

BANDEIRANTE

EMBRAER BANDEIRANTE (EMB 110)

Accessories Required For Smokejumping:

Primary Vertical Anchor: MEDC-732- Vertical Anchor Cable for  
Bandeirante\*

\*An identical anchor to MTDC-732 can be provided as an Embraer factory installation. This anchor is shown on Embraer drawing 110K1-948-11-05 (6 sheets, No Rev.)

STC Strength: 2,000 pounds  
STC #: SA1577NM

Secondary Horizontal Anchor: The approved anchor is an Embraer design that is available as an Embraer factory option. This anchor is shown on Embraer drawings:

Sheet 1 of 3, 110K1-948-10 Rev.N

Sheet 2 of 3, 110K1-948-10 Rev.N

Sheet 3 of 3, 110K1-948-10 Rev.L

Strength: 750 pounds

STC #: NA (Factory Installation)

Floor Platform & Handrails,  
Jump Step & Attachment:

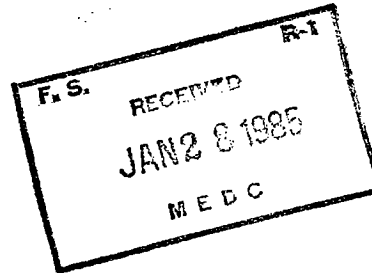
MEDC-739- Floor, Platform & Smokejumper Step  
& Bracket for Bandeirante Aircraft

← EMBRAER AIRCRAFT CORPORATION

22 January 1985

018/TA/84-MH

U.S. Forest Service  
Equipment Development Center  
Building 1  
Fort Missoula  
Missoula, Montana 59801



Attn: Dave Pearce

Dear Mr. Pearce,

Please find enclosed nine (9) sets of blueprints, pertaining to modification of Embraer EMB 110 aircraft, to a smokejump configured aircraft.

Blueprints are numerically identified as follow:

1 of 3 Sistema para salto de paraquedistas	110K1-948-10 Rev.N
2 of 3 Sistema para salto de paraquedistas	110K1-948-10 Rev.N
3 of 3 Sistema para salto de paraquedistas	110K1-948-10 Rev.L
1 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.
2 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.
3 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.
4 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.
5 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.
6 of 6 Cabo Vertical Installation	110K1-948-11-05 No Rev.

Please inspect drawings for accuracy and content. Your comments regarding drawings would be appreciated.

If you have any further questions, do not hesitate to contact me at your convenience.

Sincerely,

*Mike Hamilton*

Mike Hamilton  
Technical Representative

MH/sl.  
Encl.

United States of America  
Department of Transportation — Federal Aviation Administration  
**Supplemental Type Certificate**

*Number* SA1577NM

*This certificate, issued to* United States Forest Service  
Building #1 - Fort Missoula  
Missoula, Montana 59801

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.* Also, see Type Certificate Data Sheet for additional certification basis.

*Original Product — Type Certificate Number:* A2150

*Make:* Empresa Brasileira de Aeronautica S.A.

*Model:* Embraer Bandeirante EMP-110P1 and EMP-110P2

*Description of Type Design Change:*

Installation of static-line anchor-cable in accordance with FAA sealed Drawing No. MEDC-732 dated July 1983, FAA approved March 16, 1984 or subsequent approved revisions.

*Limitations and Conditions:*

This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any other previously approved modification will introduce no adverse effect upon the airworthiness of the aircraft.

*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.*

*Date of application:* July 5, 1983

*Date issued:*

*Date of issuance:* March 16, 1984

*Date amended:*



*By direction of the Administrator*

*Woodford R. Boyce*

Woodford R. Boyce, (Signature) Manager  
Denver Aircraft Certification Office  
Northwest Mountain Region, Aurora, Colorado  
(Title)

*Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.*

*This certificate may be transferred in accordance with FAR 21.47.*



U.S. Department  
of Transportation  
Federal Aviation  
Administration

NORTHWEST MOUNTAIN REGION  
Denver Aircraft Certification Office  
10455 East 25th Avenue - Suite 307  
Aurora, Colorado 80010  
(303) 340-5575 or 5578

March 23, 1984

Mr. Lee I. Northcutt, Director  
Missoula Equipment Development Center, USFS  
Building #1 - Fort Missoula  
Missoula, Montana 59801

Dear Mr. Northcutt:

Project No. A976NMD-S

Act						
Info	✓					
RECEIVED						
MAR 23 1984						
USFS - MEDC						
Files	✓	Files	✓	A.O.	ADJ. ENGINEER	Director
Files	✓	Files	✓	ADJ. ASST.	ADJ. ASST.	ADJ. ASST.

*Handwritten notes: "Northcutt" on the left side of the stamp. A checkmark is present in the 'Info' column. There are also checkmarks in the 'Files' columns.*

We have received and reviewed your drawings received by us on January 18 and March 15.

With these data and the conformity inspection and test results of August 17, 1983, performed in Fairbanks, Alaska; you have satisfactorily demonstrated compliance with the applicable certification regulations. Accordingly, we have enclosed Supplemental Type Certificate SA1577NM, installing static-line vertical anchor cable in the Embraer Bandeirante EMP-110P1 and EMP-110P2, and a Federal Aviation Administration sealed copy of Sheet #1 of your top drawing.

This STC is official FAA approval of your installation and may be used to authorize identical installations on other aircraft of the same model, subject to the limitations noted on the certificate. It may be transferred or otherwise made available to another party by means of a licensee arrangement in accordance with Federal Aviation Regulations (FAR) 21.47. You are requested to advise this office within 30 days after the transfer when you transfer or grant licensee rights to the STC in order that we may take the necessary recording or reissuance action.

As recipient of this approval, except as provided in FAR 21.3(d), you are required to report any failure, malfunction, or defect in any product or part manufactured by you that you have determined has resulted or could result in any of the occurrences listed in FAR Part 21.3(c). The report should be communicated initially by telephone to the Manager, Denver Aircraft Certification Office, telephone number (303) 340-5575, within 24 hours after it has been determined that the failure has occurred. In addition, written notification to the Manager, ANM-1700, at the above address is required. FAA Form 8330-2 (Malfunction or Defect Report) or any other appropriate format is acceptable in transmitting the required details.



