2.0 Erection and Disassembly Procedure

2.1 Transport Configuration

The system is packaged as shown in Drawing 8038-101002 for transportation over highways. The reflector is disassembled into individual panels and ribs and carried in the number 2 trailer.

The pedestal and tower, supported by contoured wooden blocks lies horizontally on the trailer. The structure is tied down to the trailer by means of ratchet type heavy duty load binders.

The trailer can be towed on highways at speeds up to 40 mph by a tandem axle tractor.

2.2 Preparing Equipment for Erection

(a) Tow trailer mounted antenna (Trailer No. 1) to its emplacement with the prime mover.

(b) Align and center trailer with respect to the ground pad location using trailer locater (see Figure 2.2.1) backing trailer slowly until the rear wheels of the trailer engage with the wheels chocks.

CAUTION: Check ground clearance before backing trailer

(c) Lower trailer landing gears and assembly rear stabilizing jacks

(d) Place the rear jack ground pads in position and raise the jacks so that the wheels of the trailer just clear the ground. Place the center jack pads in position and lower the jacks.

(e) Remove RF box tie down bolts and three azimuth bearing tie down blocks.

(f) With the prime mover, place Trailer No. 2 next to the Trailer No. 1

(g) Lower trailer landing gears and crane outriggers

(h) Connect the electric extension cable from the 220 volt power to the hydraulic power supply (located on the curb side under the trailer platform)

NOTES: (1) Be sure the crane outriggers are down before operating the crane

(2) Level trailer as much as is practical

(3) For operation of the trailer mounted crane see instruction manual section 3 of the procedure

(4) For easy unloading, Trailer No. 2 may be relocated during assembly of the antenna

(i) Remove all equipment tie downs from trailer.

(j) Unload and set-up scaffolds and service platform

2.3 Assembly of Equipment

(a) Rotate the RF box 90° from the trailer bed by operating the elevation manual drive as follows:

(1) Unlock (4) elevation manual stow locks (located on the yoke arms)

(2) Disengage the elevation brake as follows:

- Close brake line shut-off valve located on yoke base above the hand pump.
- Open manual brake control valve by turning the valve handle to the right and actuating the hydraulic hand pump until the brake cylinders are extended all the way out and release valve handle.

