. There is no photo showing this building and it could not be compiled on this map.

Three fixes (001, 002, and 003) were taken by the field editor in the northern part of Manitowoc Harbor. The fixes define an area of row piling. The fixes were misnumbered and fix 003 would not check when applying the check angle. This fix checked out when a degree was subtracted from the field editor's listed angle. It is assumed an error was made when recording the angle. The row piling has been applied using this correction. The field edit report states that a small boat marina will be constructed in the summer of 1982 by the Corps of Engineers above the north breakwater of Manitowoc Harbor. The row piling mentioned previously will be removed when this marina is constructed.

The road pattern compiled on this map does not show all the roads shown on the existing chart. Only the first main road back from the shoreline and all roads heading to the shoreline were shown.

62. Comparison with Registered Topographic Surveys

Not applicable.

63. Comparison with Maps of Other Agencies

Not applicable.

64. Comparison with Contemporary Hydrographic Surveys

Not applicable

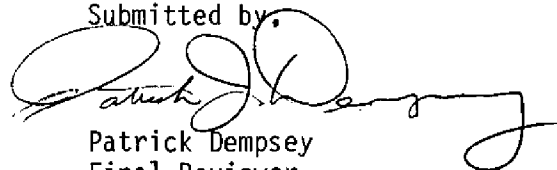
65. Comparison with Nautical Charts

Not applicable.

66. Adequacy of Results and Future Surveys

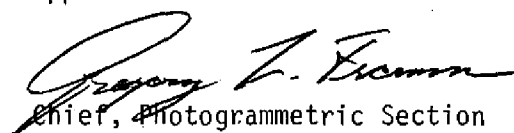
This map complies with project instructions and meets the requirements for Bureau Standards and National Standards of Map Accuracy,

Submitted by:



Patrick J. Dempsey
Final Reviewer

Approved:



Gregory T. Fickman
Chief, Photogrammetric Section



Ronald K. Brewer
Chief, Photogrammetry Branch

July 22, 1982

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7902 (Manitowoc, Wisconsin)

TP-00257

Chicago and North Western (RR)

Lake Michigan

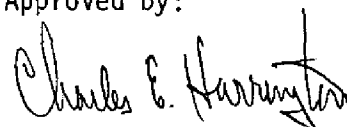
Manitowoc

Manitowoc Harbor

Manitowoc River

Soo Line (RR)

Approved by:

A handwritten signature in cursive script, reading "Charles E. Harrington".

Charles E. Harrington
Chief Geographer, C3x5

DISSEMINATION OF PROJECT MATERIAL
CM-7902
MANITOWOC HARBOR, WISCONSIN

NATIONAL ARCHIVES/FEDERAL RECORD CENTER:

Job Completion Report
Brown Jacket:

Field Edit Photographs (color)
NOAA Forms 76-41 (Descriptive Report Control Records)
76-40 Listing (computer printout)
Computer Printout from Aerotriangulation Unit
Plot Plan for Manitowoc Public Utilities
Field Notebook:

CSI Cards
76-40 Forms
Station Descriptions
Traverse Computations
Solar Observations
Computations of Triangles and Elevation

Plot Report
Ratio Photographs
Discrepancy Print (Field Edit)
Field Edit Ozalids Print

BUREAU ARCHIVES:

Registration Copy of Map
Descriptive Report of Map

REPRODUCTION DIVISION:

8X Reduction Negative of Map

OFFICE OF STAFF GEOGRAPHER:

Geographic Names Standard

SVY	TP-00257	LANDMARKS FOR CHARTS	RPT UNIT	CMD, ROCKVILLE, MD.	PAGE	3 OF 5
JOB	CM-7902	TC BE CHARTED	STATE	MARYLAND		
PRJ	R		LOCALITY	LAKE MICHIGAN	*ORIGINATING ACTIVITY*	
DTM	NA-1927		DATE	02/11/82	*COMPILATION	
* THE FOLLOWING OBJECTS HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS *						
		DESCRIPTION	POSITION	CMD	METHOD AND DATE	
* CHARTING*	RECORD REASON FOR DELETION			ALTEK*	OF LOCATION	* CHARTS *
* NAME *	PUT TRIANGULATION NAMES IN ()			DGTZD*	OFFICE	* FIELD *AFFECTED*

* (MANITOWOC, PORTLAND CEMENT	* 44 06 04.38	135.2	NOT *		*TRIANG REC*	14903 *
* STACK * COMPANY STACK, 1953)	* 87 40 05.49	122.1	CGT2D*		* 08/24/81 *	14922 *

* SPIRE *	* 44 05 50.08	1545.7	NOT *	798C1395	* V-VIS *	14922 *
	* 87 39 28.09	624.8	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* STACK *	* 44 05 43.25	1334.9	NOT *	798C1395	* V-VIS *	14922 *
	* 87 40 34.60	769.7	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* STACK *	* 44 05 33.82	1043.8	NOT *	798C1395	* V-VIS *	14922 *
	* 87 39 51.12	1137.2	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* RADIO * (MANITOWOC, RADIC STATION	* 44 05 24.28	749.4	NOT *		*TRIANG REC*	
* TOWER * WRLU MAST, 1953)	* 87 39 05.45	121.2	CGT2D*		* 08/24/81 *	14922 *

* ELEV *	* 44 05 18.60	574.1	NOT *		* P-5 *	
	* 87 39 15.78	351.1	CGT2D*		* 08/24/81 *	14922 *

* DOME * (MANITOWOC, COUNTY COURTHOUSE	* 44 05 18.32	565.4	NOT *		*TRIANG REC*	
* DOME * DOME, 1953)	* 87 39 29.92	665.6	CGT2D*		* 08/24/81 *	14922 *

* SPIRE *	* 44 05 14.40	444.5	NOT *	798C1395	* V-VIS *	14922 *
	* 87 39 27.13	603.6	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* SPIRE *	* 44 05 13.16	406.2	NOT *	798C1395	* V-VIS *	14922 *
	* 87 39 39.48	878.3	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* SPIRE *	* 44 05 13.49	416.4	NOT *	798C1395	* V-VIS *	14922 *
	* 87 40 30.06	668.8	CGT2D*	07/02/79	* 08/24/81 *	14922 *

* SVY TP-00257 * LANDMARKS FOR CHARTS * RPT UNIT CMD, ROCKVILLE, MD. * PAGE 5 OF 5 *
* JOB CM-7902 * TO BE DELETED * STATE MARYLAND *
* PRJ R * LOCALITY LAKE MICHIGAN * CRIGINATING ACTIVITY *
* DTM NA-1927 * DATE 02/11/82 * COMPILATION *
* THE FOLLOWING OBJECTS HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS *

* DESCRIPTION * POSITION * CMD * METHOD AND DATE *
* CHARTING * RECORD REASON FOR DELETION * LATITUDE DM ALTEK * OF LOCATION * CHARTS *
* NAME * PUT TRIANGULATION NAMES IN () * LONGITUDE DP CGT2D * OFFICE * FIELD * AFFECTED *

* FLAG- * NOT OF LANDMARK VALUE * 44 06 08.20 253.1 NOT * * 08/24/81 * 14922 *
* POLE * * 87 38 54.00 1201.1 CGT2D *

* SPIRE * NOT OF LANDMARK VALUE * 44 06 01.44 44.4 NOT * * 08/24/81 * 14922 *
* * 87 39 38.35 853.0 CGT2D *

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