Edward Warren: First American Aloft

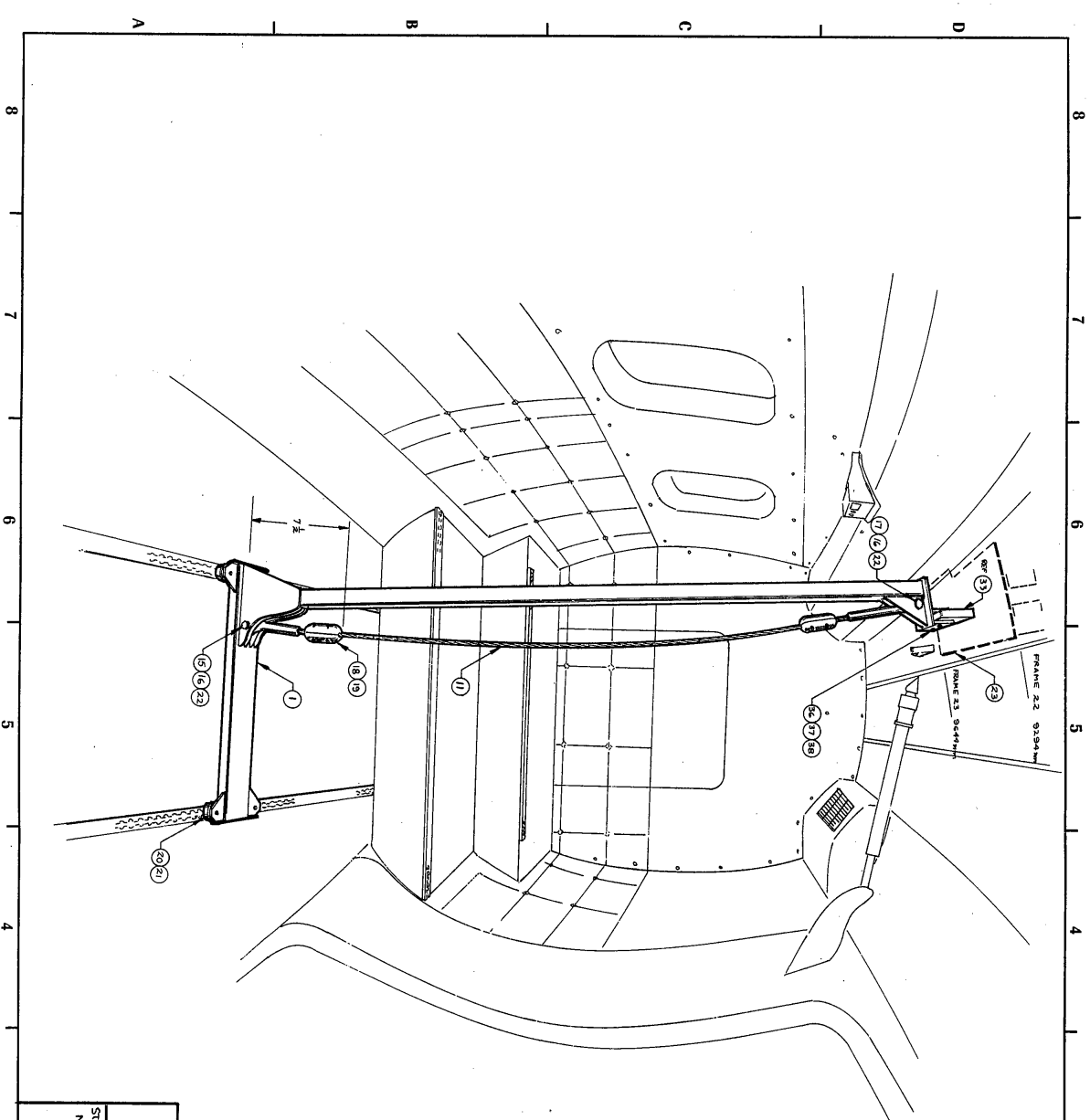
If you plan to manufacture replacement or modification parts for sale in conformance with approved data listed on the Certificate, you are required to comply with FAR 21.303. A Parts Manufacturer Approval (PMA) may be issued under the provisions of FAR 21.303(d) when you submit a statement certifying that you have established a fabrication inspection system as required by FAR 21.303(h). The identification requirements for parts produced under a PMA are in FAR 45.15. Your statement may be in letter form, with a reference to the STC number, and should be addressed to: Federal Aviation Administration, Denver Aircraft Certification Office, 10455 E. 25th Avenue, Suite 307, Aurora, Colorado 80012.

Sincerely,



Woodford R. Boyce  
Manager, Denver Aircraft  
Certification Office

Enclosures



**2**

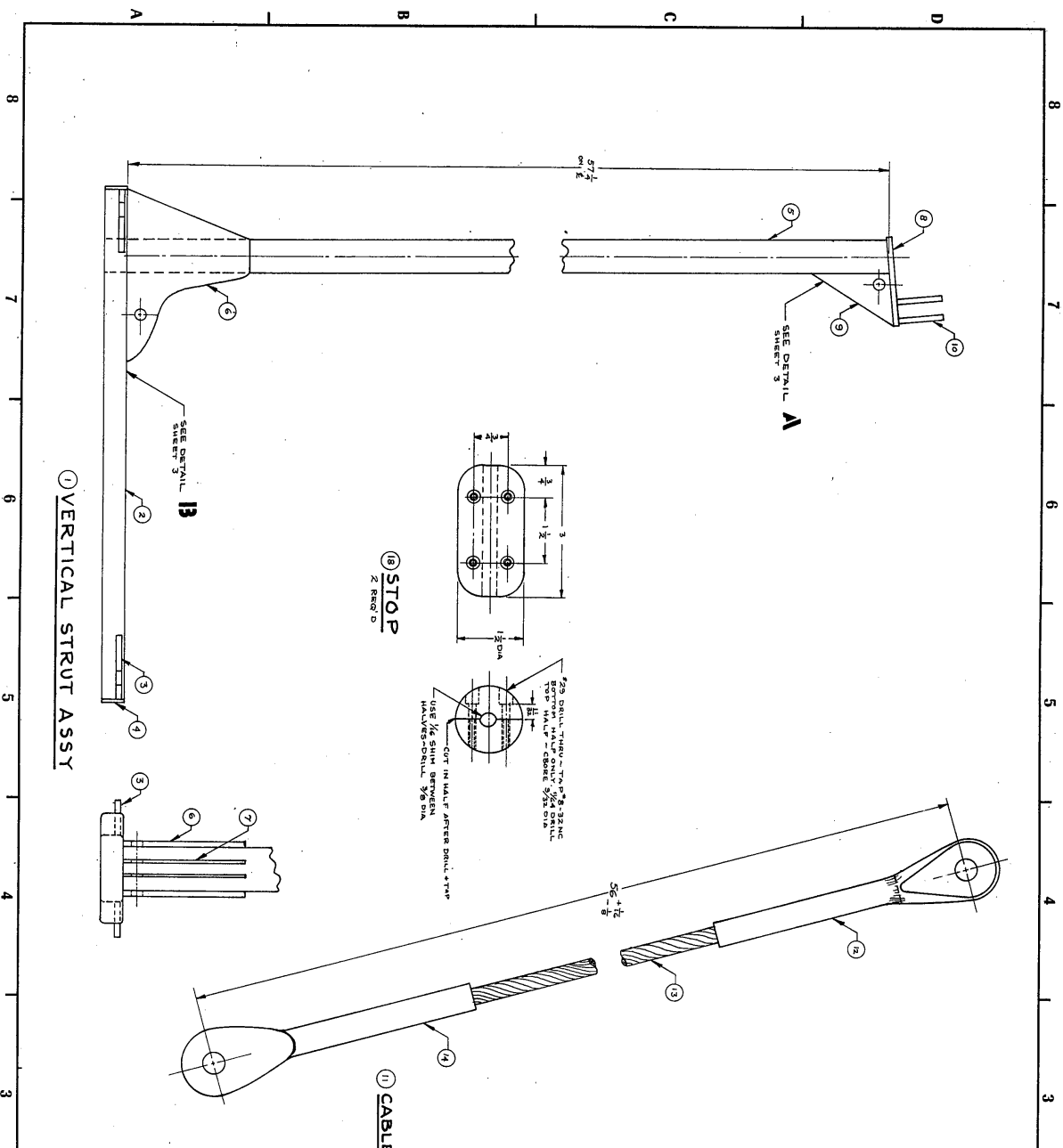
**MATERIALS LIST**

NO	PART NAME	QTY	MATERIAL-DESCRIPTION	SHEET
				KEY
1	VERTICAL ANCHOR CABLE	1	FRANCIS R-10	2
2	WASHER	2	AN-10	2
3	WASHER	2	AN-17	2
4	STOP	2	PART 18 3/4" STOP TO CABLE	2
5	STOP	2	PART 18 3/4" STOP TO CABLE	2
6	DOUBLE STOP	4	ASSEMBLY 8 BALLS	2
7	WASHER	4	FLAT WASHER 1 3/8" OD X 1/16" THICK	2
8	STOP	2	PART 18 3/4" STOP TO CABLE	2
9	STOP	2	PART 18 3/4" STOP TO CABLE	2
10	NUT	2	AN-10	2
11	NUT	2	AN-17	2
12	PIN	2	MS34465-103	2

