

<b>REQUEST FOR QUOTATIONS</b> <i>(THIS IS NOT AN ORDER)</i>		THIS RFQ <input checked="" type="checkbox"/> IS <input type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE			PAGE OF PAGES 1   6	
1. REQUEST NO. W911XK-04-T-0041	2. DATE ISSUED 11-May-2004	3. REQUISITION/PURCHASE REQUEST NO. W56MES-4071-8205	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1		RATING	
5a. ISSUED BY CONTRACTING DIVISION DETROIT DISTRICT, USAED P.O. BOX 1027 DETROIT MI 48231-1027			6. DELIVER BY (Date) <b>SEE SCHEDULE</b>			
			7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)			
5b. FOR INFORMATION CALL: (Name and Telephone no.) (No collect calls) SHARON A LAWRENCE (313) 226-6421						
8. TO: NAME AND ADDRESS, INCLUDING ZIP CODE			9. DESTINATION (Consignee and address, including ZIP Code) <b>SEE SCHEDULE</b>			
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5a ON OR BEFORE CLOSE OF BUSINESS: (Date) 18-May-2004						
<b>IMPORTANT:</b> This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5a. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.						
11. SCHEDULE (Include applicable Federal, State, and local taxes)						
ITEM NO. (a)	SUPPLIES/ SERVICES (b)		QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
<b>SEE SCHEDULE</b>						
12. DISCOUNT FOR PROMPT PAYMENT		a. 10 CALENDAR DAYS %	b. 20 CALENDAR DAYS %	c. 30 CALENDAR DAYS %	d. CALENDAR DAYS No.   %	
<b>NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached.</b>						
13. NAME AND ADDRESS OF QUOTER (Street, City, County, State, and ZIP Code)			14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION		15. DATE OF QUOTATION	
			16. NAME AND TITLE OF SIGNER (Type or print)		TELEPHONE NO. (Include area code)	

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	FY04 M/D ARCADIA HARBOR, MI FFP Mobilization and Demobilization	1	Lump Sum		

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NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Dredging - Arcadia Harbor FFP NOTE: <b>DELIVERY DATE: 04 MAY 27</b>	3,200	Cubic Yard		

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NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003	FY04 M/D LELAND HARBOR, MI FFP Mobilization and Demobilization	1	Lump Sum		

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NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	Dredging - Leland Harbor FFP NOTE: <b>DELIVERY DATE: 04 JUN 15</b>	21,000	Cubic Yard		

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NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	FY04 M/D PENTWATER HARBOR, MI FFP Mobilization and Demobilization	1	Lump Sum		

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NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006	Dredging - Pentwater Harbor FFP NOTE: <b>DELIVERY DATE: 04 JUN 30</b> CONTRACTOR SHALL FURNISH ALL PLANT, LABOR, MATERIAL, EQUIPMENT, ETC. NECESSARY TO PERFORM ALL WORK IN STRICT ACCORDANCE WITH THE TERMS AND CONDITIONS SETFORTH IN THE CONTRACT TO INCLUDE ALL ATTACHMENTS THERETO.	18,000	Cubic Yard		

TOTAL AMOUNT OF PROPOSALS \$ \_\_\_\_\_

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FOB: Destination

## Section F - Deliveries or Performance

## DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	27-MAY-2004	1	N/A FOB: Destination	
0002	27-MAY-2004	3,200	N/A FOB: Destination	
0003	15-JUN-2004	1	N/A FOB: Destination	
0004	15-JUN-2004	21,000	N/A FOB: Destination	
0005	30-JUN-2004	1	N/A FOB: Destination	
0006	30-JUN-2004	18,000	N/A FOB: Destination	

SCOPE OF WORK:

1. Mobilize dredge to Arcadia Harbor and begin dredging between sta. 14+00E and 3+00W. Placement of the dredged materials shall take place along the shoreline as stated in SECTION 02482, Paragraph 3.3.2, Government -Furnished Placement Area of the specifications. For this Task Order however, the placement zone shall begin at a point 2,000 ft. north of the north face of the north pier, then extending 800 ft. northward measured along the shoreline. The landward limit of the placement shall be the +2.0 ft. contour. See the accompanying drawings. Demobilize when work is completed.

2. Wage Rates for this Task Order shall be as specified in the basic Contract. Wage Decision IL030018, dated February 27, 2004.

3. The work for this task order shall conform to the contract specifications, this scope of work and the drawings identified on the following index:

FILE

DRAWING

1

Arcadia Harbor, MI  
FY04 Maintenance Dredging  
Dredge Plan, Placement Area, Cross  
Section, Legend, Notes, Control Data,  
Vicinity and Location Map

0001

4. Generally, the survey information will be based on channel condition soundings collected in the winter or spring of the current dredging year. Final pay yardage will be determined by prior to dredging soundings and after dredging construction surveys. If agreeable to both the Government and the Contractor, condition surveys utilized for determining the task order bid quantities may be used as the prior to dredging construction soundings. Bench mark and horizontal control point detailed sheets for this task order are attached to this scope of work. An index of those sheets is provided on the plans and is as follows:

BETTY  
CROSS  
EMIL  
JOSHUA  
ROCK  
SMUK

5. Performance Schedule: The Contractor shall be required to (a) commence work under the contract within (5) calendar days after the date the Contractor receives the notice to proceed on the task order, (b) prosecute the work diligently, and (c) complete the entire work ready for use no later than 27 May, 2004. The time stated for completion shall include final cleanup of the premises. It is anticipated that the Task Order will be issued no later than 19 May, 2004. No alternate period of performance is allowed.

6. The estimated overdepth for this task order is 1,000 Cubic Yards, and the estimated sideslope is 200 cubic yards.

7. The character of materials for this dredging work is as described in SECTION 02482 paragraph 1.3.1 Character of Materials in the contract specifications.

8. Tolerance Dimensions:

Side Slope Tolerance: 10 feet Horizontal  
Shoal Tolerance : 0.5 feet Vertical

9. Special Project Procedures: There are no additional special project procedures, besides those identified in this scope of work, and the contract specifications.

10. Identify Equipment to be utilized for this Task Order:

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SCOPE OF WORK:

1. Mobilize dredge to Leland Harbor and begin dredging between sta. 6+85N and 9+00S. Placement of the dredged materials shall take place along the shoreline as stated in SECTION 02482, Paragraph 3.3.2, GovernmentFurnished Placement Area of the specifications. For this Task Order however, the placement zone shall begin at a point 1,000 ft. south of the intersection of the shoreline and the west face of the south pier, then extending 1,700 ft. southward measured along the shoreline. The landward limit of the placement shall be the +2.0 ft. contour. See the accompanying drawings. Demobilize when work is completed.

2. Wage Rates for this Task Order shall be as specified in the basic Contract. Wage Decision IL030018, dated February 27, 2004.

3. The work for this task order shall conform to the contract specifications, this scope of work and the drawings identified on the following index:

FILE

DRAWING

1

Leland Harbor, MI  
FY04 Maintenance Dredging  
Dredge Plan, Placement Area, Legend,  
Notes, Cross Section, Location & Vicinity Map

4. Generally, the survey information will be based on channel condition soundings collected in the winter or spring of the current dredging year. Final pay yardage will be determined by prior to dredging soundings and after dredging construction surveys. If agreeable to both the Government and the Contractor, condition surveys utilized for determining the task order bid quantities may be used as the prior to dredging construction soundings. Bench mark and horizontal control point detailed sheets for this task order are attached to this scope of work. An index of those sheets is provided on the plans and is as follows:

BL200N  
ROCK  
CELL  
BOB  
TOM  
BL400N

5. Performance Schedule: The Contractor shall be required to (a) commence work under the contract within (5) calendar days after the date the Contractor receives the notice to proceed on the task order, (b) prosecute the work diligently, and (c) complete the entire work ready for use no later than June 15, 2004. The time stated for completion shall include final cleanup of the premises. It is anticipated that the Task Order will be issued no later than 19 May, 2004. No alternate period of performance is allowed.

6. The estimated overdepth for this task order is 4,000 Cubic Yards, and the estimated sideslope is 1,500 cubic yards.

7. The character of materials for this dredging work is as described in SECTION 02482 paragraph 1.3.1 Character of Materials in the contract specifications.

8. Tolerance Dimensions:

Side Slope Tolerance: 10 feet Horizontal  
Shoal Tolerance : 0.5 feet Vertical

9. Special Project Procedures: There are no additional special project procedures, besides those identified in this scope of work, and the contract specifications.

10. Identify Equipment to be utilized for this Task Order:

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**SCOPE OF WORK:**

1. Mobilize dredge the Pentwater Harbor, and begin dredging between sta. 14+83E and 14+00W. Placement of dredged materials shall take place along the shoreline as stated in SECTION 02482, Paragraph 3.3.2, GovernmentFurnished Placement Area of the specifications. For this Task Order however, the placement area shall begin at a point 800 ft. north of the north face of the north pier, then extending 1,800 ft. northward measured along the shoreline. The landward limit of the placement shall be the +2.0 ft. contour. See accompanying drawings. Demobilize when work is completed.

2. Wage Rates for this Task Order shall be as specified in the basic Contract. Wage Decision IL030018, dated February 27, 2004.

3. The work for this task order shall conform to the contract specifications, this scope of work and the drawings identified on the following index:

FILE

DRAWING

1

Pentwater Harbor, MI  
FY04 Maintenance Dredging  
Dredge Plan, Placement Area, Cross Section,  
Legend, Notes, Vicinity and Location Map

4. Generally, the survey information will be based on channel condition soundings collected in the winter or spring of the current dredging year. Final pay yardage will be determined by prior to dredging soundings and after dredging construction surveys. If agreeable to both the Government and the Contractor, condition surveys utilized for determining the task order bid quantities may be used as the prior to dredging construction soundings. Bench mark and horizontal control point detailed sheets for this task order are attached to this scope of work. An index of those sheets is provided on the plans and is as follows:

DON  
HILL  
PRIVATE  
JOSHUA  
66-6

5. Performance Schedule: The Contractor shall be required to (a) commence work under the contract within (5) calendar days after the date the Contractor receives the notice to proceed on the Task Order, (b) prosecute the work diligently, and (c) complete the entire work ready for use no later than June 30, 2004. The time stated for completion shall include final cleanup of the premises. It is anticipated that Task Order will be issued no later than 19 May, 2004. No alternate period of performance is allowed.