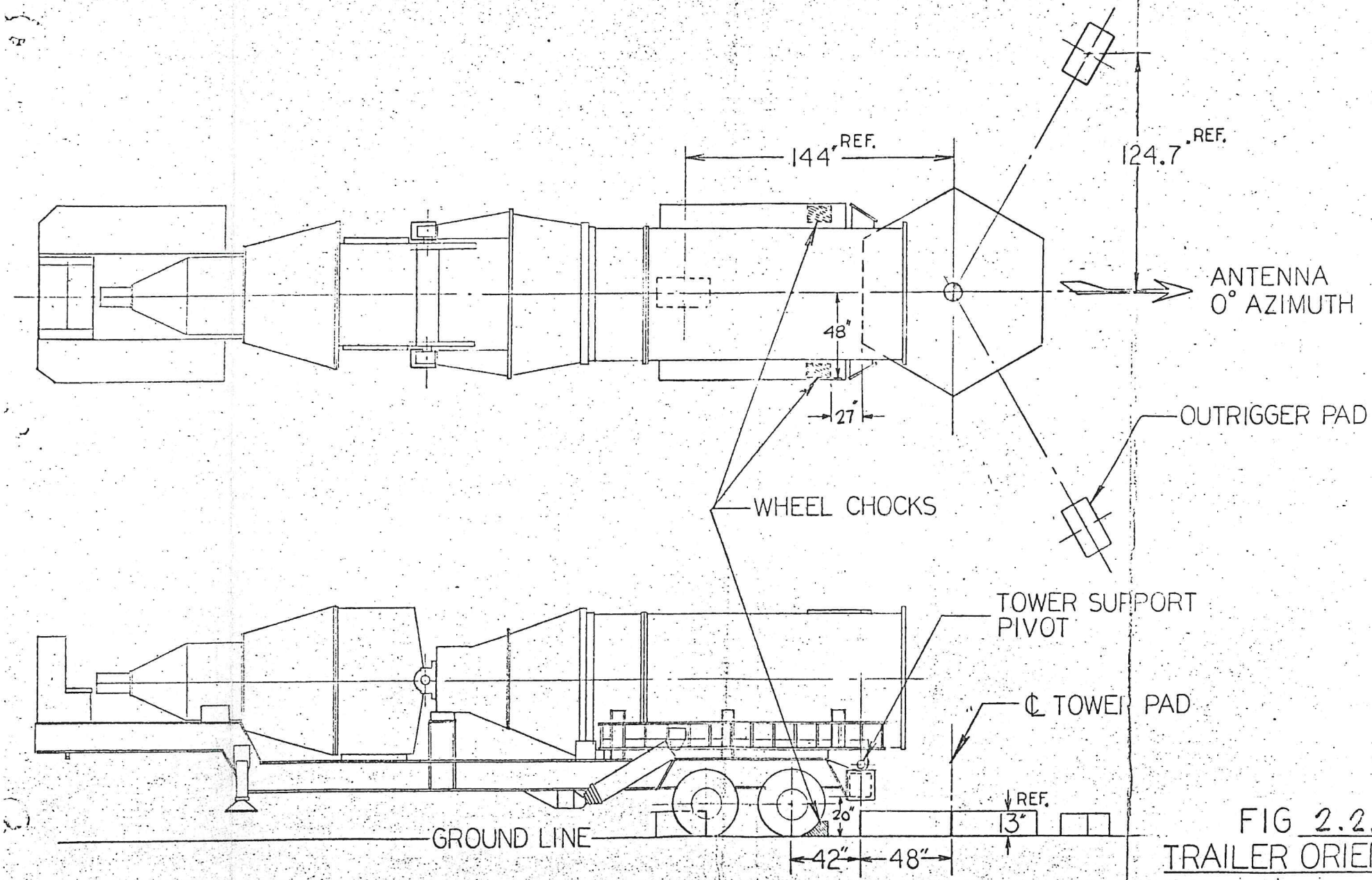


FIG 2.2.1
TRAILER ORIENTATION

(3) Open hydraulic motor hand cranking by-pass valves located on the motor manifold

(4) Turn on manual drive gear box motor switch until the R.F. box has rotated 90° and turn off motor switch.

(5) Close hand cranking by-pass valve

(6) Engage the elevation brakes by turning the manual brake control valve handle to the ~~lift~~ left and hold until the brake actuating cylinders are retracted all the way in.

(7) Open brake line shut-off valve.

(b) Assemble the transmitter package and support rack to the R.F. box

(c) Assemble the reflector structure as follows:

(1) Assemble rib (8038-103104) No. 1 to the hub structure upper fitting (Marked No. 1) with 3/4 - 16 x 1 3/4 bolt, Nut and washer, lower fitting with 1-14 x 1 57/64 bolt, nut and washer

(2) Assemble inner, upper, and lower tie rods (8038-103114) to rib No. 1 with 1/2 - 20 x 1 19/32 bolts, nuts and washers

(3) Assemble outer tie rod (8038-103114-21) to rib No. 1 with 1/2 - 2- x 1 19/32 bolt, nut and washers.

(4) Assemble rib No. 2 to reflector hub marked No. 2 with 3/4 and 1" bolts (same as Step No. 1)

(5) Assemble inner, upper, lower, and outer tie rods to rib No. 2 with 1/2 - 20 x 1 19/32 bolts, nuts and washers

(6) Assemble diagonal rod (8038-103114-11) between rib No. 1 and No. 2 with 1/2 - 20 x 1 19/32 bolts, nuts and washers.

(7) Repeat above procedure for all the ribs and the rods.

(8) Place center panel No. 1 on top of ribs between rib No. 1 and No. 6.

(9) Bolt panel with 5/16 - 24 x 1 11/32 bolts from bottom side of rib bracket up through bottom of panel. (do not tighten bolt at this time)

(10) Repeat above procedure for panel 2, 3, and 4 (make certain all panels are equally spaced)

(11) Insert 5/16 - 24 x 1 1/32 flatheat screws from face side of the panel to rib bracket and tighten all screws.

