

BERING SEA KAYAK NATIONAL MUSEUMS OF CANADA, OTTAWA

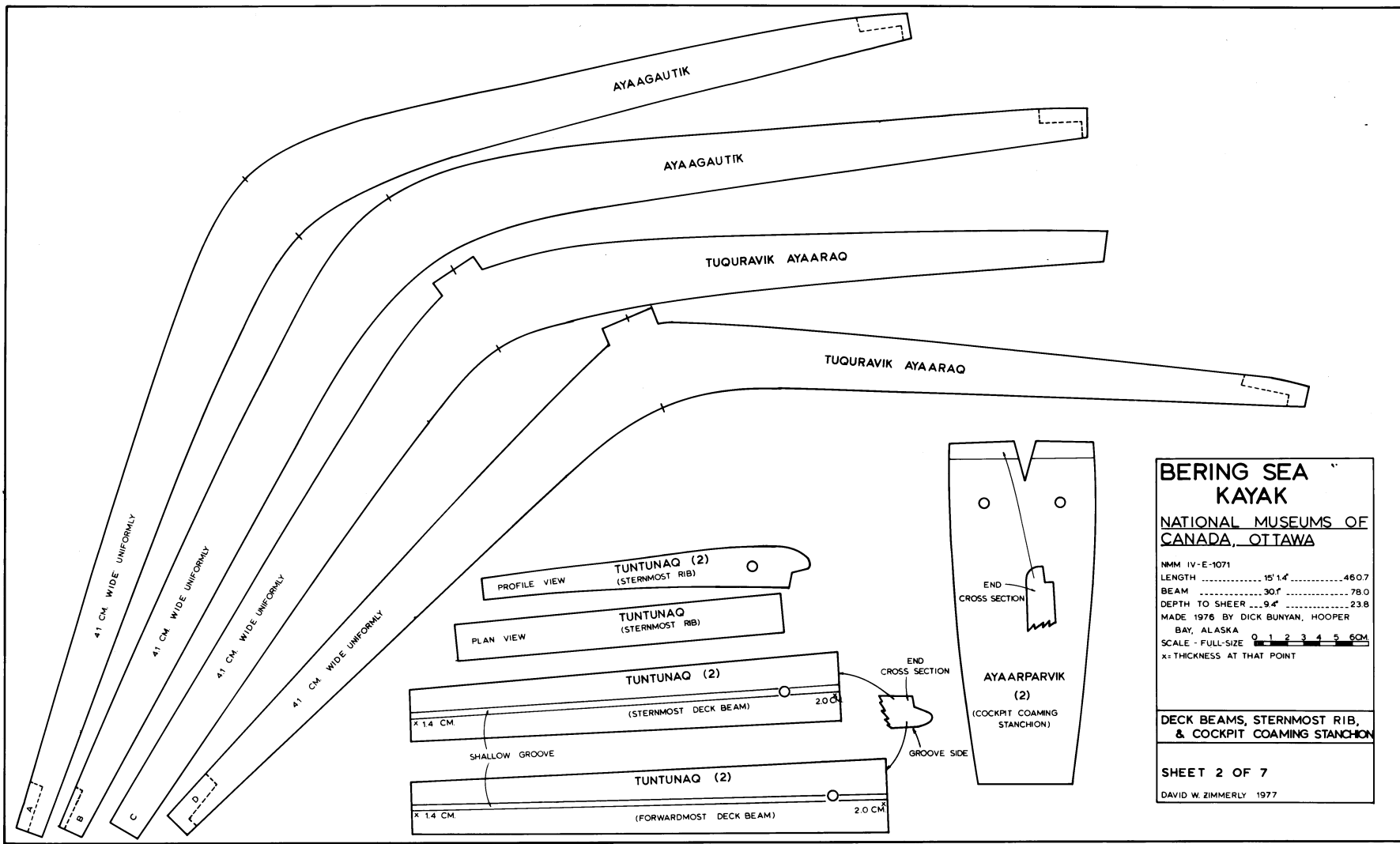
NMM IV - E-1071
LENGTH 15' 1.4" 460.7
BEAM 30.1" 78.0
DEPTH TO SHEER 9.4" 23.8
MADE 1976 BY DICK BUNYAN, HOOPER BAY, ALASKA