- NOTES:**
- 1 ALL UNLESS SHOWN OTHERWISE WITH PER PROVISIONS 84 AC 43.13-1A & 2A LATEST REVISION CHAPTER 2, SECTION 2. WELD TO BE MADE AS PER AMERICAN STANDARD WELDING CODE AND UNDER THE SUPERVISION OF FAA CERTIFIED AIRCRAFT MECHANIC.
  - 2 THE CABLE AND ENDS ARE TO BE SWAGED IN ACCORDANCE CHAPTER 4, SECTION 1, PARAGRAPHS 1-12 LATEST REVISION.
  - 3 POSITION VERTICAL CABLE ASSY TO ALLOW OPENING THE IN-FLIGHT DOOR ALSO THE STRAP LINE ROVER ON THE ROVER AND CONTACT SHALL BE PART OF THE IN-FLIGHT DOOR OPENING. THEN DOOR HALLS IN A NEW (PART 33) TO MATCH VERTICAL STOP ASSY FOR DOOR (PART 33).
  - 4 BELT'S PARTS 15, 17 AND 18 SHALL NOT BE SUBSTITUTED UNLESS THEY ARE APPROVED BY THE DESIGNER. THE BELT'S PARTS MUST NOT BE COMPROMISED.
  - 5 LOCATE TOP STOP TO ACCOMMODATE OPERATIONAL CONSIDERATIONS.
  - 6 THE VERTICAL STRAP ASSY SHALL BE PAINTED AND PRIMED.

This is a **REDUCED PRINT**. Full size print available upon request.

U.S. DEPT. OF AGRICULTURE FOREST SERVICE EQUIPMENT DEVELOPMENT CENTER MISSOULA, MONTANA	
TITLE <b>VERTICAL ANCHOR CABLE FOR BANDERANTE</b>	SHEET <b>1</b> OF <b>5</b> MEDC-732
DATE <b>JULY 1983</b>	DATE <b>JULY 1983</b>
SCALE <b>NONE</b>	SCALE <b>NONE</b>
APPROVED 	APPROVED 
DESIGNED <b>TJRS</b>	DESIGNED <b>TJRS</b>
CHECKED <b>TJRS</b>	CHECKED <b>TJRS</b>
DRAWN <b>LKSL</b>	DRAWN <b>LKSL</b>
REVISIONS NONE	REVISIONS NONE
PROJECT NO. <b>SA1577M</b> MARCH 16, 1984 200016	PROJECT NO. <b>SA1577M</b> MARCH 16, 1984 200016



**2 MATERIALS LIST**

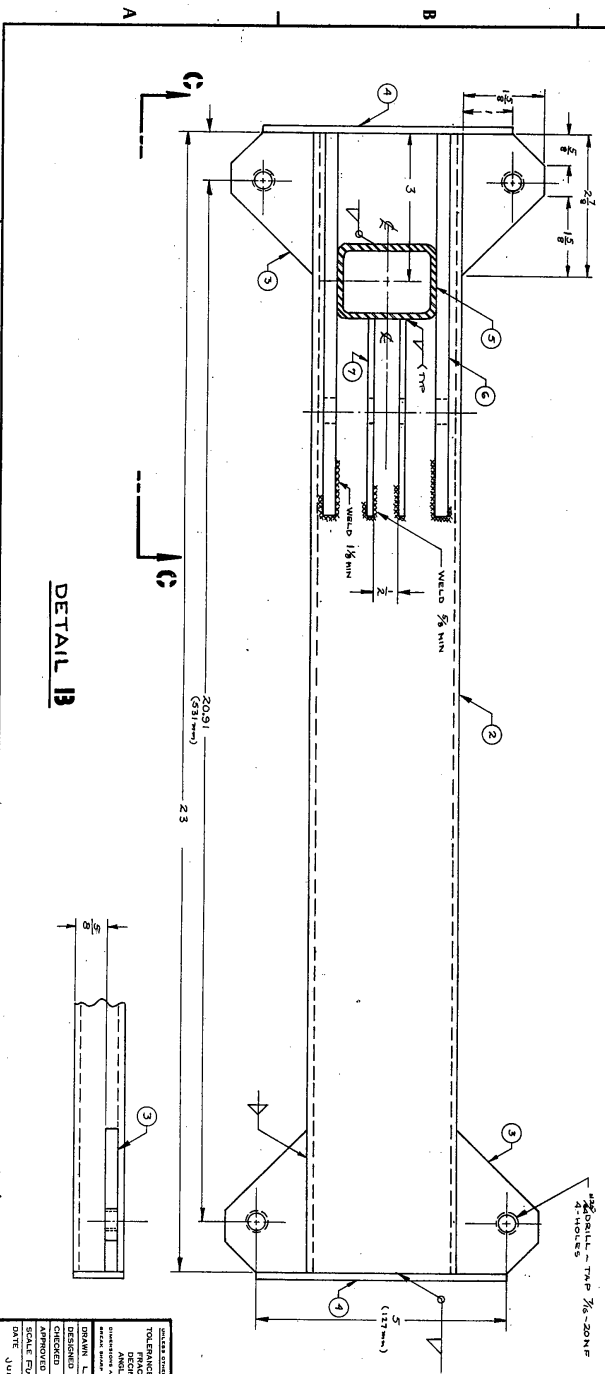
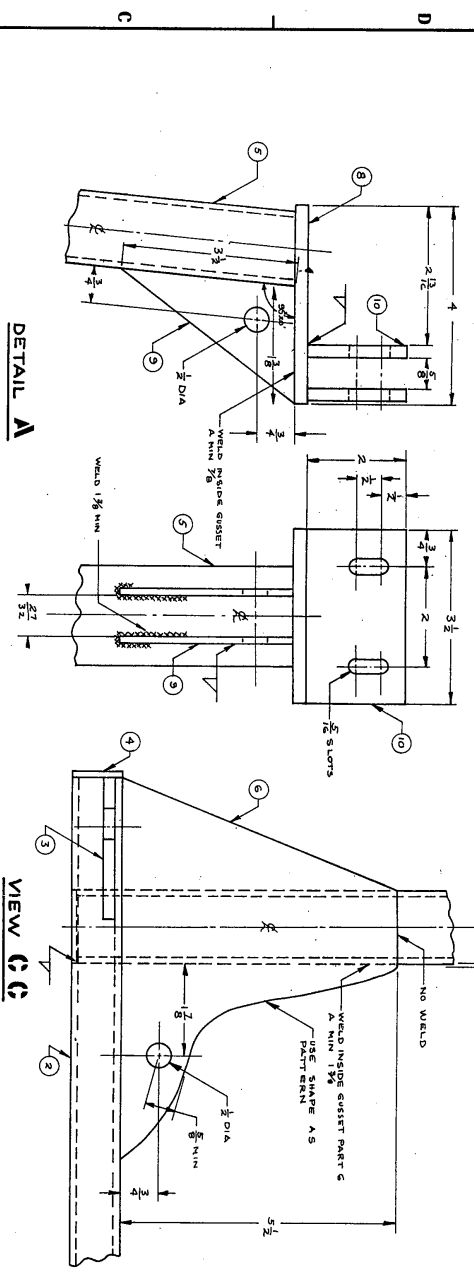
NO	PART NAME	REQD	MATERIAL DESCRIPTION	SHEET
1	VERTICAL ANCHOR CABLE	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
2	STOP	2	1/2" DIA. X 1/4" THICK 3041 T16 ALUM. ROUND	
3	NUT	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
4	WASHER	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
5	VERTICAL STRUT	1	1/2" THICK 1020 STEEL STRIP	
6	PLATE	2	1/2" THICK 1020 STEEL STRIP	
7	PLATE	2	1/2" THICK 1020 STEEL STRIP	
8	TOP PLATE	1	1/2" THICK 1020 STEEL STRIP	
9	CLIP	2	1/2" THICK 1020 STEEL STRIP	
10	TOP PLATE	2	1/2" THICK 1020 STEEL STRIP	
11	CABLE ASSY	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
12	CABLE END	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
13	STOP	2	1/2" DIA. X 1/4" THICK 3041 T16 ALUM. ROUND	
14	NUT	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
15	WASHER	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
16	NUT	1	1/2" DIA. 7710 ALUMINUM CABLE GALV. ANCHORED	
17	PLATE	1	1/2" THICK 1020 STEEL STRIP	
18	STOP	2	1/2" DIA. X 1/4" THICK 3041 T16 ALUM. ROUND	

