

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 BK, 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. 3701 kg

CP (PRISMATIC COEFFICIENT) 61

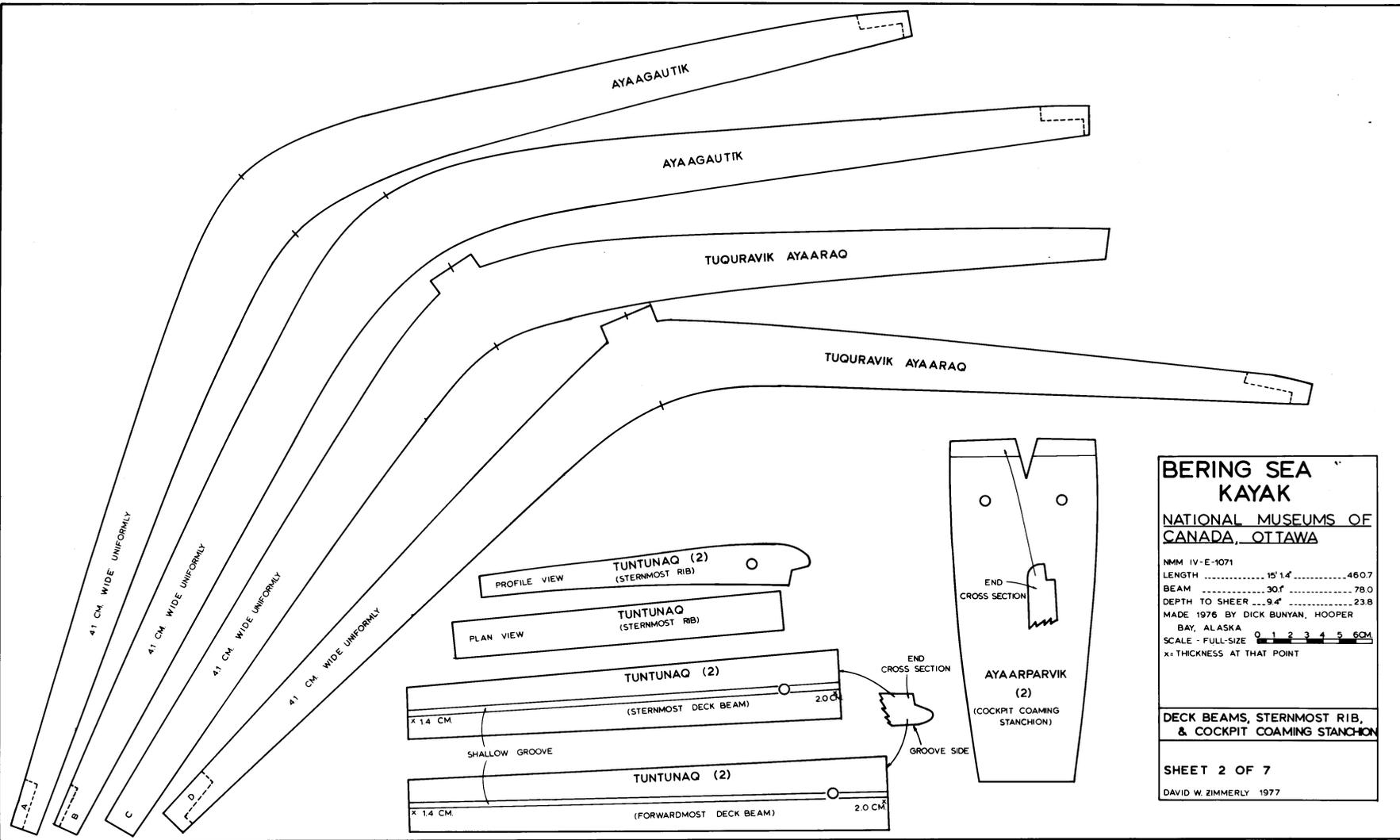
THEORETICAL TOP SPEED 4.6 KNOTS

LOADED KAYAK UNSTABLE AT 45° HEEL