(12) Remove feed cone radome and shroud (Sylvania's equipment)

(13) Assemble optical service platform on ground and lift with crane ~~x~~ on to feed cone assembly.

(14) Lift subreflector for assembly (with the back-up support structure assembled) with crane into center of the reflector just above the feed cone.

(15) With the crane holding the subreflector above the feed cone, assemble (4) support ~~sturts~~ struts (8038-103203) to the ~~xx~~ subreflector support (8038-103202) with 1/4 - 28 x 1 9/32 bolts, nuts and washer

(16) Lift the complete subreflector assembly in place and bolt struts to the rib structure with 3/4 - 16 x 3 bolts, with nuts and washer

(17) Place outer panel No. 1 on top of ribs between rib No. 1 and No. 2

(18) Bolt panel with 5/16 - 24 x 1 11/32 bolts from bottom side of rib bracket up through bottom of panel.

(19) Repeat above procedure for outer panel No. 2 through No. 16

(20) Insert 5/16 - 24 x 1 1/32 flathead screws from face side of the panel to rib bracket and tighten all screws

(21) Assemble (8) tie rods to the reflector back-up structure with 3/8 volts and nuts

(22) Tighten all screws and torque all bolts per Table 2.3.1 and 2.3.2

(23) Assemble reflector ladder (8038-103001-11) between ribs No. 4 and rib No. 5 with 5/16 - 24 x 3 31/32 bolts and nuts.

(d) Remove manual drive gear box from hydraulic motor by removing the four 1/2 bolts from the gear box mount.

2.4 Erection of the Antenna

(a) Disconnect the electric cable from No. 2 trailer power supply and connect to the erection power supply. (located on the gooseneck of the No. 1 trailer)

(b) Position the three way valve in the neutral position (valve handle in the center) before starting the hydraulic power supply.

(c) Start the hydraulic power supply

(d) Push three way valve handle all the way in and hold until the antenna is raised 90° from trailer bed and pull the valve to neutral position and turn-off power supply.

CAUTION: Before the tower reaches vertical position, check clearance between the tower base and ground pad. Raise the tower if necessary by operating the trailer stabilizing jacks.

(e) Lower the tower structure on the ground pad by retracting the two stabilizing jacks and insert (12) 7/8 - 9 x 7 tie down studs and nuts at tower base.

TABLE 2.3.1

WRENCH TORQUE ON STEEL BOLTS*

COARSE THREAD SERIES

ROOM TEMPERATURE

1	2	3	4	5
Size	R = Ratio of Wrench Torque to Tensile Stress in Bolt		Torque Limits Recommended for Installation (in. lbs.) (Bolts Loaded Primarily in Shear)	
Nut / Bolt	Self-Locking Type A 365	Castellated Type AN310	Tension Type Nuts AN365 and AN310 (40,000 psi in Bolt)**	Shear Type Nuts AN364 and AN320 (60% of Column 4)
8/32	.00039	----	12-15	7-9
10-24	.00055	.00052	20-25	12-15
1/4-20	.00095	.00120	40-50	25-30
5/16-18	.00205	.00225	80-90	48-55
3/8-16	.00463	.00392	160-185	95-110
7/16-14	.00622	.00605	235-255	140-155
1/2-13	.0099	.0120	400-480	240-290
9/16-12	.0126	.0177	500-700	300-420
5/8-11	.0173	.0220	700-900	420-540
3/4-10	.0289	.0409	1,150-1,600	700-950
7/8-9	.0554	.0754	2,200-3,000	1,300-1,800
1-8	.0923	.1313	3,700-5,000	2,200-3,000
1 1/8-8	.1410	----	5,500-6,500	3,300-4,000
1 1/4-8	.1764	----	6,500-8,000	4,000-5,000

NOTES: * For installing castellated and self-locking steel nuts. (Threads - Class 3 fit, cadmium plated and non-lubricated)

** On threaded section of bolt.

$T = R \times S_t$ where: T = wrench torque, inchpounds.
R = ratio listed in columns 2 and 3.
S_t = axial tensile stress desired in bolt.