This is a REPRODUCTION. Full size print available upon request.

U.S. DEPT. OF AGRICULTURE FOREST SERVICE FOREST LABORATORY MISSOURI, MISSOURI	TITLE <b>VERTICAL ANCHOR CABLE FOR BANDEIRANTE</b>
DATE JULY 1953	SHEET <b>2 OF 6</b>
MED-C-732	



MATERIALS LIST		1
NO.	PART NAME	SHEET
1000	MATERIAL-DESCRIPTION	

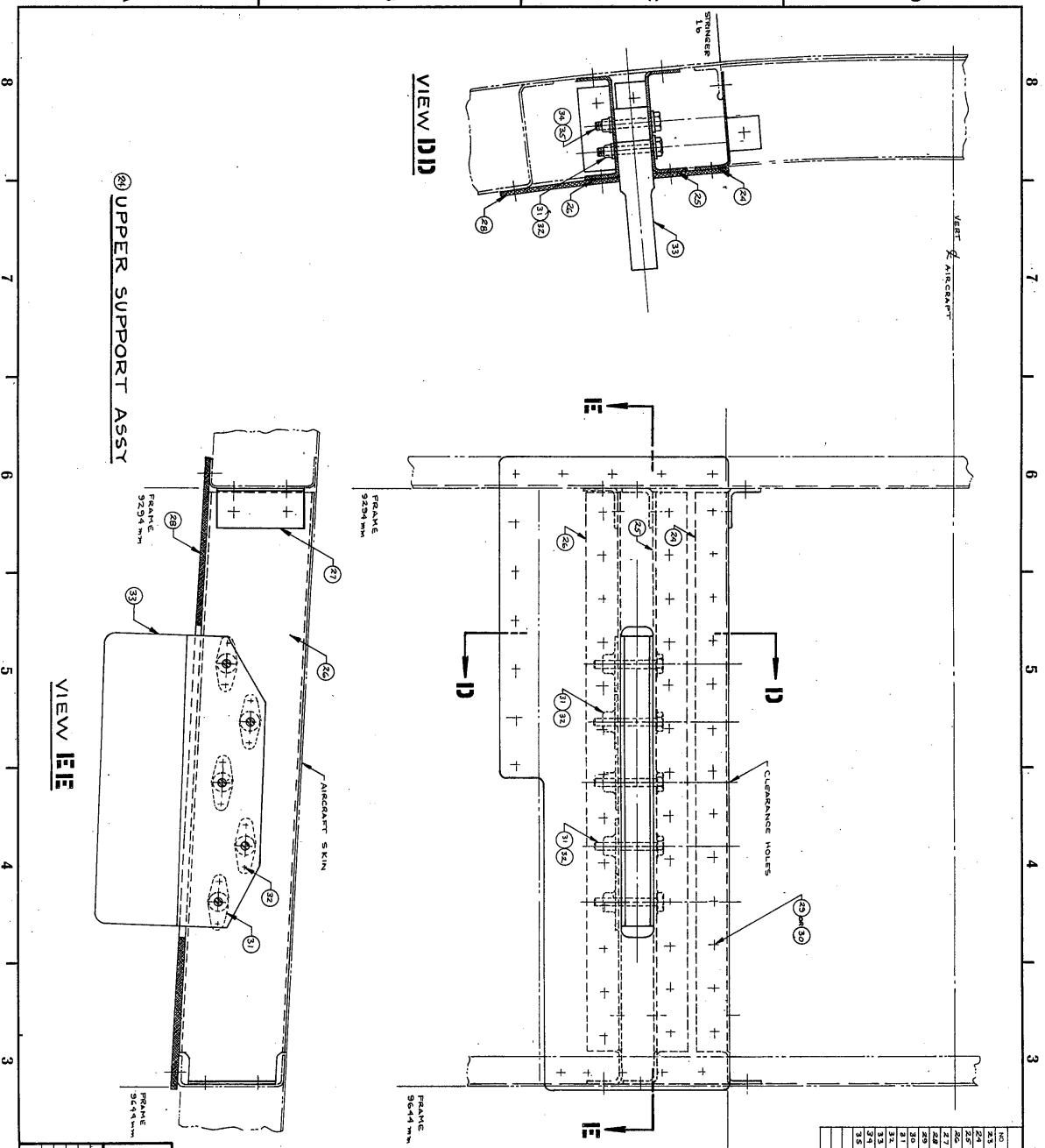


*This is a reduced print, full size print available upon request.*

DESIGNED	DATE	REVISION	BY
FRANCIS J. WILSON			
CHECKED			
APPROVED			
DATE	JULY 1953		
SHEET 3 OF 5		MEDC-732	

U.S. DEPT. OF AGRICULTURE  
FOREST SERVICE  
EQUIPMENT DESIGN CENTER  
MISOULA, MONTANA

TITLE  
**VERTICAL ANCHOR CABLE  
FOR BANDERANTE**



**MATERIALS LIST**

NO	PART NAME	QTY	UNIT	DESCRIPTION	SHEET
23	UPPER SUPPORT	1	PART 24-35		1
24	CHANNEL A	1	PART 24		2
25	CHANNEL B	1	PART 25		2
26	CHANNEL C	1	PART 26		2
27	ANGLE DOUBLE	3	PART 27		2
28	PLATE	1	PART 28		2
29	RIVET	10	PART 29		2
30	RIVET	10	PART 30		2
31	ANGLE	1	PART 31		2
32	ANGLE	1	PART 32		2
33	ANGLE	1	PART 33		2
34	SOLE	5	PART 34		2
35	WASHER	5	PART 35		2