6. The estimated overdepth for this task order is 6,500 Cubic Yards, and the estimated sideslope is 500 cubic yards.

7. The character of materials for this dredging work is as described in SECTION 02482 paragraph 1.3.1 Character of Materials in the contract specifications.

8. Tolerance Dimensions:

Side Slope Tolerance: 10 feet Horizontal  
Shoal Tolerance : 0.5 feet Vertical

9. Special Project Procedures: There are no additional special project procedures, besides those identified in this scope of work, and the contract specifications.

10. Identify Equipment to be utilized for this Task Order.

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SURVEY CONTROL DATA

STATION DESIGNATION            CROSS            FILE            SHEET            NUMBER             
 PROJECT Arcadia Harbor CHANNEL/REACH             
 QUAD            NOAA CHART#             
 CITY/TWP Arcadia COUNTY Manistee STATE MI TWP 24N RANGE 16W  
 MARKER TYPE Brass Disk SET BY C. Hughes OFFICE/AGENCY G.C.A.  
 DATE SET Aug. 1991 ORIGIN OF CONTROL: HORIZ.            G.P.S.            VERT.           

HORIZONTAL

DATUM NAD 83 LATITUDE            LONGITUDE             
 SPC Y 431140.897 (NORTHING) X 19193680.025 (EASTING)  
 STATE MICH PROJECTION Lambert ZONE Central <sup>45 Feet</sup> CODE 2112

AZIMUTH MARK

GRID AZ

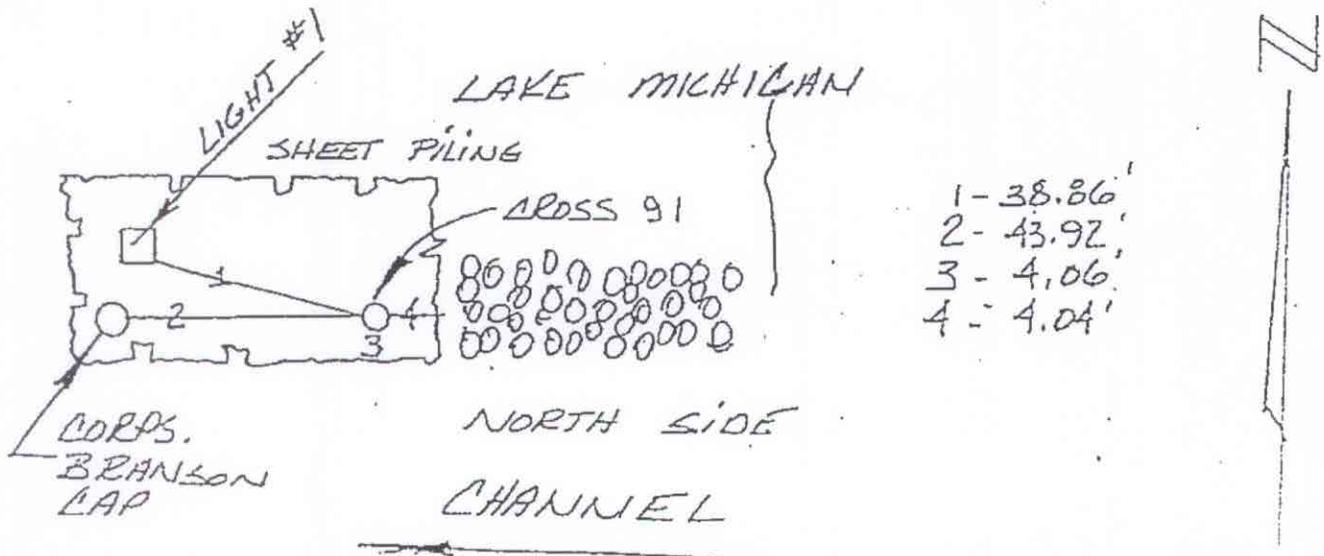
VERTICAL

ELEV. IN FEET: IGLD            NGVD            NAVD 88            OTHER             
 PROPERTY OWNER            ACCESS NOTES           

<u>DATE</u>	<u>RECOVERY/REVISIONS/REMARKS</u>	<u>BY</u>

DESCRIPTION

Set brass disk in concrete structure at west end of north channel break wall.



STATION RECOVERY INFORMATION READONLY FORMAT

PROJECT ID: ARI

PROJECT NAME: ARCADIA

COUNTY: HANISTEE

STATE: MI

STATION NAME: EMIL

AGENCY: NCENCD DATE ESTABLISHED: 01/01/

STATION STATUS: GOOD

RECOVERED: 07/01/89 INITIALS: BM

COORDINATE SYSTEM: MICH. LAMBERT, CENTRAL ZONE, US FEET, NAD 83

NORTHING (Y): 430719.09

EASTING (X): 1993923.70

ELEVATION:

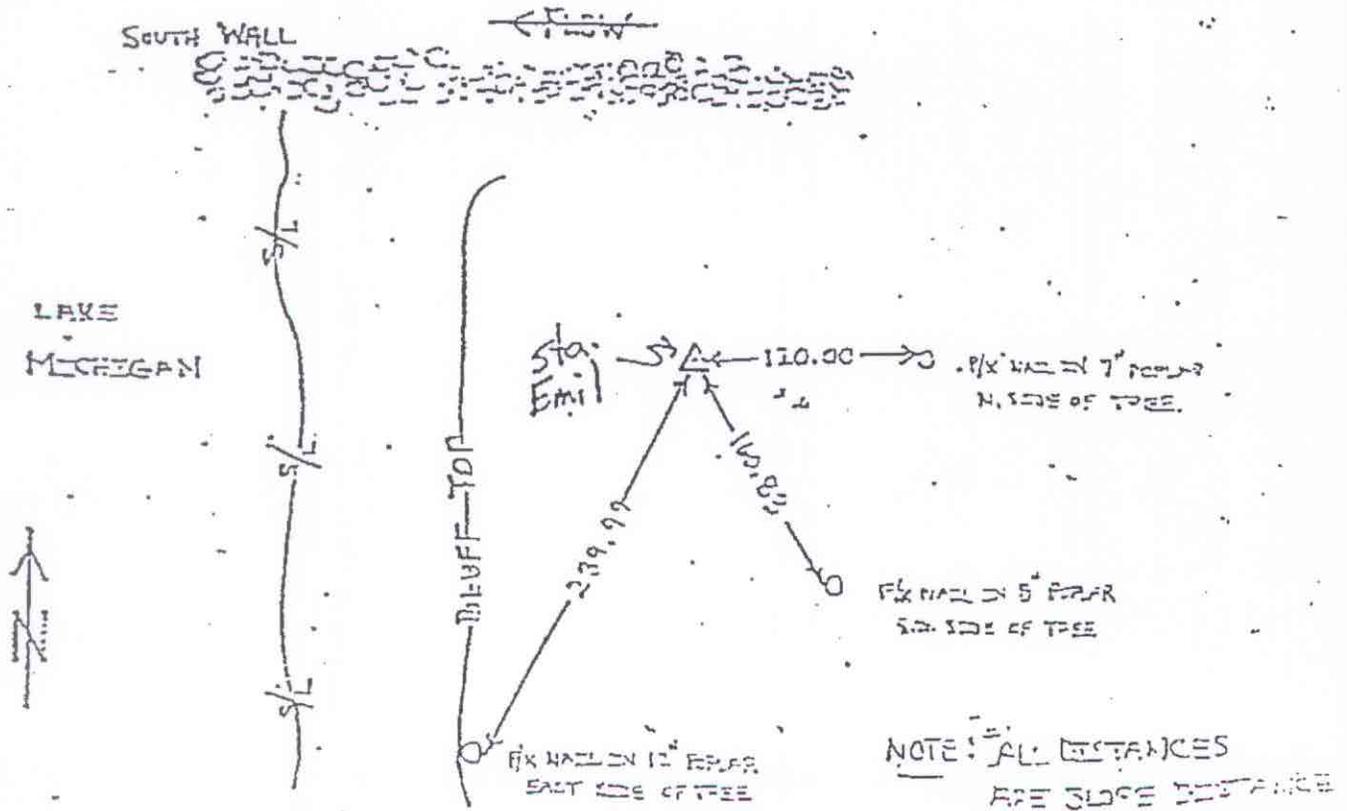
DATUM:

FOOTNOTE NUMBERS:

(NOTES ARE STANDARD TO ALL)

DESCRIPTION/REMARKS:

STATION EMIL IS A STANDARD BRASS SURVEY DISC IN A 6 INCH DIAMETER CONCRETE MONUMENT ABOUT 4 INCHES ABOVE THE GROUND SURFACE. THE STATION IS LOCATED ON THE SOUTH SIDE OF ARCADIA HARBOR AT APPROXIMATELY C/S 5+63.00 EAST AND APPROXIMATELY 199.0 SOUTH OFF-SET.



STATION RECOVERY INFORMATION INPUT FORM

PROJECT ID: ARI

PROJECT NAME: ARCADIA

COUNTY: MANISTEE

STATE: MI

STATION NAME: JOSHUA

AGENCY: NCENCD DATE ESTABLISHED: 07/02

STATION STATUS: GOOD

RECOVERED: 07/01/89 INITIALS: EM

COORDINATE SYSTEM: MICH. LAMBERT, CENTRAL ZONE, US FEET, NAD 83

NORTHING (Y): 430948.16

EASTING (X): 19193360.95

ELEVATION:

DATUM:

FOOTNOTE NUMBERS:

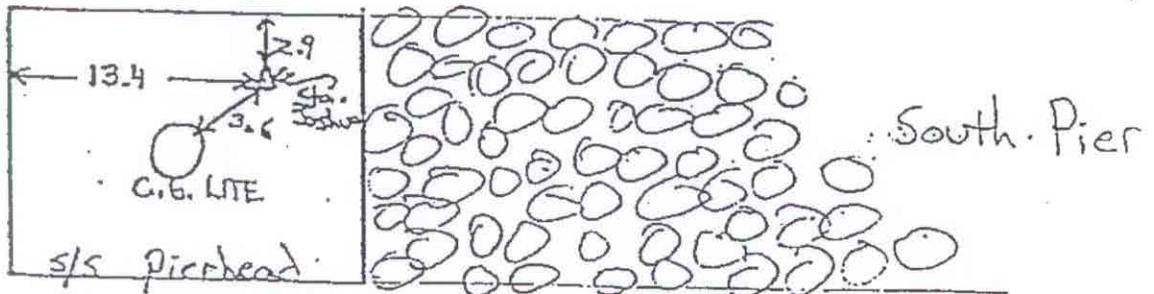
(NOTES ARE STANDARD TO ALL)

DESCRIPTION/REMARKS:

STATION JOSHUA IS A STANDARD BRONZE DISC SET FLUSH IN THE CONCRETE ON THE LAKEWARD END OF THE SOUTH PIER IN ARCADIA, MI.