SCALE 1:8 (IN CENTIMETERS)
LWL (LOAD WATERLINE) BASED ON 68.0 kg (150 lb) MAN SEATED 240 cm FROM BOW
DISPLACEMENT TO SHEER 815.9 lbs 370.1 kg
CP (PRISMATIC COEFFICIENT) 61
THEORETICAL TOP SPEED 4.6 KNOTS
LOADED KAYAK UNSTABLE AT 45° HEEL

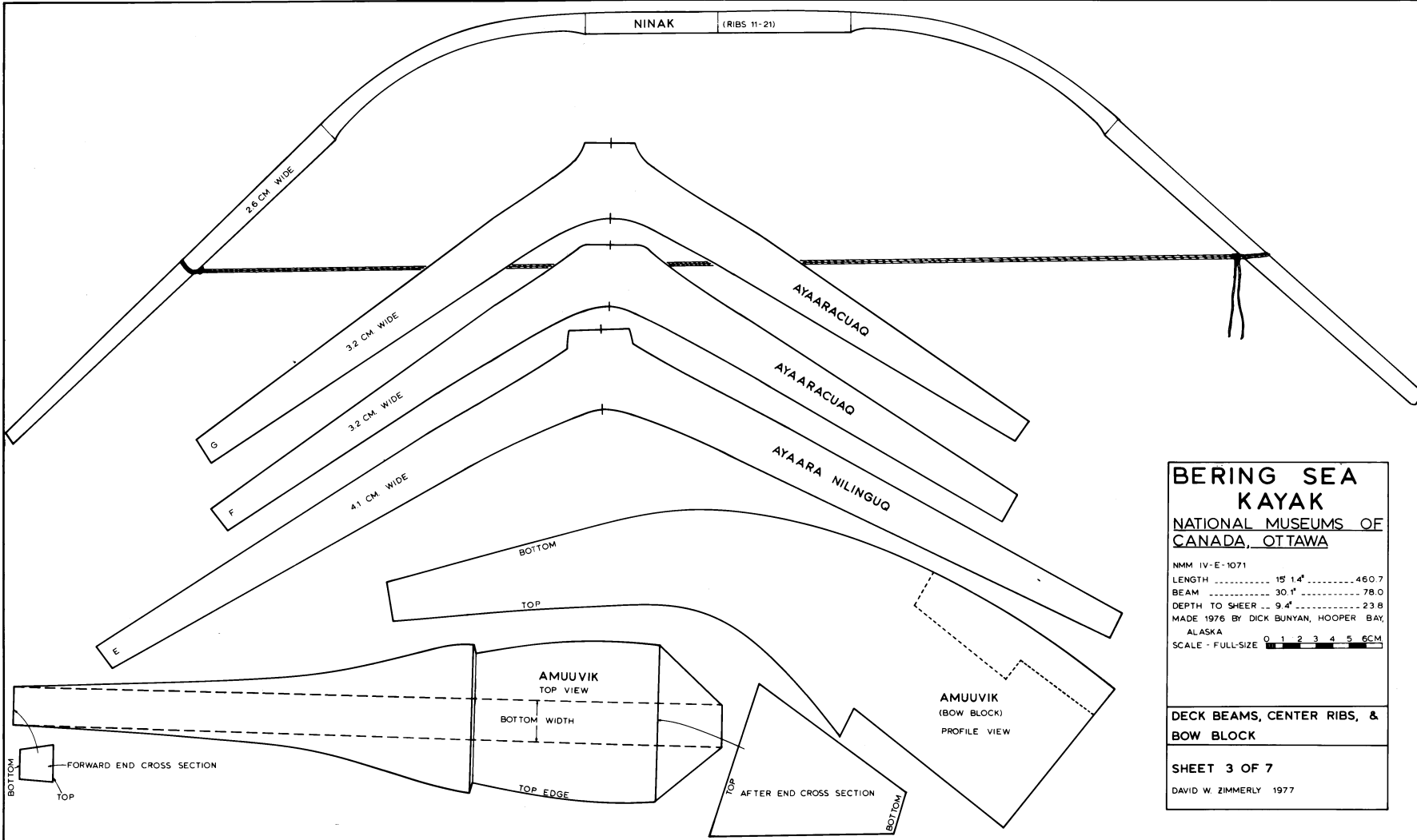
LINES & CONSTRUCTION DETAILS

SHEET 1 OF 7

DAVID W. ZIMMERLY 1977



BERING SEA		
KAYAK		
<u>NATIONAL MUSEUMS OF</u>		
<u>CANADA, OTTAWA</u>		
NMM IV-E-1071		
LENGTH	15' 1 1/4"	460.7
BEAM	30"	76.0
DEPTH TO SHEER	9 1/4"	23.8
MADE 1976 BY DICK BUNYAN, HOOPER		
BAY, ALASKA		
SCALE - FULL-SIZE	0 1 2 3 4 5 6 CM	
x=THICKNESS AT THAT POINT		
DECK BEAMS, STERNMOST RIB,		
& COCKPIT COAMING STANCHION		
SHEET 2 OF 7		
DAVID W. ZIMMERLY 1977		