*This is a RECOGNIZED print, all size print available upon request.*

DATE	REVISION	BY
JULY 1983		

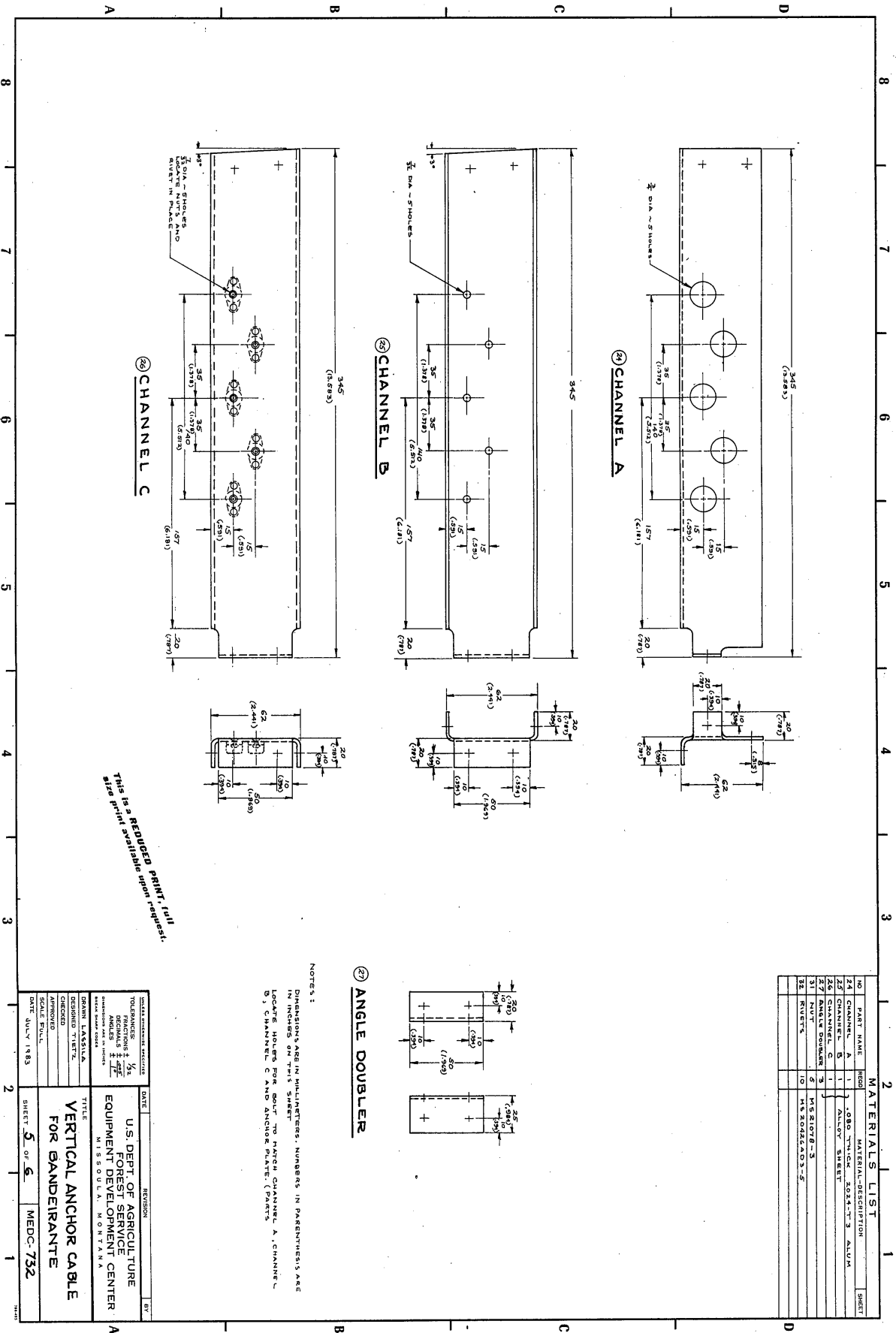
TOLERANCE: DIMENSIONS  $\pm$  .005  
 DECIMALS  $\frac{1}{32}$   
 UNLESS OTHERWISE SPECIFIED  
 DRAWN: LASSILA  
 CHECKED: TIERZ  
 DESIGNED: TIERZ  
 TITLE: VERTICAL ANCHOR CABLE FOR BANDEIRANTE  
 SHEET 4 OF 6 MEDC-732

UPPER SUPPORT ASSY

VIEW DDE

VIEW DDD

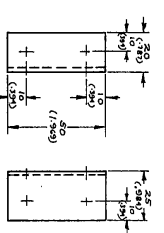
A B C D 8 7 6 5 4 3 2 1



**2**

**MATERIALS LIST**

NO	PART NAME	REQD	MATERIAL-DESCRIPTION	SHEET
24	CHANNEL A	1	ALUM	1
25	CHANNEL B	1	ALUM SHEET	1
26	CHANNEL C	1	ALUM SHEET	1
27	ANCHOR PLATE	6	MS1018-3	1
28	NUT	6	MS1018-3	1
29	RIEVTS	10	MS 2024AD3-5	1



**NOTES:**  
 DIMENSIONS ARE IN MILLIMETERS. NUMBERS IN PARENTHESES ARE IN INCHES ON THIS SHEET.  
 LOCATE HOLES FOR GOLF TO MATCH CHANNEL A, CHANNEL B, CHANNEL C AND ANCHOR PLATE (PARTS).

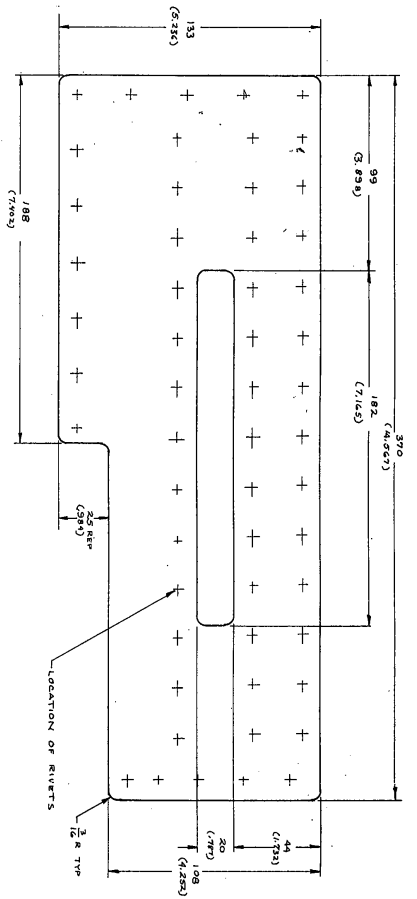
This is a **REDUCED PRINT**. Full size print available upon request.