LINES & CONSTRUCTION DETAILS

SHEET 1 OF 7

DAVID W. ZIMMERLY 1977



**BERING SEA
KAYAK**

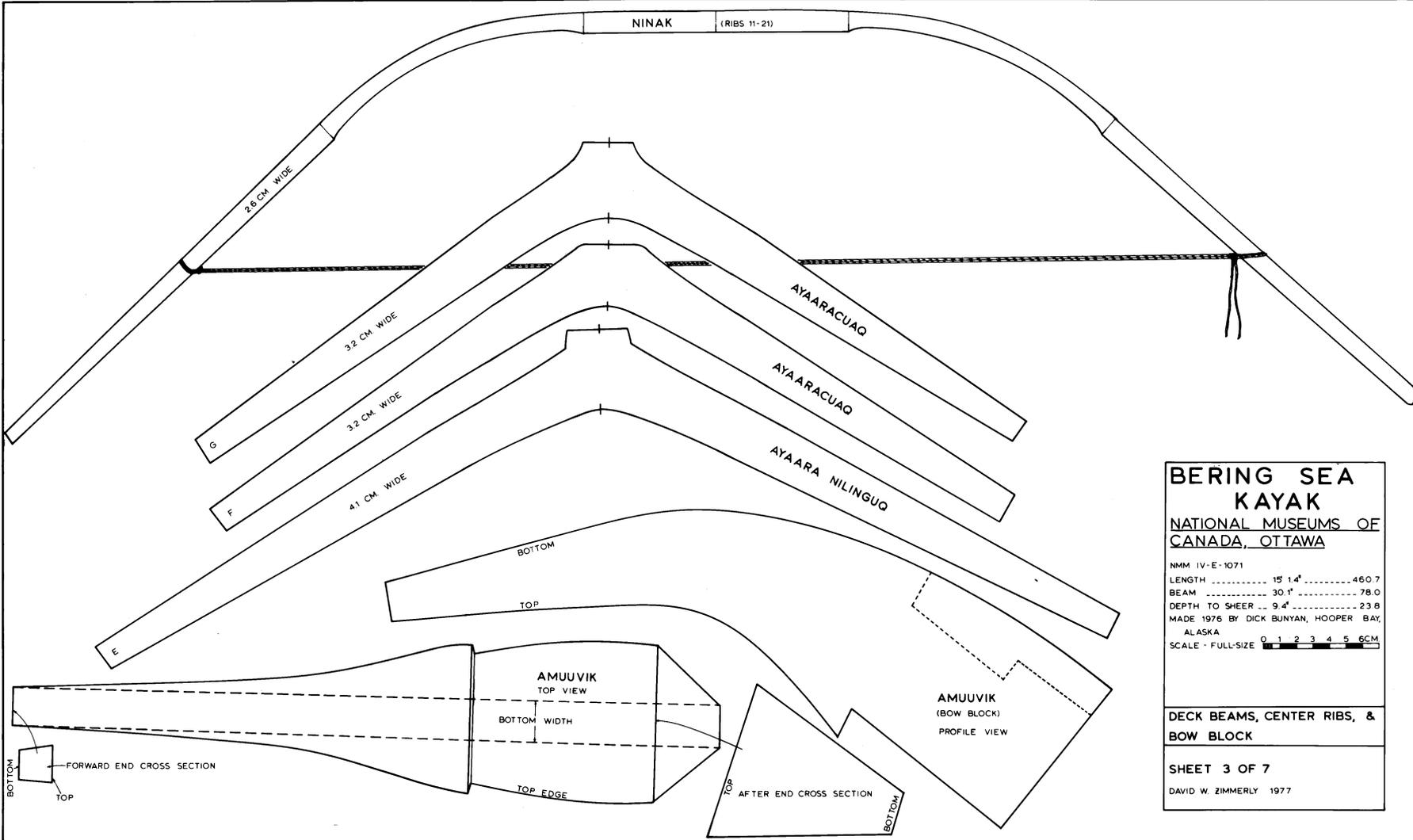
NATIONAL MUSEUMS OF
CANADA, OTTAWA

NMM IV-E-1071
 LENGTH 15' 1 1/4" 460.7
 BEAM 30" 78.0
 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