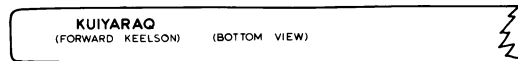
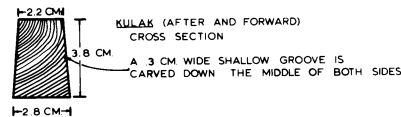
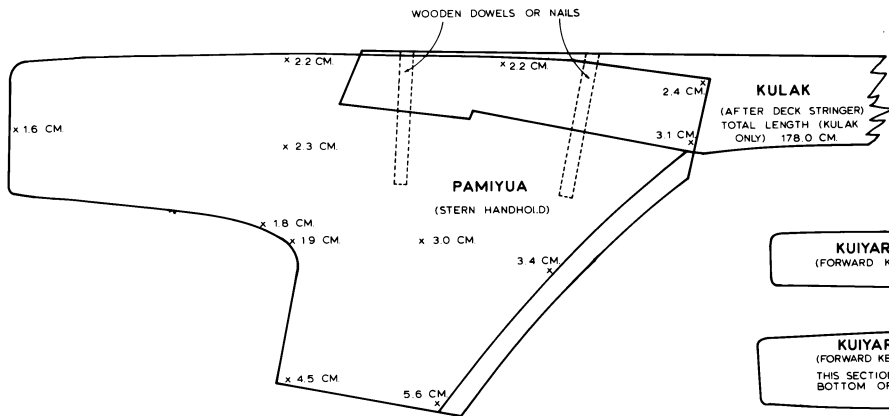
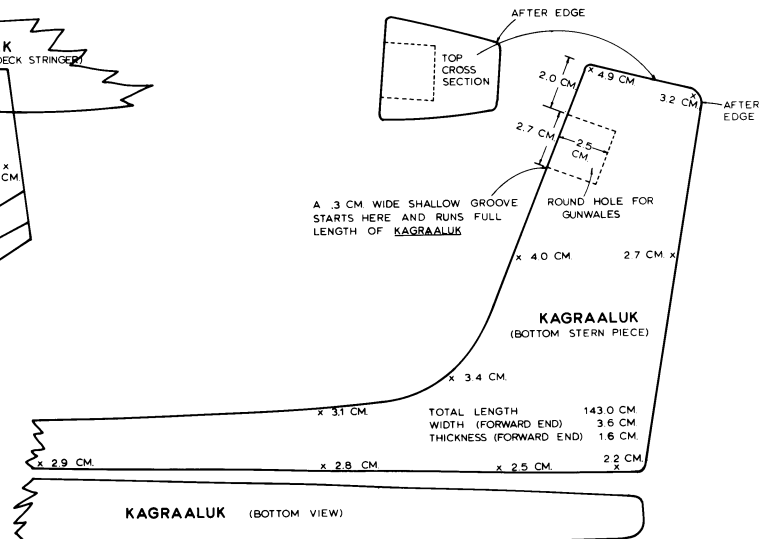
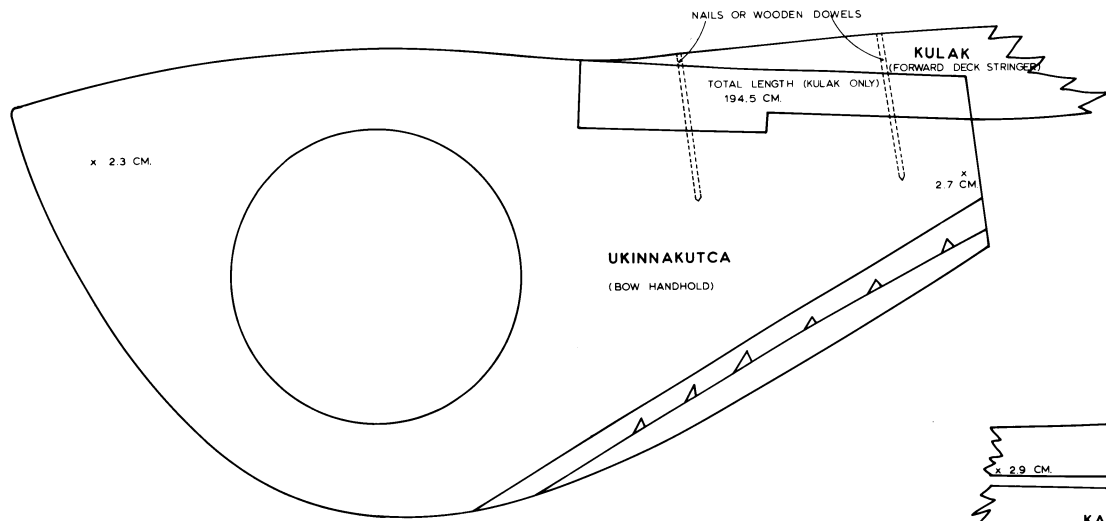
BERING SEA KAYAK NATIONAL MUSEUMS OF CANADA, OTTAWA