DATE	REVISION
DATE: JULY 1983	REVISION: 1

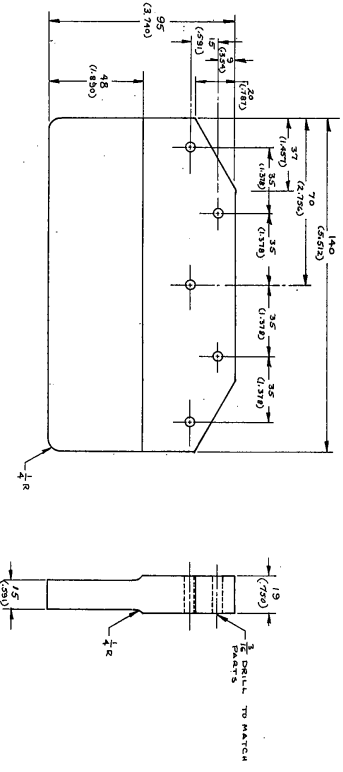
TITLE: **VERTICAL ANCHOR CABLE FOR BANDERANTE**  
 SHEET: **5** OF **6** MEDC-732

U.S. DEPT. OF AGRICULTURE  
 FOREST SERVICE  
 EQUIPMENT DEVELOPMENT CENTER  
 MISSOULA, MONTANA

NO	PART NAME	QTY	MATERIAL DESCRIPTION	SHEET
28	PLATE	1	0.25 THICK 7057-T6 ALUM ALLOY PLATE	
29	ANCHOR	1	3/4" DIA. 7057-T6 ALUM ALLOY PARTS	



28 PLATE

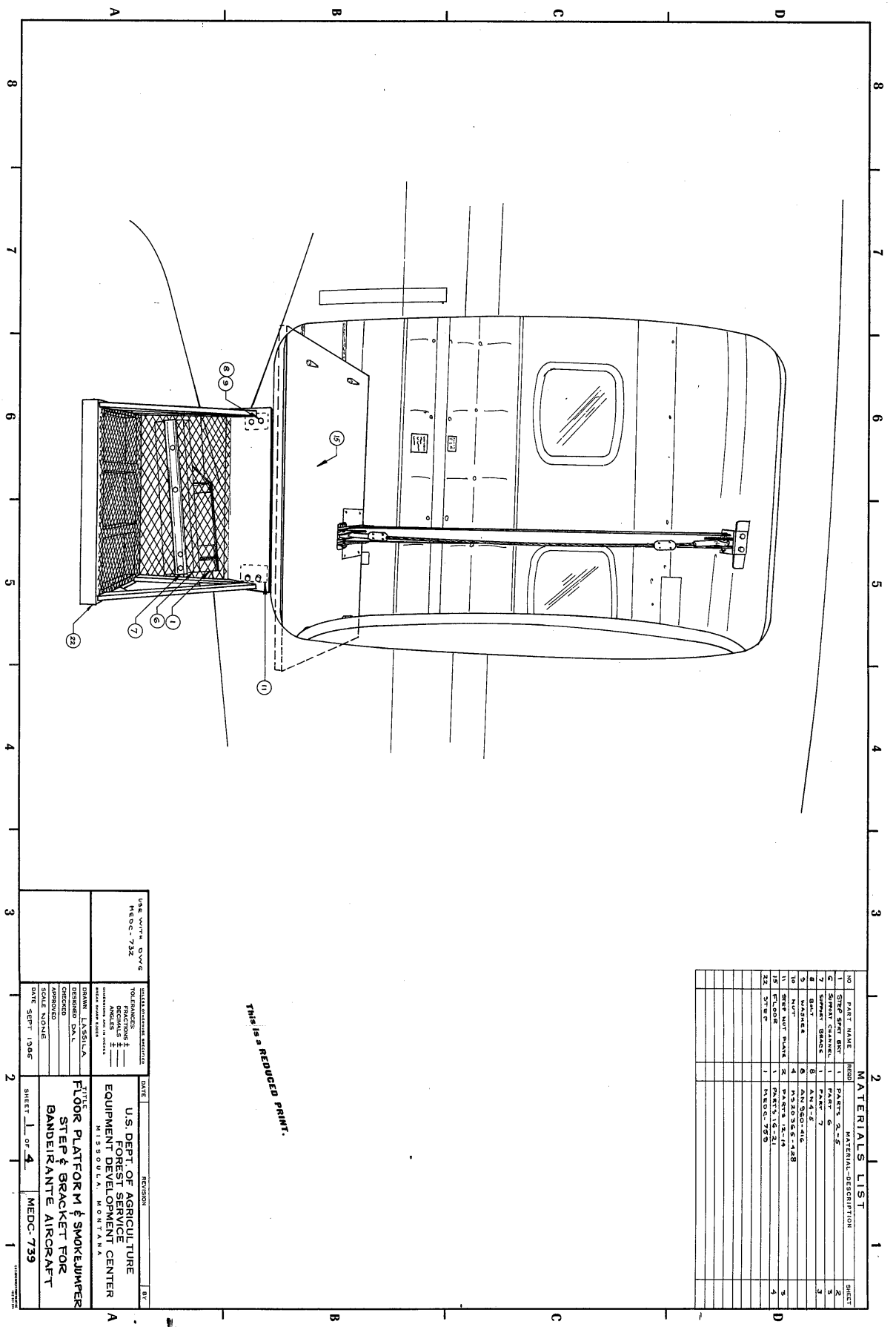


29 ANCHOR

This is a REDUCED PRINT. If all size print available upon request.

NOTES:  
DIMENSIONS ARE IN MILLIMETERS AND IN INCHES. NUMBERS IN PARENTHESES ARE IN INCHES. THIS SHEET.

DESIGNED BY	DATE	REVISION	BY
BRUNI LASKILA			
CHECKED			
APPROVED			
SCALE FULL			
DATE	JULY 1983		
TITLE		U.S. DEPT. OF AGRICULTURE FOREST SERVICE EQUIPMENT DEVELOPMENT CENTER MISSOULA, MONTANA	
VERTICAL ANCHOR CABLE FOR BANDERANTE		MEDC-732	
SHEET 5 OF 5			



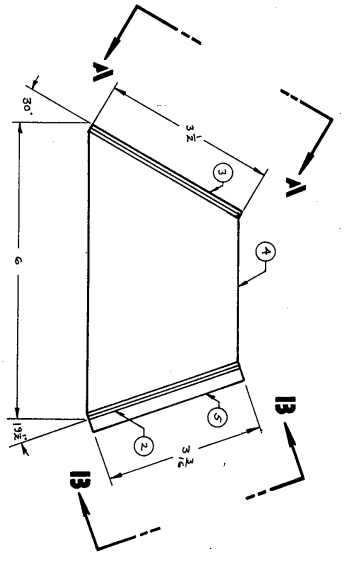
**2 MATERIALS LIST 1**

NO	PART NAME	QTY	MATERIAL-DESCRIPTION	SHEET
1	STEP SWIVEL BRKT	1	PARTS 2-5	2
2	SMOKE CHIMNEL	1	PARTS 6	3
3	BRKT	1	PARTS 7	3
4	WHEELS	4	AN ISO-416	3
5	WHEELS	4	AN ISO-416	3
6	WHEELS	4	AN ISO-416	3
7	WHEELS	4	AN ISO-416	3
8	WHEELS	4	AN ISO-416	3
9	WHEELS	4	AN ISO-416	3
10	WHEELS	4	AN ISO-416	3
11	WHEELS	4	AN ISO-416	3
12	WHEELS	4	AN ISO-416	3
13	WHEELS	4	AN ISO-416	3
14	WHEELS	4	AN ISO-416	3
15	WHEELS	4	AN ISO-416	3
16	WHEELS	4	AN ISO-416	3
17	WHEELS	4	AN ISO-416	3
18	WHEELS	4	AN ISO-416	3
19	WHEELS	4	AN ISO-416	3
20	WHEELS	4	AN ISO-416	3
21	WHEELS	4	AN ISO-416	3
22	WHEELS	4	AN ISO-416	3