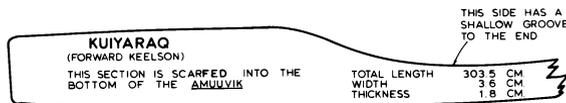
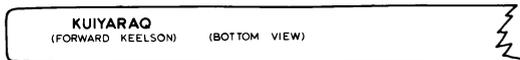
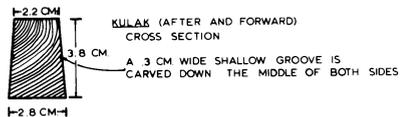
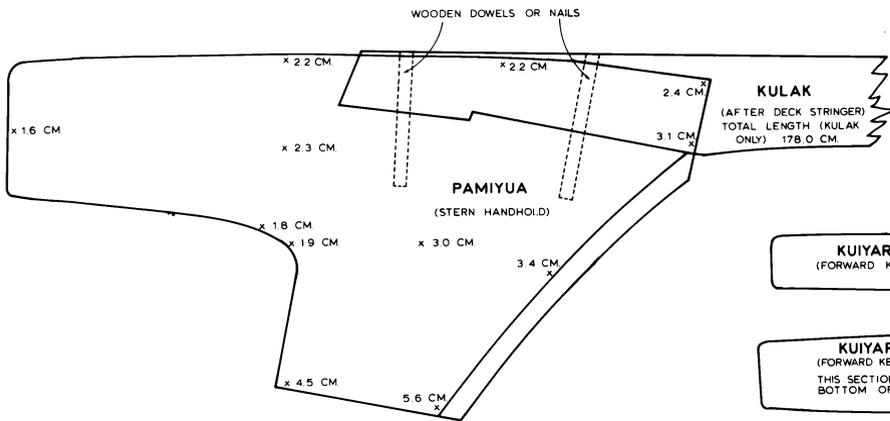
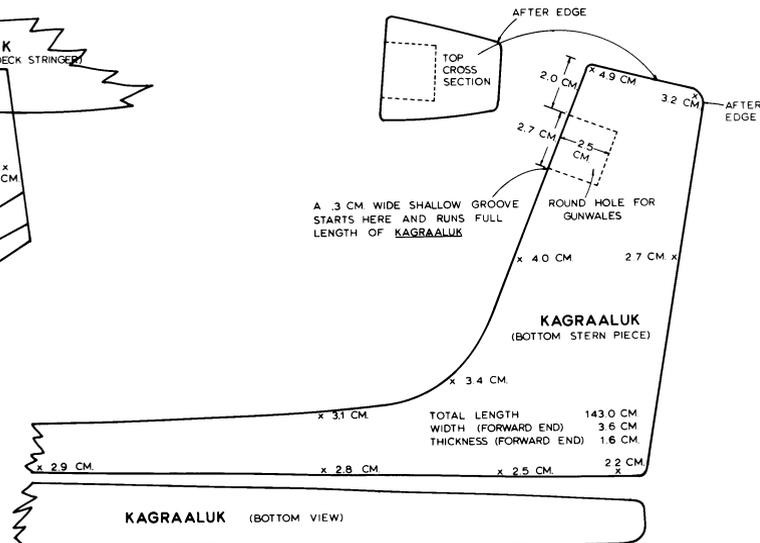
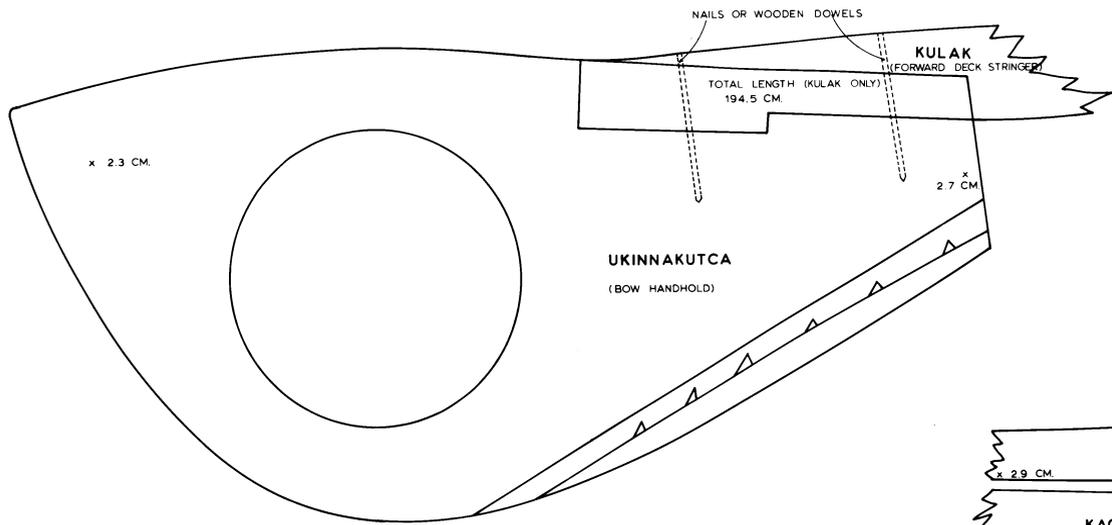
NMM IV-E-1071