Witness to sta. Joshua

← FLOW



Lake Michigan

STATION RECOVERY INFORMATION READONLY FORMAT

PROJECT ID: ARI

PROJECT NAME: ARCADIA

COUNTY: MANISTEE

STATE: MI

STATION NAME: ROCK

AGENCY: NCENCD DATE ESTABLISHED: 08/01/89

STATION STATUS: GOOD

RECOVERED: 08/01/89 INITIALS: BM

COORDINATE SYSTEM: MICH LAMBERT, CENTRAL ZONE, US FEET, NAD 83

NORTHING (Y): 430878.74

EASTING (X): 19194546.15

ELEVATION:

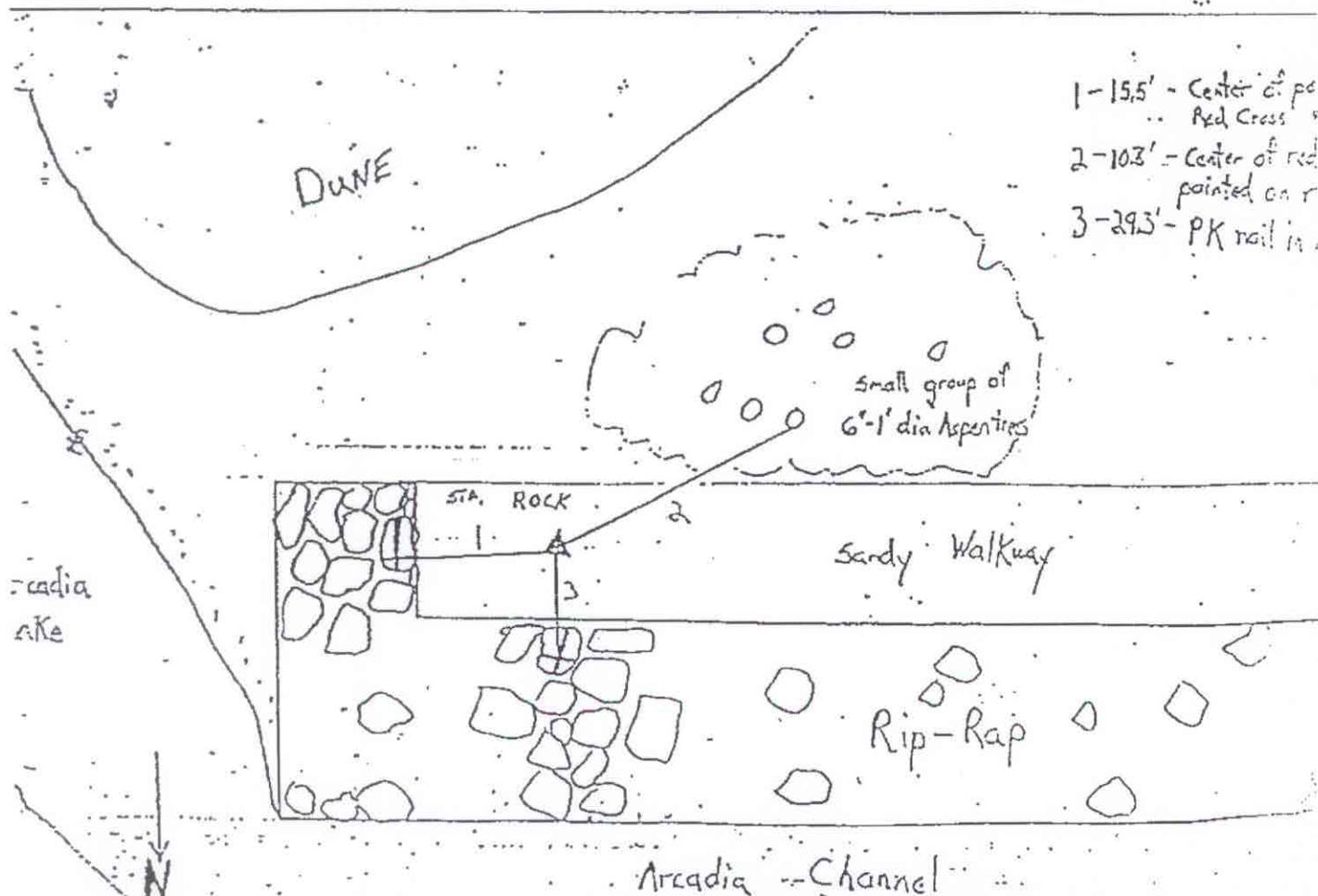
DATUM:

FOOTNOTE NUMBERS:

(NOTES ARE STANDARD TO ALL)

DESCRIPTION/REMARKS:

STATION ROCK IS A STANDARD BRONZE SURVEY DISC SET IN A 6 INCH DIAMETER CONCRETE MONUMENT WHICH IS APPROXIMATELY 1 FOOT ABOVE GROUND SURFACE. THE STATION IS LOCATED NEAR THE EAST END OF THE CHANNEL BETWEEN ARCADIA LAKE AND LAKE MICHIGAN, ALONG THE SOUTHSIDE OF THE CHANNEL IN ARCADIA, MI.



# STATION RECOVERY

PROJECT <b>ARCADIA HARBOR</b>	COUNTY <b>MANTSTEEF</b>	STATE <b>MICHIGAN</b>
NAME <b>TT-18</b>	STAMPINGS ..	AGENCY <b>USCE</b>
TYPE <b>COPPER COATED RE-ROD</b>	CONDITION <b>GOOD</b>	

**DESCRIPTION**

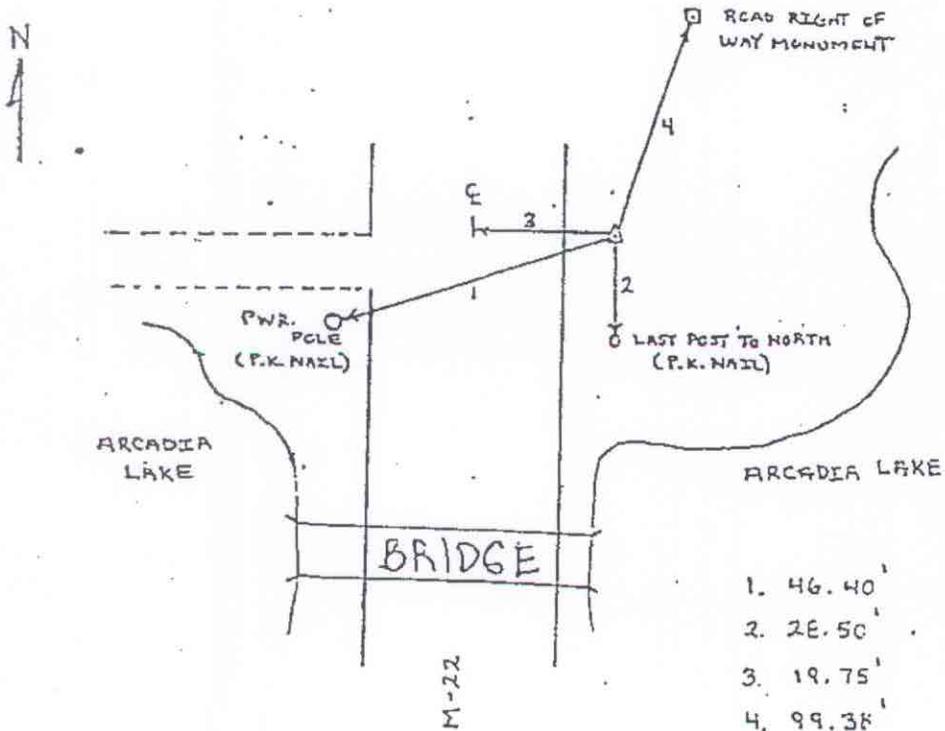
A COPPER-COATED RE-ROD, EAST OF M-22 CENTERLINE 19.75', 28.50' NORTH OF POST, AND 46.40' NORTH EAST OF PWR. POLE.

POINT WAS ESTABLISHED IN 1976 BY ABRAMS SURVEY CORP.

DRAW SKETCH ON REVERSE SIDE

BY <b>R. FLANDERS</b>	HORIZONTAL DATA <b>T M " C" ZONE</b>	VERTICAL DATA
DATE <b>4/91</b>	EASTING	IGLD <b>585.03</b>
OFFICE <b>G:H.</b>	NORTHING	USC&GS

NCE FORM 43  
(MAY 1970)