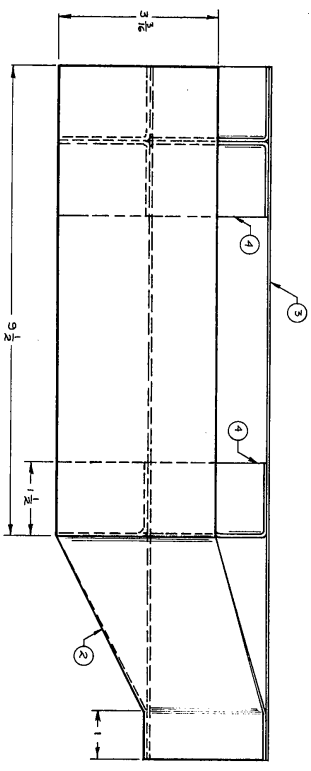
USE WITH DWG <b>MEDC-732</b>	TITLE: <b>FLOOR PLATFORM &amp; SMOKEJUMPER STEP &amp; BRACKET FOR BANDERANTE AIRCRAFT</b> DATE: <b>1 SEP 1967</b>	REVISION: <b>1</b> U.S. DEPT. OF AGRICULTURE FOREST SERVICE EQUIPMENT DEVELOPMENT CENTER WASHINGTON, D.C.
DRAWN: <b>L.S.SILVA</b> CHECKED: <b>DATE</b> APPROVED: <b>DATE</b> SCALE: <b>NONE</b> DATE SEPT 1967	SHEET <b>1</b> OF <b>4</b> <b>MEDC-739</b>	SHEET <b>1</b> OF <b>1</b>

*This is a REDUCED PRINT.*

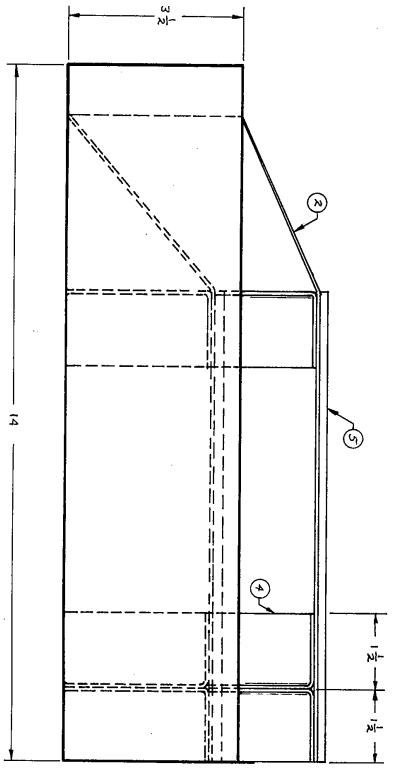
PART NAME		ROOM	MATERIAL-DESCRIPTION	SHEET
1	STEP BRACKET END	1	PARTS 2-5	
2	TOP	1	003 (CIGDA) WILD STEER SHEET	
3	SPOTON	1		
4	BRACKET	1		
5	PAD	1	4X1X3/4 LG RUBBER PAD 60-70-DURA	



① STEP SUPPORT BRACKET



VIEW 13 13

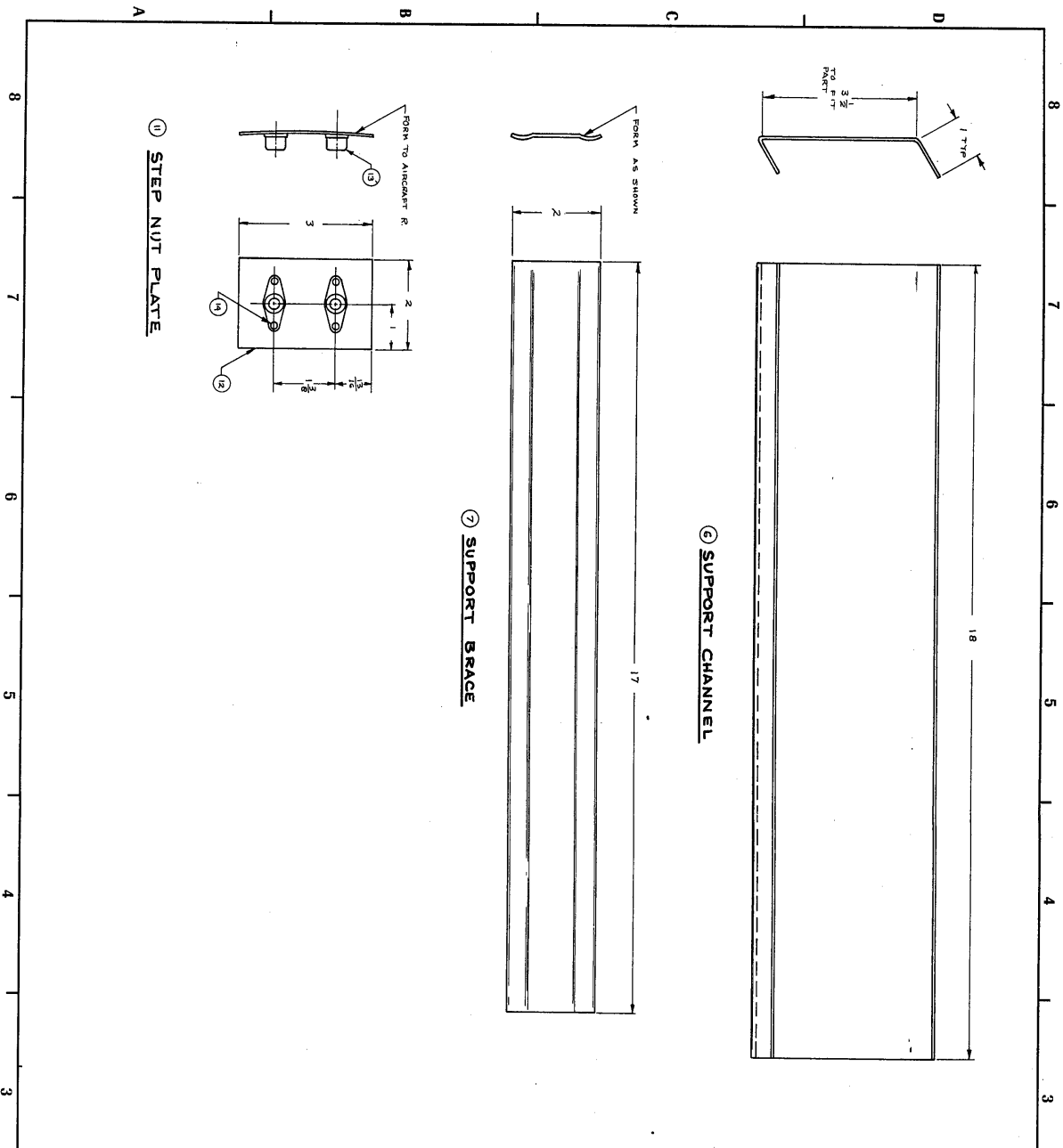


VIEW AA

This is a REDUCED PRINT.