LENGTH	15 1/4'	460.7
BEAM	30 1/2"	78.0
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

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" 78.0

DEPTH TO SHEER .. 9.4" 23.8

MADE 1976 BY DICK BUNYAN, HOOPER BAY,
ALASKA

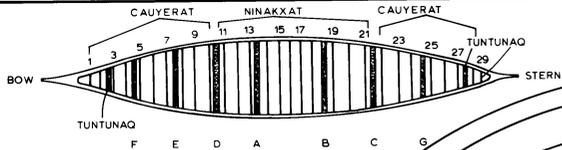
SCALE - FULL-SIZE 0 1 2 3 4 5 6 CM

x: THICKNESS AT THAT POINT

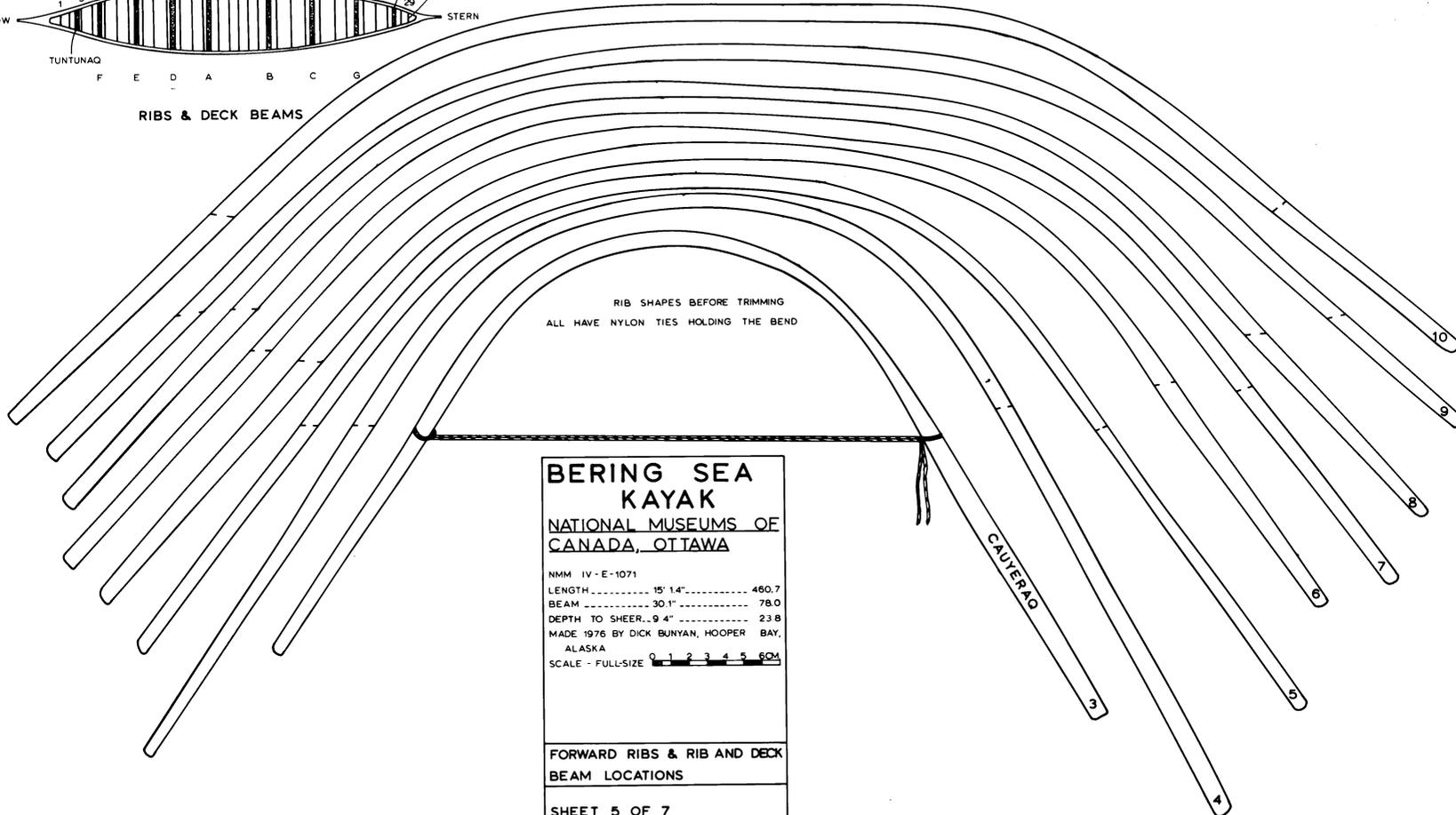
BOW & STERN HANDHOLDS, DECK
STRINGERS, KEELSON, & BOTTOM
STERN PIECE

SHEET 4 OF 7

DAVID W. ZIMMERLY 1977



RIBS & DECK BEAMS