# STATION RECOVERY

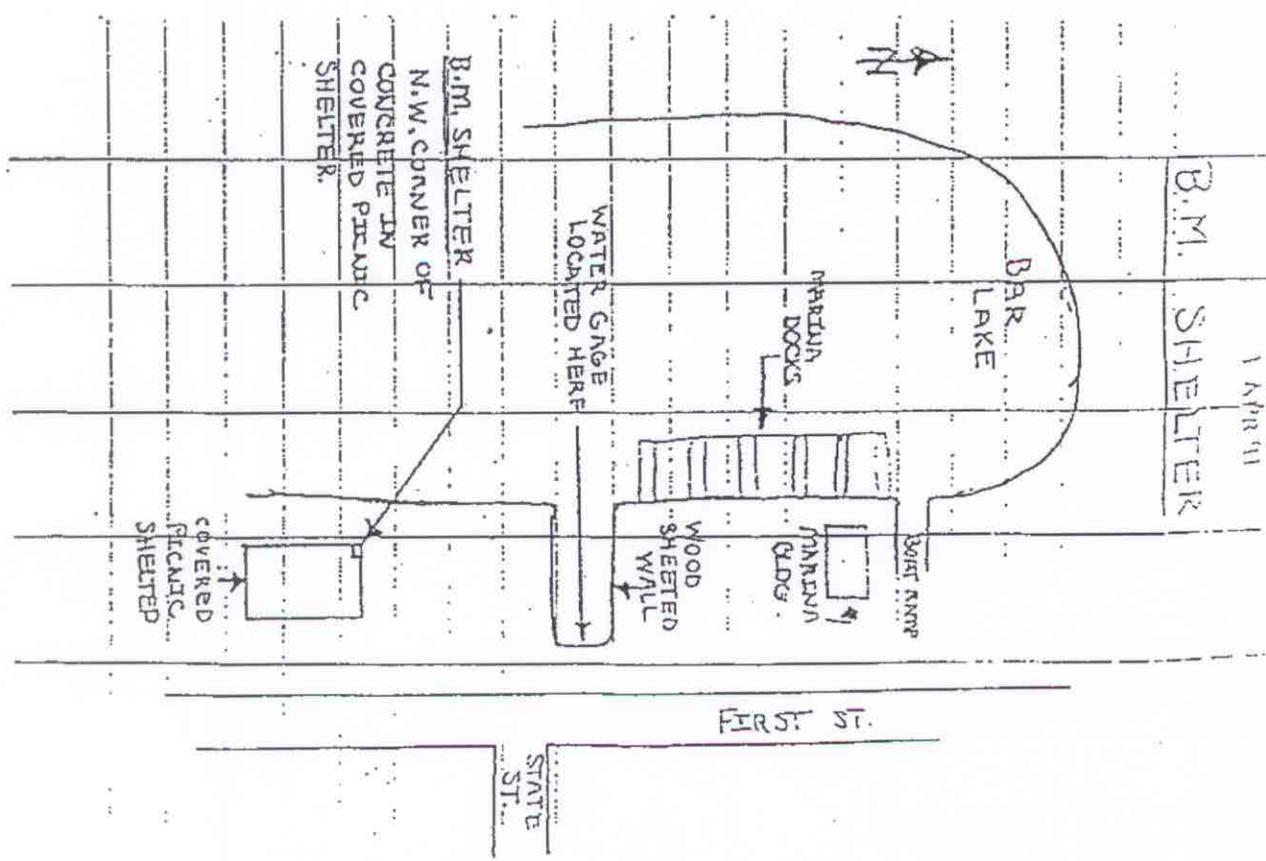
PROJECT <b>ARCADIA HARBOR</b>	COUNTY <b>MANISTEE</b>	STATE <b>MICHIGAN</b>
NAME <b>B.M. SHELTER</b>	STAMPINGS <b>NONE</b>	AGENCY <b>USCE</b>
TYPE <b>CONC. CORNER</b>	CONDITION <b>GOOD</b>	

**DESCRIPTION**  
 BM Shelter is an elevation reference mark established to the GHAO from a closed level loop originating at Norahus A.S. sta. II-18, used for setting a gauge for Arcadia Harbor. BM Shelter is the top NW corner of the concrete pad of a covered picnic shelter at the end of State St., near the Arcadia Marina, in Arcadia Harbor, M.

DRAW SKETCH ON REVERSE SIDE

BY <b>R. FLANDERS</b>	HORIZONTAL DATA	VERTICAL DATA
DATE <b>4/91</b>	EASTING	IGLD <b>584.46 (+7.66)</b>
OFFICE <b>GHAO</b>	NORTHING	USC&GS

NCE FORM 43  
(MAY 1970)



**U.S. ARMY ENGINEER DISTRICT - DETROIT**

**GENERAL INFORMATION**

designation: B/L 200N  
reference no. GHA-0020

project: LELAND HARBOR  
channel/reach:

sheet no. 1

USGS Quad:

NOAA chart:

community: LELAND

county: LEBLANC

state: MICHIGAN

Township/Range T. 00N R. 00E

section: 0

**ORIGIN AND HORIZONTAL DATA**

datum: NAD83

lat: 45° 1' 26.91778" N

lon: 85° 45' 42.53976" W

Y: 525,590.46 ft (US) N

X: 19,324,296.50 ft (US) E

state: MICHIGAN

projection: LAMBERT

zone: C

code: 2112

**POINT SOURCE(S)**

USGS

**MOST RECENT RECOVERY**

06/01/95 by DAC

condition: GOOD

**VERTICAL**

feet meters

IGLD 1955: 0.000 0.000

IGLD 1985: 583.093 0.000

NAVD 1988: 0.000 0.000

NGVD 1929: 0.000 0.000

pt. source:

(HCA) + 5.6

geoid. hgt: 0.000 0.000

**PROPERTY OWNER**

**ACCESS:**

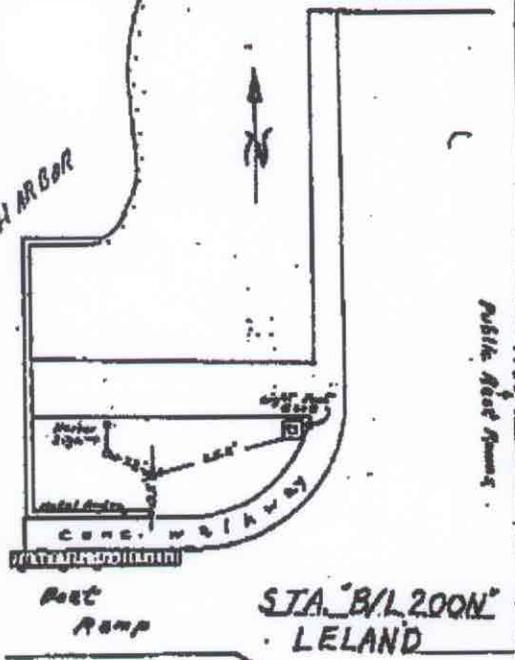
CAR, Fwd, boat, hike

**DESCRIPTION**

STATION B/L 200N IS A STANDARD BRONZE SURVEY DISC SET 7 IN. BELOW GROUND LEVEL IN A 1 FT. DIAMETER TILE WITH A WOOD LID COVERING THE HOLE. IT IS APPROX. 13.52 FEET FROM THE BOAT LAUNCH RAMP IN LELAND HARBOR.

**GPS VISIBILITY:**

**SKETCH**



Ref # **GHA-0020**

Design: **B/L 200N**

# STATION RECOVERY

PROJECT Leland Harbor	COUNTY Leelanau	STATE Michigan
NAME Sta. Bob	STAMPINGS 1973	AGENCY USCo of E DET. DIST.
TYPE Std. Survey disc	CONDITION NEW BK	

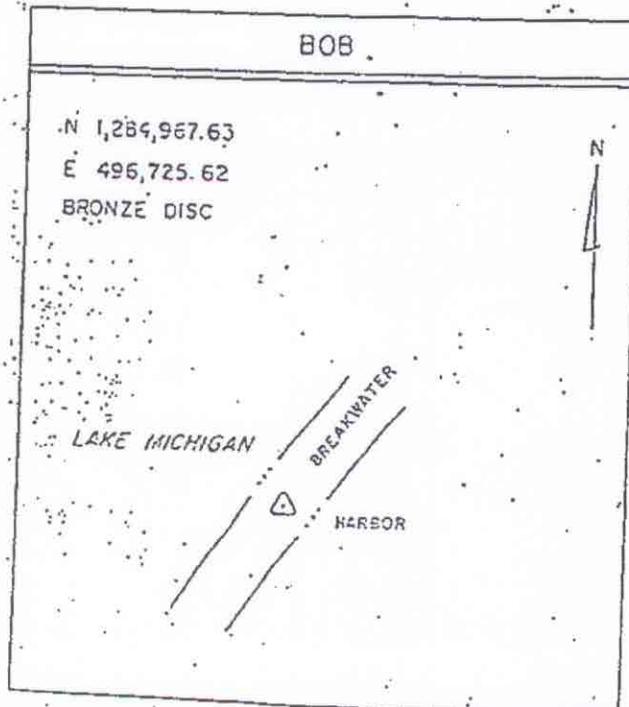
DESCRIPTION Sta. Bob is a std. bronze survey disc grouted flush with the top of a 5' X 7' cover stone near C/L of breakwater, Approx. 152' S.W. of the N.E. angle of the breakwater.

MICHIGAN STATE GRID SYSTEM -

- GENERAL ZONE

BY E. Tompkins	HORIZONTAL DATA	VERTICAL DATA
DATE July 1973	EASTING (*) 19,324,064.08	IGLD 586.48
OFFICE GR. Proj. Offc.	NORTHING (*) 626,164.96	USC&GS

MSCE FORM 43  
MAY 1971



# STATION RECOVERY

PROJECT	LELAND HARBOR	COUNTY	LEELANAU	STATE	MICHIGAN
NAME	STA. TOM	STAMPINGS	1973	AGENCY	
TYPE	BRONZE DISC	CONDITION			

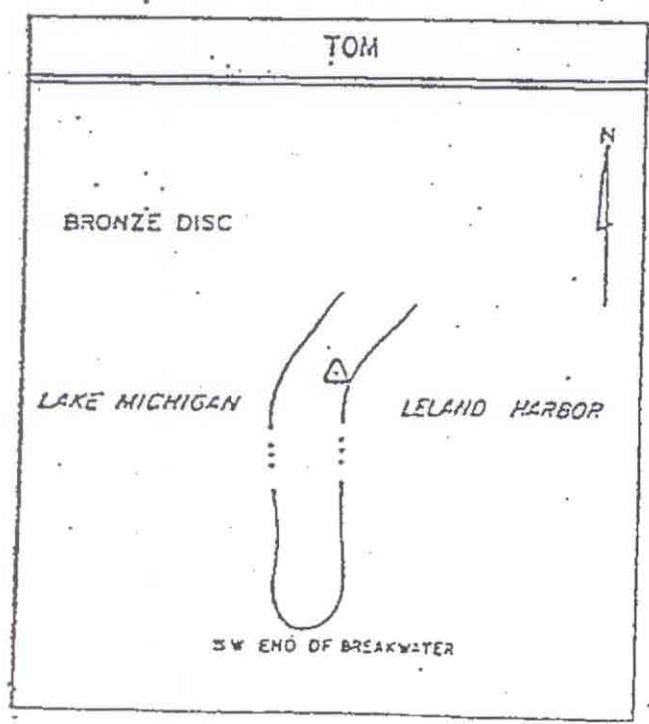
**DESCRIPTION**

Station Tom is a standard C. of E. survey disc grouted into the top of a 1' x 6' cover stone near the C/L of the breakwater approx. 109' N. of C/L of Breakwater Light at Leland, Michigan.