NMM IV-E-1071
 LENGTH 15' 1" 460.7
 BEAM 30" 78.0
 DEPTH TO SHEER 9" 23.8
 MADE 1976 BY DICK BUNYAN, HOOPER BAY,
 ALASKA
 SCALE - FULL-SIZE 0 1 2 3 4 5 6 CM

**DECK BEAMS, CENTER RIBS, &
BOW BLOCK**

SHEET 3 OF 7

DAVID W. ZIMMERLY 1977



BERING SEA KAYAK NATIONAL MUSEUMS OF CANADA, OTTAWA

NMM IV-E-1071

LENGTH 15' 1.4" 460.7

BEAM 30" 76.0

DEPTH TO SHEER 9.4" 23.8

MADE 1976 BY DICK BUNYAN, HOOPER BAY, ALASKA

SCALE - FULL-SIZE 0 1 2 3 4 5 6 CM

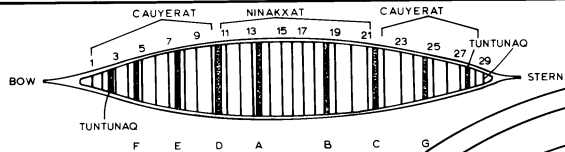
x = THICKNESS AT THAT POINT

BOW & STERN HANDHOLDS, DECK
STRINGERS, KEELSON, & BOTTOM

STERN PIECE

SHEET 4 OF 7

DAVID W. ZIMMERLY 1977



RIBS & DECK BEAMS

RIB SHAPES BEFORE TRIMMING
ALL HAVE NYLON TIES HOLDING THE BEND

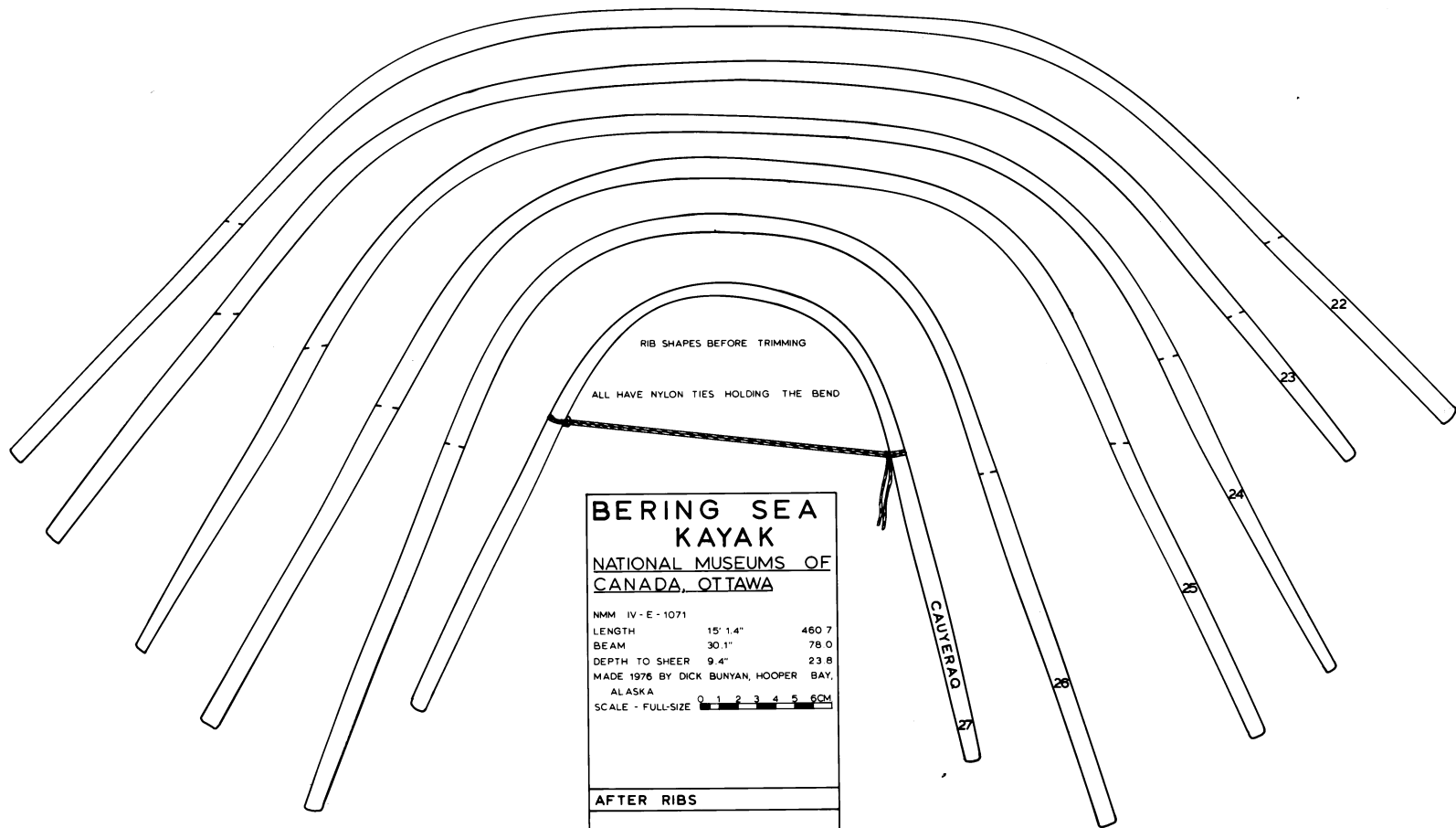
BERING SEA KAYAK NATIONAL MUSEUMS OF CANADA, OTTAWA

NMM IV - E-1071