RIB SHAPES BEFORE TRIMMING
ALL HAVE NYLON TIES HOLDING THE BEND

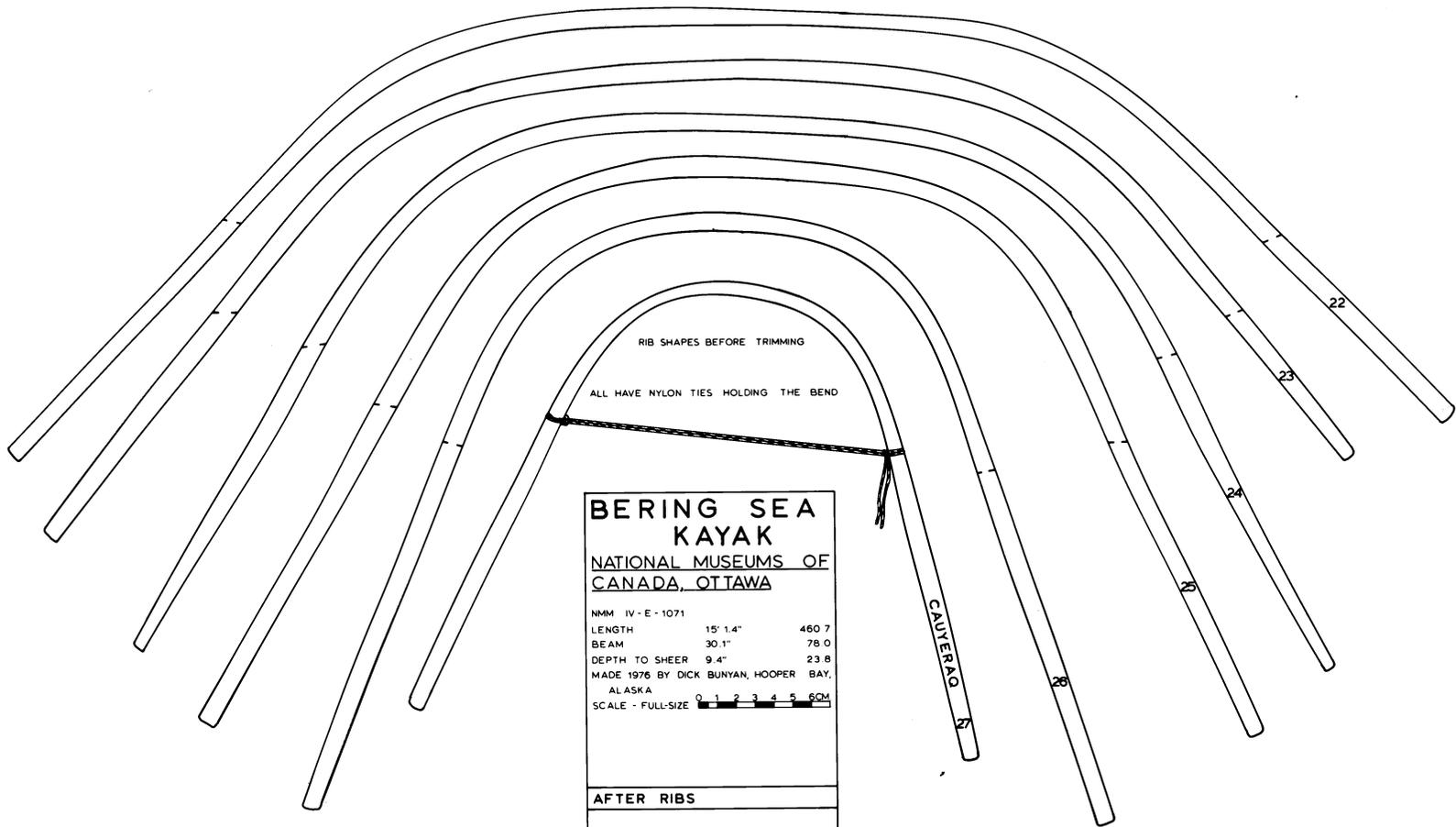
**BERING SEA
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NATIONAL MUSEUMS OF
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NMM IV - E-1071
LENGTH 15' 14" 460.7
BEAM 30 1/2" 78.0
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ALASKA
SCALE - FULL-SIZE 

FORWARD RIBS & RIB AND DECK
BEAM LOCATIONS

SHEET 5 OF 7

DAVID W. ZIMMERLY 1977



RIB SHAPES BEFORE TRIMMING