MICHIGAN STATE GRID SYSTEM - NAD 83      LAMBERT - CENTRAL ZONE

BY	E. TOMPKINS	HORIZONTAL DATA	LAMBERT CENTRAL	VERTICAL DATA	
DATE	JULY 1973	EASTING (X)	19323631.44	IGLD	
OFFICE	GRAND HAVEN P.O.	NORTHING (Y)	625698.75	USC & GS	

NCE FORM 43  
(MAY 1972)



# STATION RECOVERY

PROJECT	LELAND HARBOR	COUNTY	LEELANAU	STATE	MICHIGAN
NAME	STA. BL 400N	STAMPINGS	1964	AGENCY	U.S.C.E.
TYPE	BRASS DISC	CONDITION			

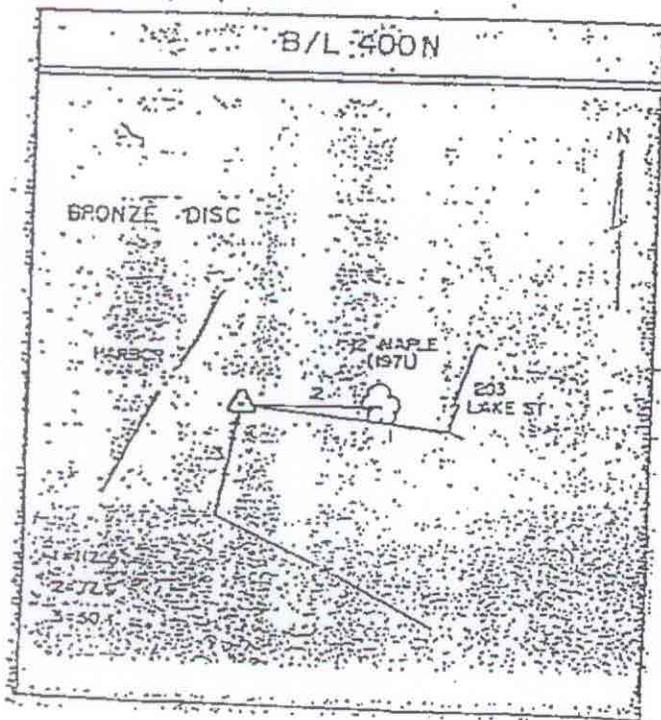
**DESCRIPTION**

Station BL 400N is a standard C. of E. survey disc set in a 6" concrete monument approx. 1' above ground and on top of bank between residence of 203 Lake Street and the harbor. Also, in line with stations BL 300N and BL 200N in Leland, Michigan.

MICHIGAN STATE GRID SYSTEM - NAD:83 - LAMBERT - CENTRAL ZONE

BY	E. TOMPKINS	HORIZONTAL DATA	<del>LAMBERT</del> CENTRAL	VERTICAL DATA
DATE	OCT. 1971	EASTING (X)	19324434.96	IGLD
OFFICE	GRAND HAVEN P.O.	NORTHING (Y)	625736.50	USC & GS

KCE FORM 43  
(2-7-70)



**SURVEY CONTROL DATA**

STATION DESIGNATION            CELL            FILE            SHEET            NUMBER             
 PROJECT           Leland Harbor           CHANNEL/REACH             
 QUAD           Northport, MI (15min)           NOAA CHART#             
 CITY/TWP           Leland           COUNTY           Leelanau           STATE           MI           TWP           30N           RANGE           12E            
 MARKER TYPE           Brass Disc in Lg. Rock           SET BY           Tompkins           OFFICE/AGENCY           USC of            
 DATE SET           14 Oct 71           ORIGIN OF CONTROL: HORIZ.           GPS           VERT.           DET.DIST          

HORIZONTAL

DATUM           NAD 83 (US foot)           LATITUDE           45°01'27.70286"           LONGITUDE           85°45'48.53145"            
 SPC Y           625677.36           (NORTHING) X           19323869.61           (EASTING)  
 STATE           MI           PROJECTION           Lambert           ZONE           Central           CODE           2112          

AZIMUTE MARK

GRID AZ

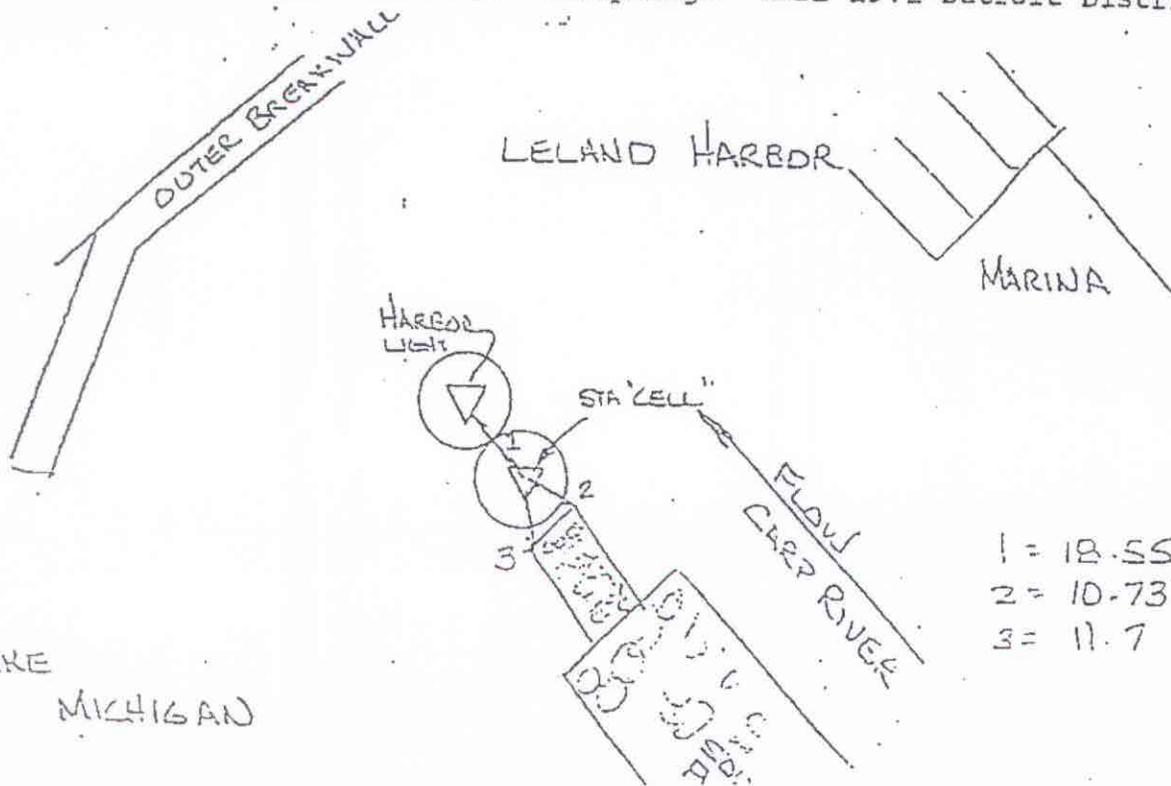
VERTICAL

ELEV. IN FEET: IGLD           584.73           NGVD            NAVD 88            OTHER             
 PROPERTY OWNER            ACCESS NOTES           

<u>DATE</u>	<u>RECOVERY/REVISIONS/REMARKS</u>	<u>BY</u>
<u>          5 Sept 1991          </u>	<u>          Found in Good Condition          </u>	<u>          C. Hughes          </u>
<u>          </u>	<u>          </u>	<u>          </u>
<u>          </u>	<u>          </u>	<u>          </u>

DESCRIPTION

Found brass disc in a large rock in a stone-filled cell at the west end of south pier of Leland Harbor. Stampings "Cell-1971-Detroit District"



SURVEY CONTROL DATA

STATION DESIGNATION E-88 FILE \_\_\_\_\_ SHEET \_\_\_\_\_ NUMBER \_\_\_\_\_  
 PROJECT Leland Harbor CHANNEL/REACH \_\_\_\_\_  
 QUAD Northport, MI (15min) NOAA CHART# \_\_\_\_\_  
 CITY/TWP Leland COUNTY Leelanau STATE MI TWP 30N RANGE 12W  
 MARKER TYPE Standard Disc SET BY \_\_\_\_\_ OFFICE/AGENCY USC&GS  
 DATE SET 1934 ORIGIN OF CONTROL: HORIZ. \_\_\_\_\_ VERT. \_\_\_\_\_

HORIZONTAL

DATUM NAD 83(US foot) LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_  
 PC Y 624940.77 (NORTHING) X 19324653.67 (EASTING)  
 STATE MI PROJECTION Lambert ZONE Central CODE 2112

AZIMUTH MARK

GRID AZ

VERTICAL

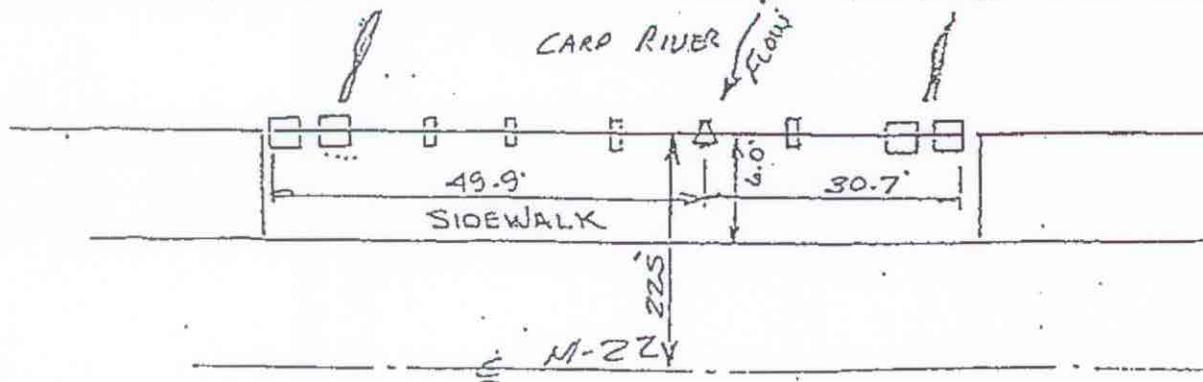
ELLIPSOIDAL HEIGHT IN FEET: IGLD \_\_\_\_\_ NGVD \_\_\_\_\_ NAVD 88 \_\_\_\_\_ OTHER \_\_\_\_\_  
 PROPERTY OWNER \_\_\_\_\_ ACCESS NOTES \_\_\_\_\_

<u>DATE</u>	<u>RECOVERY/REVISIONS/REMARKS</u>	<u>BY</u>
<u>5 Sept 1991</u>	<u>Found in Good Condition</u>	<u>C. Huches</u>

DESCRIPTION

STA "E-88"

benchmark established on the east side of Highway M-22 bridge over the Carp River. The standard disc is set at the top center of the fourth sidewalk railing-post from the south end of the railing. Stampings "E-88 1934".