LENGTH..... 15' 14"..... 460.7
BEAM..... 30 1"..... 76.0
DEPTH TO SHEER.. 9 4"..... 23.8
MADE 1976 BY DICK BUNYAN, HOOPER BAY,
ALASKA
SCALE - FULL-SIZE 0 1 2 3 4 5 6 CM

FORWARD RIBS & RIB AND DECK
BEAM LOCATIONS

SHEET 5 OF 7

DAVID W. ZIMMERLY 1977



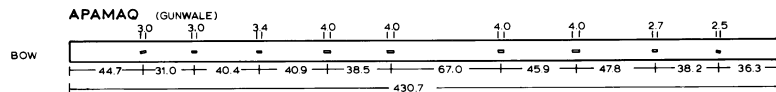
**BERING SEA
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AFTER RIBS

SHEET 6 OF 7

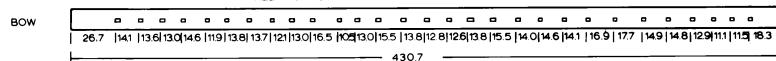
DAVID W. ZIMMERLY 1977



DECK BEAM LOCATIONS

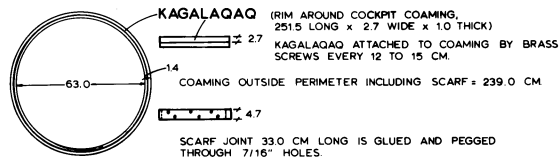
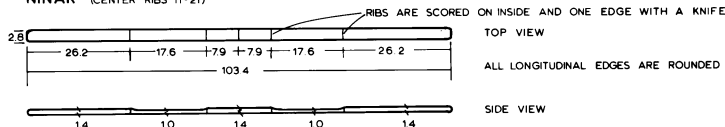
APAMAQ

BOW AND STERN DECK BEAM MORTISES ARE SLIGHTLY ANGLED AS SHOWN.
DECK BEAM AND RIB MORTISES ARE ALL LOCATED IN THE CENTER OF THE GUNWALES.
DECK BEAM MORTISES 2.7 CM DEEP; RIB MORTISES 1.7 CM DEEP x 2.2 CM LONG.
ALL MORTISES DRILLED WITH 7/16" AUGER BIT.