ALL HAVE NYLON TIES HOLDING THE BEND

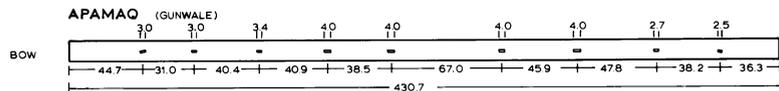
**BERING SEA
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NMM IV - E - 1071
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 ALASKA
 SCALE - FULL-SIZE 

AFTER RIBS

SHEET 6 OF 7

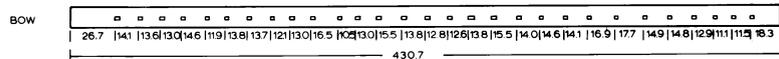
DAVID W. ZIMMERLY 1977



DECK BEAM LOCATIONS

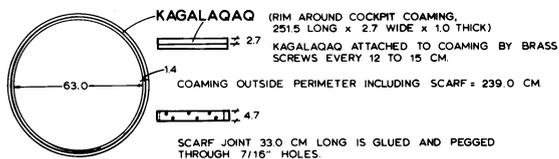
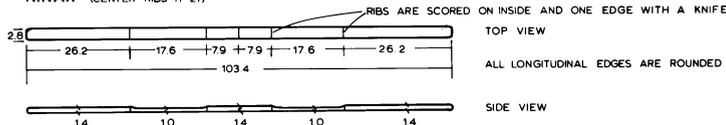
APAMAQ

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.