**SURVEY CONTROL DATA**

STATION DESIGNATION            ROCK            FILE            SHEET            NUMBER             
 PROJECT Leland Harbor CHANNEL/REACH             
 QUAD Northport, MI (15min) NOAA CHART#             
 CITY/TWP Leland COUNTY Leelanau STATE MI TWP 30N RANGE 1E  
 MARKER TYPE Standard Brass Disc SET BY GCA OFFICE/AGENCY USC & G.S.  
 DATE SET 5 Sept 91 ORIGIN OF CONTROL: HOPIZ.            GPS            VERT.           

HORIZONTAL

DATUM NAD 83 (US foot) LATITUDE 45°01'25.25797" LONGITUDE 85°45'45.9966"  
 SPC Y 625426.67 (NORTHING) X 19324047.37 (EASTING)  
 STATE MI PROJECTION Lambert ZONE Central CODE 2112

AZIMUTH MARK

GRID AZ

VERTICAL

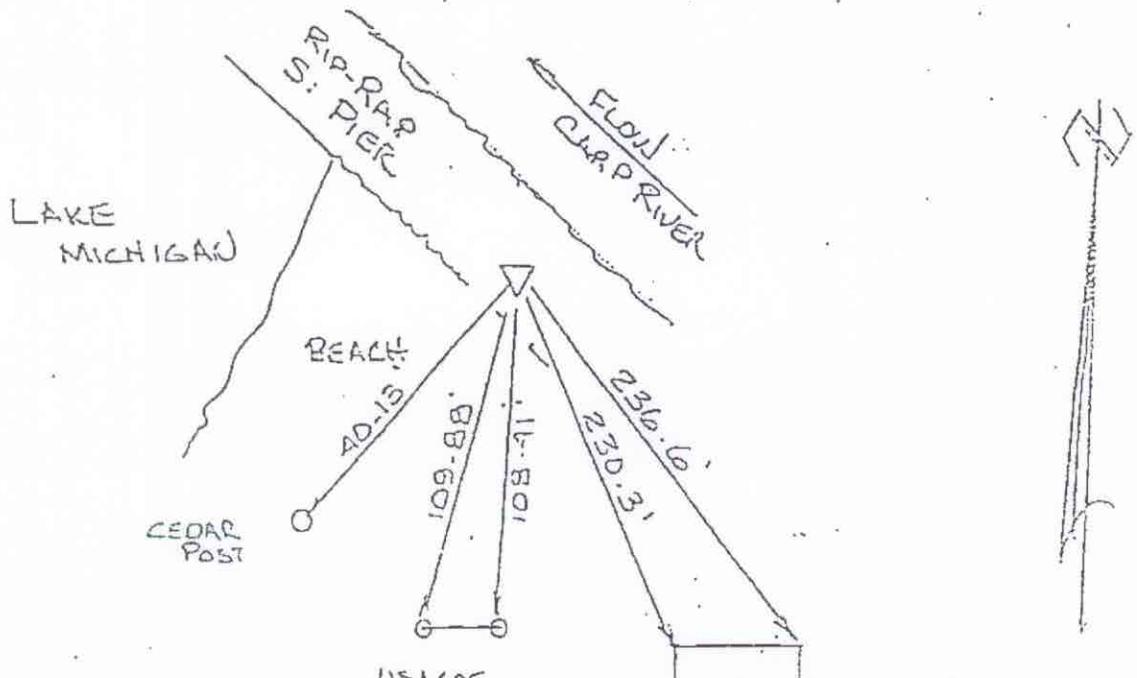
ELEV. IN FEET: IGLD            NGVD            NAVD 88            OTHER             
 PROPERTY OWNER            ACCESS NOTES           

<u>DATE</u>	<u>RECOVERY/REVISIONS/REMARKS</u>	<u>BY</u>
<u>5 Sept 1991</u>	<u>NEW</u>	<u>C. Hughes</u>

DESCRIPTION

STA "ROCK"

Set standard USACOE brass disc cemented in large rock at beach end of south breakwater on south side of Carp River. Stampings "Rock-1991-GCA".



**U.S. ARMY ENGINEER DISTRICT - DETROIT**

**GENERAL INFORMATION**

designation: 66-6  
 reference no. GHA-0059  
 project: PENTWATER HARBOR  
 channel/reach:  
 sheet no. 1 of 1  
 USGS Quad: PENTWATER 7.5  
 NOAA chart:  
 community: PENTWATER  
 county: OCEANA  
 state: MICHIGAN  
 Township/Range T.16N R.18W  
 section: 15

agency: CENCE  
 order: SECOND/Class 1  
 date: 04/01/94  
 method: GPS  
 set by: GOSLING/CZUBACK

**ORIGIN AND HORIZONTAL DATA**

datum: NAD83  
 lat: 43° 46' 51.11840" N  
 lon: 86° 26' 19.47088" W  
 Y: 12,576,117.34 ft (US) N  
 X: 837,989.13 ft (US) E  
 state: MICHIGAN  
 projection: LAMBERT  
 zone: 8  
 code: 2113

POINT SOURCE(S) \* ref \*\*  
 NGS  
 MOST RECENT RECOVERY  
 09/20/95 by JR  
 condition: GOOD

**VERTICAL**

feet meters  
 IGLD 1955: 0.000 0.000  
 IGLD 1985: 582.785 0.000  
 NAVD 1988: 0.000 0.000  
 NGVD 1929: 0.000 0.000  
 pt. source:  
 geold. hgt: 0.000 0.000

**PROPERTY OWNER**

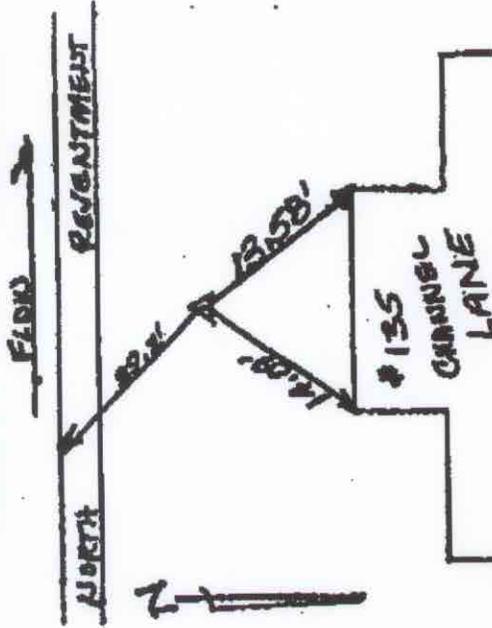
access:  
 car, fwd, boat, hike

**DESCRIPTION**

STATION 66-6 IS A STANDARD BRONZE DISK SET IN A 6" DIA. CONCRETE MONUMENT. THE DISK IS 29.2 FEET FROM A STRUCTURE STATION PIN XVI, 14.07 FEET FROM THE SOUTHEAST CORNER OF A PORCH AND 13.58 FEET FROM THE SOUTHWEST CORNER. IT IS LOCATED ON THE NORTH SIDE OF THE PENTWATER CHANNEL AT STRUCTURE STATIONING 15+85, APPROX. 32 FEET NORTH OF THE CHANNEL FACE OF THE NORTH REVEMENT.

**GPS VISIBILITY:**

**SKETCH**



Ref # **GHA-0059**

Desig:

**66-6**

Grand Raven Area Office

Printed on 02/27/96

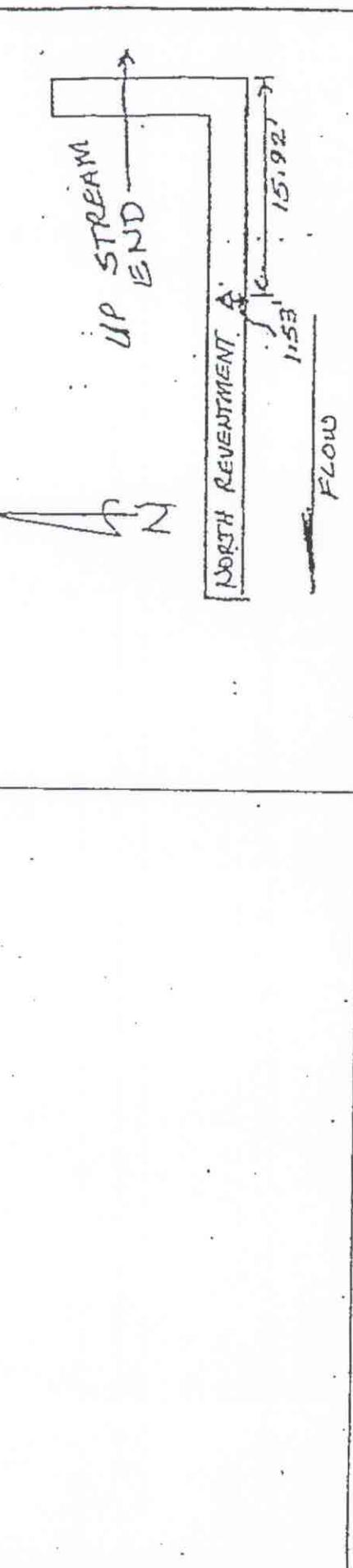
U.S. ARMY ENGINEER DISTRICT - DETROIT

<p><b>GENERAL INFORMATION</b></p> <p>designation: PRIVATE reference no.</p> <p>project: PERIWATER HARBOR channel/reach: sheet no. 1 of 1 USGS Quad: PERIWATER (MICHIGAN) NOAA chart</p> <p>community: PERIWATER county: OCEANA state: MICHIGAN township/range: T16N, R18W section: 14</p>	<p><b>HORIZONTAL</b></p> <p>datum: NAD83 lat: 43°46'48.64066" N lon: 086°26'12.48879" W</p> <p>X 12576623.262 E (US FOOT) Y 837725.729 N (US FOOT)</p> <p>X 3833362.43704 E (METERS) Y 2553339.31287 N (METERS)</p> <p>state: MICHIGAN projection: LAMBERT CONIC zone: SOUTH code: 2113</p>	<p><b>HORIZONTAL ORIGIN</b></p> <p>agency: MCEHCD order: date: 01/01/1985 method: set by: EXISTING</p> <p>POINT SOURCE:</p>	<p><b>VERTICAL</b></p> <p>feet ..... meters .....</p> <p>ICLD 1955: ..... ICLD 1985: 583.24 ..... NAVD 1988: 0.000 ..... NGVD 1929: 0.000 ..... pt. source:</p> <p>geoid. hgt. 0.000 0.000</p>
<p><b>PROPERTY OWNER</b></p> <p>name: telephone: access notes: MIKE, BOAT, CAR</p>		<p><b>HORIZONTAL RECOVERY</b></p> <p>04-15-1994</p>	

**DESCRIPTION:** STATION IS A STANDARD BRONZE DISK SET GROUDED ON THE TOP OF THE NORTH REVEMENT, IT IS LOCATED 15.92 FEET WEST OF THE UPSTREAM END OF THE WALL, MEASURING FROM THE TOP OF THE BEVELED EDGE, THE POINT IS 1.53 FEET FROM THE CHANNEL EDGE OF THE WALL IN PERIWATER, MICHIGAN.