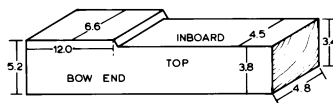


RIB LOCATIONS

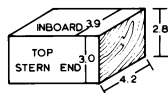
NINAK (CENTER RIBS 11-21)



PAINGA (COCKPIT COAMING)

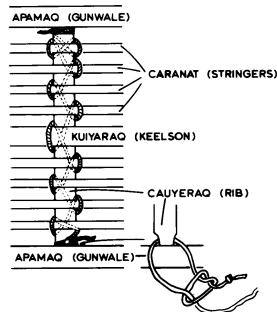


APAMAQ (PORT GUNWALE)

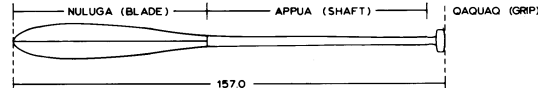


THE TAPER FROM BOW TO STERN STARTS AT MIDPOINT OF GUNWALE.
TOTAL GUNWALE LENGTH = 430.7

NAMUK (RIB/STRINGER TIE)



ANGUARUN (SINGLE-BLADED PADDLE)

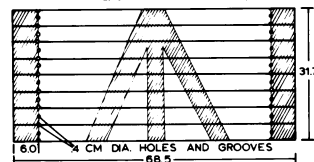


BLADE IS RIDGED ON BOTH SIDES. BLADE CROSS SECTION IS CONCAVE FROM RIDGE TO BLADE EDGE. SHAFT HAS ROUND CROSS SECTION. BLADE IS PAINTED BLUE WITH SHAFT AND GRIP GREEN. BLACK BLADE AND NATURAL SHAFT AND GRIP IS COMMON. SHAFT IS MORTISED INTO ROUND HOLE IN GRIP. BLADE IS 6 CM THICK .5 CM FROM EDGE. CORRECT PADDLE LENGTH IS AN ARMSPAN WITH THE ENDS GRIPPED IN THE 2ND FINGER JOINTS. GRIP ENDS ARE 2.6 CM DIA., CENTER 3.7 CM

PADDLE DIMENSIONS

DISTANCE FROM BLADE END	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	115	150	165
1/2 HEADTHICKNESS	15	28.0	40.0	51.0	62.0	73.0	84.0	95.0	106.0	117.0	128.0	139.0	150.0	161.0	172.0	183.0	194.0	205.0	216.0	227.0	238.0
1/2 HEADTHICKNESS	11.7	11.8	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8

AQUMAGAUTAQ (WOODEN SLAT KAYAK SEAT)



ALL EIGHT SLATS ARE OF EQUAL WIDTH (CIRCA 4.0 CM) AND 1.0 CM THICKNESS.



END VIEW SHOWING METHOD OF TYING SLATS TOGETHER.

RED OTHER PAINT
PAINTED DESIGN REPRESENTS THE FOOT OF A RAVEN OR SEAGULL. BOTH BIRDS ARE GOOD FISHERMEN AND AT EASE IN THE WATER.

TABLE OF OFFSETS

OFFSETS - CENTIMETERS TO OUTSIDE OF SKIN													
SECTIONS	STEM	25	50	100	150	200	250	300	350	400	450	500	STERN
DECK RIDGE	23.8	45.4	45.8	47.4	48.3	48.9	51.4	48.9	43.8	40.6	38.6	35.3	35.3
DECK	28.6	28.6	29.3	30.1	30.1	29.0	27.5	25.3	23.4	22.7	22.8		
STRINGER 4		20.3	18.4	17.4	17.0	17.0	15.4	13.8	12.0	10.6			
STRINGER 3		17.8	14.2	13.2	13.1	13.1	9.4	8.1	6.7	5.1			
STRINGER 2		14.7	10.9	8.8	7.8	7.2	6.1	5.7	4.7	3.5			
STRINGER 1		13.8	10.3	8.0	7.2	6.7	5.8	5.2	4.8	4.7			
DECK RIDGE	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
DECK	4.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
STRINGER 4		8.4	19.0	20.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
STRINGER 3		7.4	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
STRINGER 2		5.8	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
STRINGER 1		5.8	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
KEELSON		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

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BEAM 30.1" 78.0
DEPTH TO SHEER 9.4" 23.8
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NOTE: ALL MEASUREMENTS IN CENTIMETERS

MISCELLANEOUS CONSTRUCTION DETAILS

SHEET 7 OF 7
DAVID W. ZIMMERLY 1977