DESIGN/DEVELOPER	DATE	REVISION	BY
TOLSON, L. PATRICK			
DEPARTMENT OF AGRICULTURE			
FOREST SERVICE			
EQUIPMENT DEVELOPMENT CENTER			
MISSOURI, KANSAS, MISSISSIPPI, MONTANA			
DESIGNED BY			
DRUM, L. ASHLEY			
CHECKED BY			
APPROVED			
SCALE FULL			
DATE SEPT-1985			

FLOOR PLATFORM & SMOKEJUMPER  
STEP & BRACKET FOR  
BANDEIRANTE AIRCRAFT  
SHEET 2 OF 4 MEDC-739



⑧ STEP NUT PLATE

⑦ SUPPORT BRACE

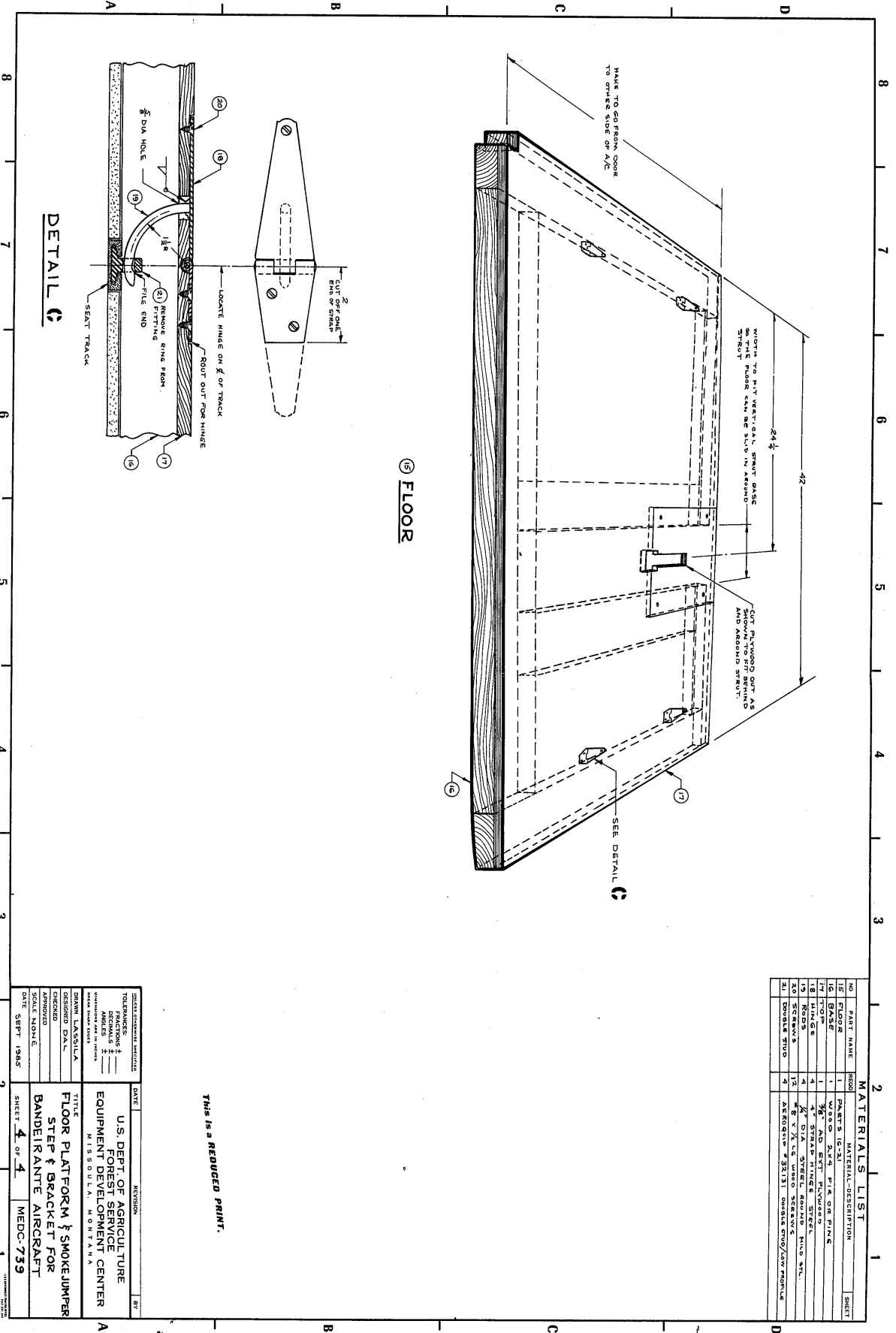
⑥ SUPPORT CHANNEL

**2**

MATERIALS LIST	
NO	PART NAME
1	0.083 THICK 6061-T4 ALUM ALLOY SHEET
2	0.083 THICK 6061-T4 ALUM ALLOY SHEET
3	0.083 THICK 6061-T4 ALUM ALLOY SHEET
4	0.083 THICK 6061-T4 ALUM ALLOY SHEET
5	0.083 THICK 6061-T4 ALUM ALLOY SHEET

This is a reduced print.

DESIGNER: CASSEL, A		DATE: 1	REGION: 1
CHECKED: DAN, S		BY: 1	
APPROVED: SCALE FULL		SHEET: 3 OF 4	
DATE: SEPT 1985			
TITLE: FLOOR PLATFORM & SMOKEJUMPER STEP & BRACKET FOR BANDEIRANTE AIRCRAFT			
PROJECT: U.S. DEPT. OF AGRICULTURE FOREST SERVICE EQUIPMENT DEVELOPMENT CENTER			
DRAWING NO: 8153 01 00 00 00 00 00			
DESIGN: 1/16			
FRACTIONS & DECIMALS: 1/16			
SCALE: 1/16			
UNITS: INCHES			
STANDARD: ASSTG 6			
SYMBOLS: 1/16			
DIMENSIONS: 1/16			
MATERIALS: 1/16			



**5 FLOOR**

**DETAIL C**

8 7 6 5 4 3

**MATERIALS LIST**

NO	PART NAME	QTY	UNIT	MATERIAL-DESCRIPTION
1E	FLOOR	1	FACTS 1E-21	PLYWOOD 3/4" THICK
1F	ROD	1	2x4	PIR OR PINE
1G	HINGE	4		4" STEEL HINGE STEEL
1H	RODS	4		5/8" DIA STEEL ROUND RUD W/L
1I	SCREWS	12		2 1/2" X 1/8" WOOD SCREWS
2J	SCREW STUD	4		1/2" DIA STEEL STUD/LOW PROFILE

*This is a REDUCED PRINT.*

DESIGNED BY DAVID LASSIOLA	CHECKED BY DAVID LASSIOLA	DATE SEPT 1965	SCALE NONE
TITLE FLOOR PLATFORM & SMOKE JUMPER STEP & BRACKET FOR BANDEIRANTE AIRCRAFT		PROJECT NO. MEDC-759	SHEET 4 OF 4