**SKETCH**

DYNAMIC Ht. 583.54  
Hyp. Corr. - 0.3  
583.24



REFERENCE #

SURVEY CONTROL DATA

DESIGNATION: PRIVATE

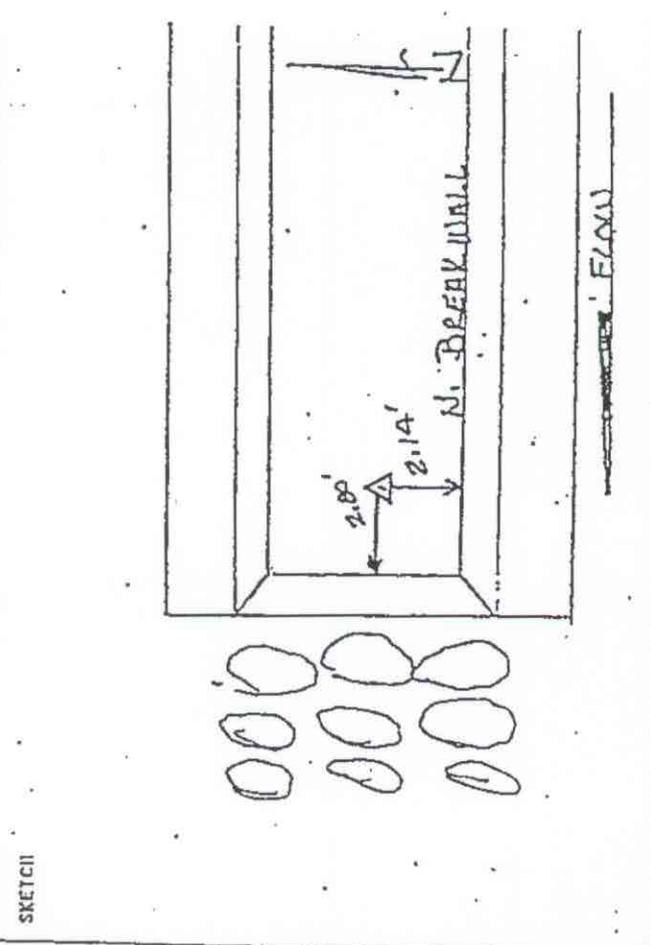
Office of record DETROIT DISTRICT

printed on 5-26-1994

U.S. ARMY ENGINEER DISTRICT - DETROIT

<p><b>GENERAL INFORMATION</b></p> <p>designation: CONO reference no.</p> <p>project: PENTWATER HARBOR channel/reach: sheet no. 1 of 1 USGS quad: PENTWATER (MICHIGAN) VOLL chart</p> <p>community: PENTWATER county: OCEANA state: MICHIGAN township/range T16N, R10W section: 15</p>	<p><b>HORIZONTAL</b></p> <p>datum: NAD83 lat: 43°48'56.57368" lon: 086°26'37.43672"</p> <p>12574811.816 E (US FOOT) 830573.877 N (US FOOT)</p> <p>3832810.30710 E (METERS) 255597.82880 N (METERS)</p> <p>state: MICHIGAN projection: LAMBERT CONIC zone: SOUTH code: 2113</p>	<p><b>HORIZONTAL ORIGIN</b></p> <p>agency: ICE/ICD order: date: 01/01/1970 method: set by: EXISTING POINT SOURCE:</p> <p><b>MOST RECENT RECOVERY</b> 04-15-1994</p>	<p><b>VERTICAL</b></p> <table border="0"> <tr> <td>feet</td> <td>meters</td> </tr> <tr> <td>ICLD 1955: 0.000</td> <td>0.000</td> </tr> <tr> <td>ICLD 1985: 0.000</td> <td>0.000</td> </tr> <tr> <td>NAVD 1988: 0.000</td> <td>0.000</td> </tr> <tr> <td>pt. source:</td> <td></td> </tr> <tr> <td>geoid. hgt: 0.000</td> <td>0.000</td> </tr> </table> <p><b>PROPERTY OWNER</b></p> <p>name: telephone: access notes: HIKE, BOAT</p>	feet	meters	ICLD 1955: 0.000	0.000	ICLD 1985: 0.000	0.000	NAVD 1988: 0.000	0.000	pt. source:		geoid. hgt: 0.000	0.000
feet	meters														
ICLD 1955: 0.000	0.000														
ICLD 1985: 0.000	0.000														
NAVD 1988: 0.000	0.000														
pt. source:															
geoid. hgt: 0.000	0.000														

**DESCRIPTION:** STATION IS A STANDARD BRONZE SURVEY DISK SET IN CONCRETE, STATION IS LOCATED AT THE TOP OF THE NORTH BREAKWALL IN PENTWATER HARBOR.



<p>REFERENCE #</p> <p>office of record DETROIT DISTRICT</p>	<p>SURVEY CONTROL DATA</p> <p>DESIGNATION: CONO</p>	<p>printed on 5-26-1994</p>
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U.S. ARMY ENGINEER DISTRICT - DETROIT

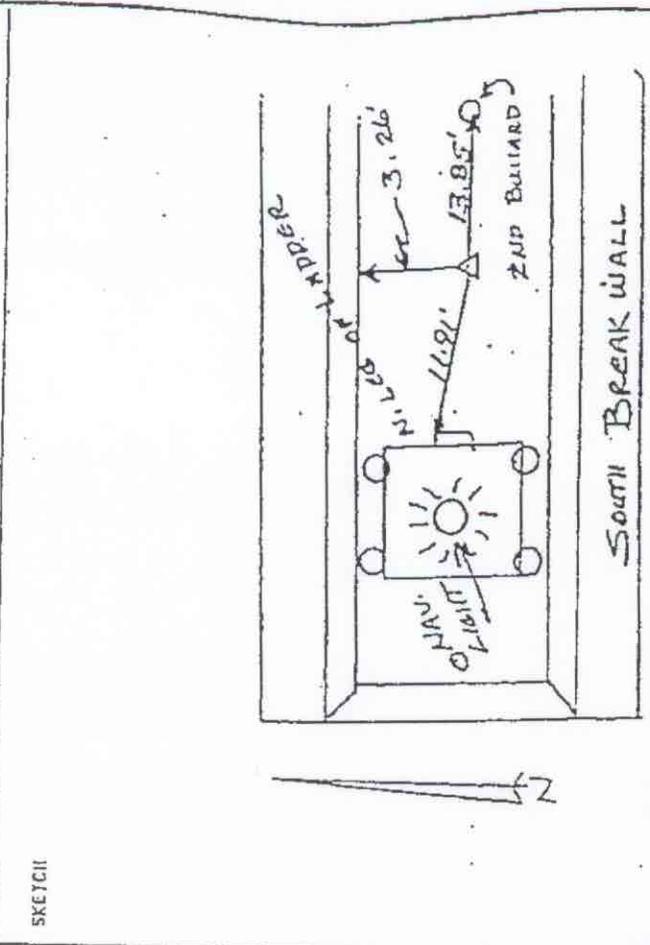
<p><b>GENERAL INFORMATION</b></p> <p>designation: DOH reference no.</p> <p>project: PENTWATER HARBOR channel/reach: sheet no. 1 of 1 UTM coord: PENTWATER (MICHIGAN) MGA chart</p> <p>community: PENTWATER county: DECATUR state: MICHIGAN township/range T14N, R10W section: 14</p>	<p><b>HORIZONTAL</b></p> <p>datum: NAD83 lat: 43°40'45.25087" lon: 086°26'03.86641"</p> <p>12577247.404 E (US FOOT) 837367.823 N (US FOOT)</p> <p>3833552.67596 E (METERS) 255230.22306 N (METERS)</p> <p>state: MICHIGAN projection: LAMBERT CONIC zone: SOUTH code: 2113</p>	<p><b>HORIZONTAL ORIGIN</b></p> <p>agency: H.O.S. order: date: 4-15-1994 method: GPS set by: GOSLING CZUBAK ASSOC. P.C.</p> <p>POINT SOURCE:</p>	<p><b>VERTICAL</b></p> <p>feet: ..... meters</p> <p>IGLD 1955: 0.000 0.000 IGLD 1985: 0.000 0.000 NAVD 1988: 0.000 0.000 MGVD 1929: 0.000 0.000</p> <p>pt. source:</p> <p>geoid. hgt: 0.000 0.000</p>
<p><b>PROPERTY OWNER</b></p> <p>name: PENTWATER YACHT CLUB telephone: access notes: CAR</p>		<p><b>HORIZONTAL ORIGIN</b></p> <p>HOST RECENT RECOVERY 04-15-1994</p>	
<p><b>DESCRIPTION:</b></p> <p>SET STANDARD COE 30"X 3" PIPE AND ALUMINUM CAP ON CONCRETE STAPED "DOH 1994" MONUMENT IS 6 FEET NORTH OF SOUTH PROPERTY LINE OF PENTWATER YACHT CLUB HOUSE GROUNDS, 1 BLOCK SOUTH AND 1 BLOCK WEST OF POST OFFICE.</p>		<p><b>SKETCH</b></p> <p>1. N42°U ~ 120.9' - BLDG 2. S15°E ~ 64.8' - POST 3. S85°E ~ 74.2' - ZONARIE</p>	
<p><b>REFERENCE #</b></p>		<p><b>SURVEY CONTROL DATA</b></p> <p>DESIGNATION: DOH</p>	