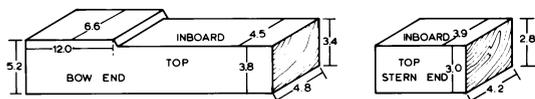


RIB LOCATIONS

NINAK (CENTER RIBS 11-21)



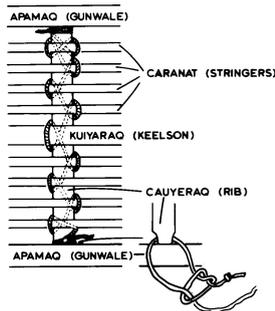
PAINGA (COCKPIT COAMING)



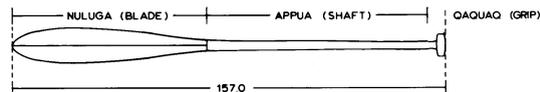
APAMAQ (PORT GUNWALE)

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

NAMUK (RIB/STRINGER TIE)



ANGUARUN (SINGLE-BLADED PADDLE)

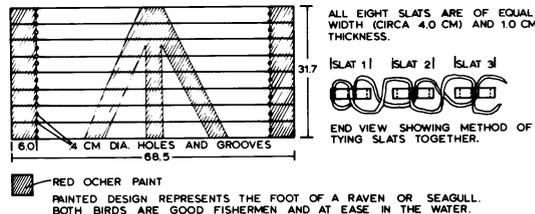


BLADE IS RIDGED ON BOTH SIDES. BLADE CROSS SECTION IS CONCAVE FROM BLUE TO BLADE EDGE. SHAFT HAS ROUND CROSS SECTION. BLADE IS PAINTED BLUE WITH SHAFT AND GRIP GREEN, BLACK BLADE AND NATURAL SHAFT AND GRIP IS COMMON. SHAFT IS MORTISED INTO ROUND HOLE IN GRIP. BLADE IS 6 CM THICK .5 CM FROM EDGE. CORRECT 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	95	115	150	155	
1/2 BREADTHS	1.0	1.8	2.0	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5.0	5.3	5.6	5.9	6.2	6.5	6.8	7.1	7.4	7.7
THICKNESS	1.7	1.8	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9

AQUMAGAUTAQ (WOODEN SLAT KAYAK SEAT)



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NOTE: ALL MEASUREMENTS IN CENTIMETERS

TABLE OF OFFSETS

OFFSETS - CENTIMETERS TO OUTSIDE OF SKIN		STEM	25	50	100	150	200	250	300	350	400	425	450
HEIGHTS ABOVE BASELINE	DECK RIDGE	23.8	44.4	43.8	47.7	48.3	48.9	51.4	48.6	43.6	40.6	38.6	35.3
	SHEER	28.8	28.6	29.3	30.1	30.1	29.0	27.5	28.3	23.4	22.7	22.8	
	STRINGER 4		20.3	118.4	117.4	117.0	117.0	15.4	13.8	12.0	12.6		
	STRINGER 3		17.8	114.2	112.2	111.5	111.4	9.8	8.6	8.9	10.1		
	STRINGER 2		14.7	110.9	8.8	7.8	7.2	6.1	5.7	6.1	5.5		
HALF BREADTHS	STRINGER 1		13.8	10.3	8.0	7.2	6.7	5.8	5.2	4.8	4.7	5.3	
	KEELSON		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
	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
	SHEER		4.2	1.4	0.5	0.3	0.3	1.35	4.28	1.15	5.8	7.8	1.0
	STRINGER 4		8	4.19	0.26	0.29	0.28	0.27	0.29	0.12	5.6	4	
STRINGER 3		7	4.15	1.21	0.24	0.24	2.21	8.17	9.10	4	5.7		
STRINGER 2		5	8.11	4.14	1.15	0.15	0.17	0.11	0.17	2.4	4.8		
STRINGER 1		3	8.1	3.5	1.7	1.8	1.8	1.7	1.4	1.8	4.1	3.9	
KEELSON		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	

MISCELLANEOUS CONSTRUCTION DETAILS

SHEET 7 OF 7
DAVID W. ZIMMERLY 1977