U.S. ARMY ENGINEER DISTRICT - DETROIT

<p><b>GENERAL INFORMATION</b></p> <p>designation: PENT reference no.</p> <p>project: PENTWATER HARBOR channel/reach:</p> <p>sheet no. 1 of 1 USGS Quad: PENTWATER (MICHIGAN) NOVA chart</p> <p>community: PENTWATER county: OCEANA state: MICHIGAN township/range: 11N, 11E, 15W section: 15</p>	<p><b>HORIZONTAL</b></p> <p>datum: NAD83 lat: 43°46'54.95338" lon: 086°26'38.57902"</p> <p>12574725.457 E (US FOOT) 838411.886 N (US FOOT)</p> <p>3832783.98478 E (METERS) 255548.45360 N (METERS)</p> <p>state: MICHIGAN projection: LAMBERT CONIC zone: SOUTH code: 2113</p>	<p><b>HORIZONTAL ORIGIN</b></p> <p>agency: ICEHCO order: date: 01/01/1965 method: set by: EXISTING</p> <p>POINT SOURCE:</p> <p>MOST RECENT RECOVERY 04-15-1994</p>	<p><b>VERTICAL</b></p> <p>feet      meters</p> <p>IGLD 1955:      0.000      0.000 IGLD 1985:      0.000      0.000 NAVD 1988:      0.000      0.000 IGVD 1929:      0.000      0.000</p> <p>pt. source:</p> <p>beleid. hgt:      0.000      0.000</p> <p><b>PROPERTY OWNER</b></p> <p>name: telephone: access notes: HIKE, BOAT</p>
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**DESCRIPTION:**

STATION IS A STANDARD BRONZE DISK SET IN CONCRETE, STATION IS LOCATED AT THE TOP OF THE SOUTH BREAKWALL NEAR THE WEST END IN PENTWATER MICHIGAN.



U.S. ARMY ENGINEER DISTRICT - DETROIT

GENERAL INFORMATION

designations: HARBOR  
 reference no.  
 project: PENTWATER HARBOR  
 channel/reach:  
 sheet no. 1 of 1  
 USGS Quad: PENTWATER (MICHIGAN)  
 NOAA chart  
 community: PENTWATER  
 county: OCEANA  
 state: MICHIGAN  
 township/range: T14N, R18W  
 section: 15

HORIZONTAL

datum: HADSB  
 lat: 43°46'50.87320"  
 lon: 065°26'24.79476"  
 12575726.253 E (US FOOT)  
 837973.931 H (US FOOT)  
 3833089.02807 E (METERS)  
 255414.96512 H (METERS)  
 state: MICHIGAN  
 projection: LAMBERT CONIC  
 zone: SOUTH  
 code: 2113

HORIZONTAL ORIGIN

agency: ICE/ICD  
 order:  
 date: 01/01/1970  
 method:  
 set by: EXISTING  
 POINT SOURCE:

HOT RECEIVED RECOVERY  
 04-15-1994

VERTICAL

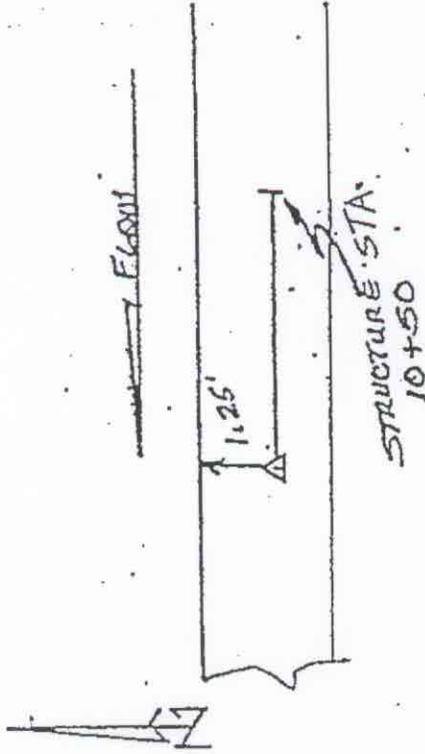
	feet	meters
IGLD 1955:	0.000	0.000
IGLD 1985:	0.000	0.000
HAVD 1980:	0.000	0.000
HIGVD 1929:	0.000	0.000
pt. source:		
geoid. hgt:	0.000	0.000

PROPERTY O:  
 name:  
 telephone:  
 access notes: HIKE, BOAT

DESCRIPTION:

STATION IS A STANDARD BRONZE DISK GROUTED ON THE TOP OF THE SOUTH CONCRETE REVENMENT, THE STRUCTURE STATIONING IS 10+42.4, THE POINT IS 1.25 FEET IN FROM THE TOP OF THE BEVELED EDGE ON THE CHANNEL SIDE OF THE WALL IN PENTWATER, MICHIGAN.

SKETCH



REFERENCE #

SURVEY CONTROL DATA

DESIGNATION: HARB



U.S. ARMY ENGINEER DISTRICT - DETROIT

<p><b>GENERAL INFORMATION</b></p> <p>designations: 66-5 reference no.</p> <p>project: PONTIAC HARBOR</p> <p>channel/reach: sheet no. 1 of 1</p> <p>USGS used: PONTIAC (MICHIGAN) WGA chart</p> <p>community: PONTIAC</p> <p>county: OCEANA</p> <p>state: MICHIGAN</p> <p>ship/race: TISY, R15W</p> <p>section: 15</p>	<p><b>HORIZONTAL</b></p> <p>datum: NAD83</p> <p>lat: 43°46'49.23562" N</p> <p>lon: 086°26'20.84067" W</p> <p>12576012.17932 (US FOOT)</p> <p>837801.009 N (US FOOT)</p> <p>3833176.17842 E (METERS)</p> <p>255362.25844 N (METERS)</p> <p>state: MICHIGAN</p> <p>projection: LAMBERT CONIC</p> <p>zone: SOUTH</p> <p>code: 2113</p>	<p><b>HORIZONTAL ORIGIN</b></p> <p>agency: ICEHCD</p> <p>order: date: 01-1990</p> <p>method: set by: EXISTING</p> <p>POINT SOURCE:</p> <p>HOST RECENT RECOVERY 05-06-1994</p>	<p><b>VERTICAL</b></p> <p>feet : meters</p> <p>IGLD 1955: 0.000 0.000</p> <p>IGLD 1985: 0.000 0.000</p> <p>HAVD 1988: 0.000 0.000</p> <p>HVD 1929: 0.000 0.000</p> <p>pt. source:</p> <p>geoid. hgt: 0.000 0.000</p> <p>PROPERTY OWNER</p> <p>name: telephone: access notes: MOAY, MIKE</p>
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**DESCRIPTION:** STATION IS A STANDARD BRONZE DISK SET IN 6" DIA. CONCRETE MONUMENT, IT IS LOCATED 50.85 FEET FROM PIER STATION XIV AND 43.0 FEET FROM CHANNEL FACE OF SOUTH PIER, THERE IS 28.0 FEET BETWEEN STATION XIV AND THE LOCATION TO MEASURE FROM ON THE SOUTH PIER CHANNEL FACE.

**SKETCH:**

U.S. ARMY ENGINEER DISTRICT - DETROIT

GENERAL INFORMATION

Designation: 66-10  
reference no.

Project: PENTWATER HARBOR  
channel/reach:  
sheet no. 1 of 1  
USGS Quad: PENTWATER (MICHIGAN)  
KOA chart

Community: PENTWATER  
County: OCEANA  
State: MICHIGAN  
Township/Range: T16N, R18W  
Section: 15

HORIZONTAL

datum: NAD83  
lat: 43°46'51.86490"  
lon: 086°26'31.97373"

12575209.683 E (US FOOT)  
830390.978 N (US FOOT)  
3832931.57739 E (METERS)  
255542.08126 N (METERS)

State: MICHIGAN  
Projection: LAMBERT CONIC  
Zone: SOUTH  
Code: 2113

HORIZONTAL ORIGIN

Agency: HECMCO  
Order: 07-1966  
Date: 07-1966  
Method:  
Set by: EXISTING  
Point Source:

Most Recent Recovery  
05-06-1994

VERTICAL

IGLD 1955: 0.000  
IGLD 1985: 0.000  
MVD 1988: 0.000  
MVD 1929: 0.000  
pt. source:

geoid. hgt: 0.000

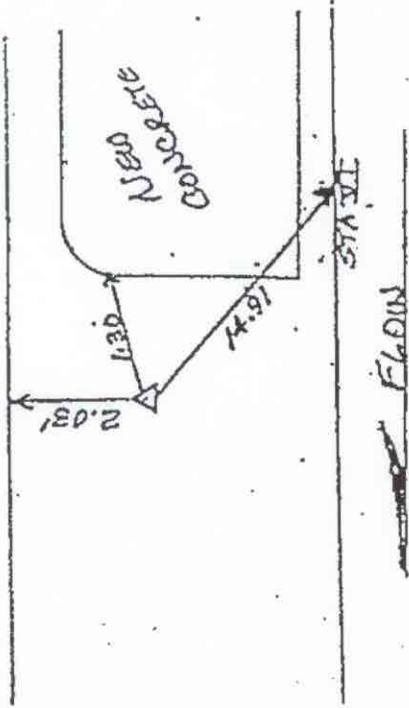
PROPERTY OWNER

name:  
telephone:  
access notes: BOAT, IIKE

DESCRIPTION:

STATION IS A 3/4" STAR DRILLED HOLE ON TOP OF NORTH PIER AT C/S 1+53.79, IT IS LOCATED 2.03 FEET FROM THE NORTH FACE OF THE PIER AND 14.91 FEET FROM THE PIN AT STRUCTURE STATION VI IN PENTWATER MICHIGAN.

SKETCH



REFERENCE #

SURVEY CONTROL DATA

DESIGNATION: 66-10