TABLE 2.3.2

WRENCH TORQUE ON STEEL BOLTS*

FINE THREAD SERIES

ROOM TEMPERATURE

1	2	3	4	5
Size	R = Ratio of Wrench Torque to Tensile Stress in Bolt		Torque Limits Recommended for Installation (in. lbs.) (Bolts Loaded Primarily in Shear)	
Nut / Bolt	Self-Locking Type AN365	Castellated Type AN310	Tension Type Nuts AN365 and AN310 (40,000 psi in Bolt)**	Shear Type Nuts AN364 and AN320 (60% of Column 4)
8-36	.00028	-----	12-15	7-9
10-32	.00053	-----	20-25	12-15
1/4-28	.0018	.00128	50-70	30-40
5/16-24	.0034	.00264	100-140	60-85
3/8-24	.0045	.00431	160-190	95-110
7/16-20	.0122	.0115	450-500	270-300
1/2-20	.0115	.0172	480-690	290-410
9/16-18	.0203	.0240	800-1,000	480-600
5/8-18	.0280	.0314	1,100-1,300	660-780
3/4-16	.0586	.0586	2,300-2,500	1,300-1,500
7/8-14	.079	.084	2,500-3,000	1,500-1,800
1 14	.100	.154	3,700-5,000	2,200-3,300
1 1/8 -12	.133	-----	5,000-7,000	3,000-4,200
1 1/4 -12	.244	-----	9,000-11,000	5,400-6,600

NOTES:

* For installing castellated and self-locking steel nuts. (Threads - Class 3 fit, cadmium plated and non-lubricated)

** On threaded section of bolt.

$T = R \times S_t$ where: T = wrench torque, inch-pounds.
R = ratio listed in columns 2 and 3.
S_t = axial tensile stress desired in bolt.

(f) With crane lifting outriggers in place, assemble outriggers No. 2 and 3 to the tower structure.

(g) Assemble No. 2 and 3 lower outriggers in place

(h) Bolt down outrigger jack pad to ground pad with 3/4" 10 x 24" bolts and shim with washer if necessary.

(i) Remove the tower tie downs from the tower structure.

(j) Retract tower support rack of trailer back on trailer bed.

(k) Disconnect electric cable from erection power supply

(l) Disassemble trailer center and rear stabilizing jacks and place on trailer. Lower center trailer jack before lowering the rear jacks.

(m) Remove trailer wheel chocks and place on trailer.

(n) Remove trailer from antenna.

(o) Assemble No. 1 outrigger with crane lifting to tower and tighten all tie down bolts and nuts

(p) Assemble service platform on ground and lift in place with crane and bolt to the pedestal.

(q) With crane lifting the counterweights in place, assemble 7/8 - 14 x 1 1/2 and 3/4 - 10 x 2 3/4 bolts to the RF box structure.

(r) Place the hydraulic power supply units into position (Drawing 8038-101001).

(s) Connect hydraulic lines and mainpower line to the antenna Figure 2.4.1 and 2.4.2.

(t) Remove protective grease from elevation bull gears, clean and re-grease using MIL-G-21164 as per lubrication instructions Table 5.1.4.1.

(u) Install boresight telescope in the RF box (Figure 2.4.3). Assemble elevation encoder and bellows coupling (Figure 1.10.3). Install nitrogen bottle at foot tower.

(v) Antenna is now ready for operation check out.

2.5 Antenna Checkout and Alignment

The checkout and alignment of the antenna after erection consist of leveling of antenna, reflector contour check out and secondary reflector alignment.

(a) Antenna Leveling

The antenna must be leveled to less than ± 8 seconds of arc, two coincidence levels are permanently mounted to the yoke arm assembly. The levels are observed during ± 270 degree rotation of the antenna turret (rotating part of the pedestal). The level of the antenna is achieved by adjusting the outrigger jacks. Figure 2.5.1 Adjusting is continued until the split bubbles of the levels are within .010 inch of being coincident during ± 270 degree rotation of the turret.

.002 inch movement of bubble equals approximately 1 arc second. The levels are accurate to two (2) seconds of arc.

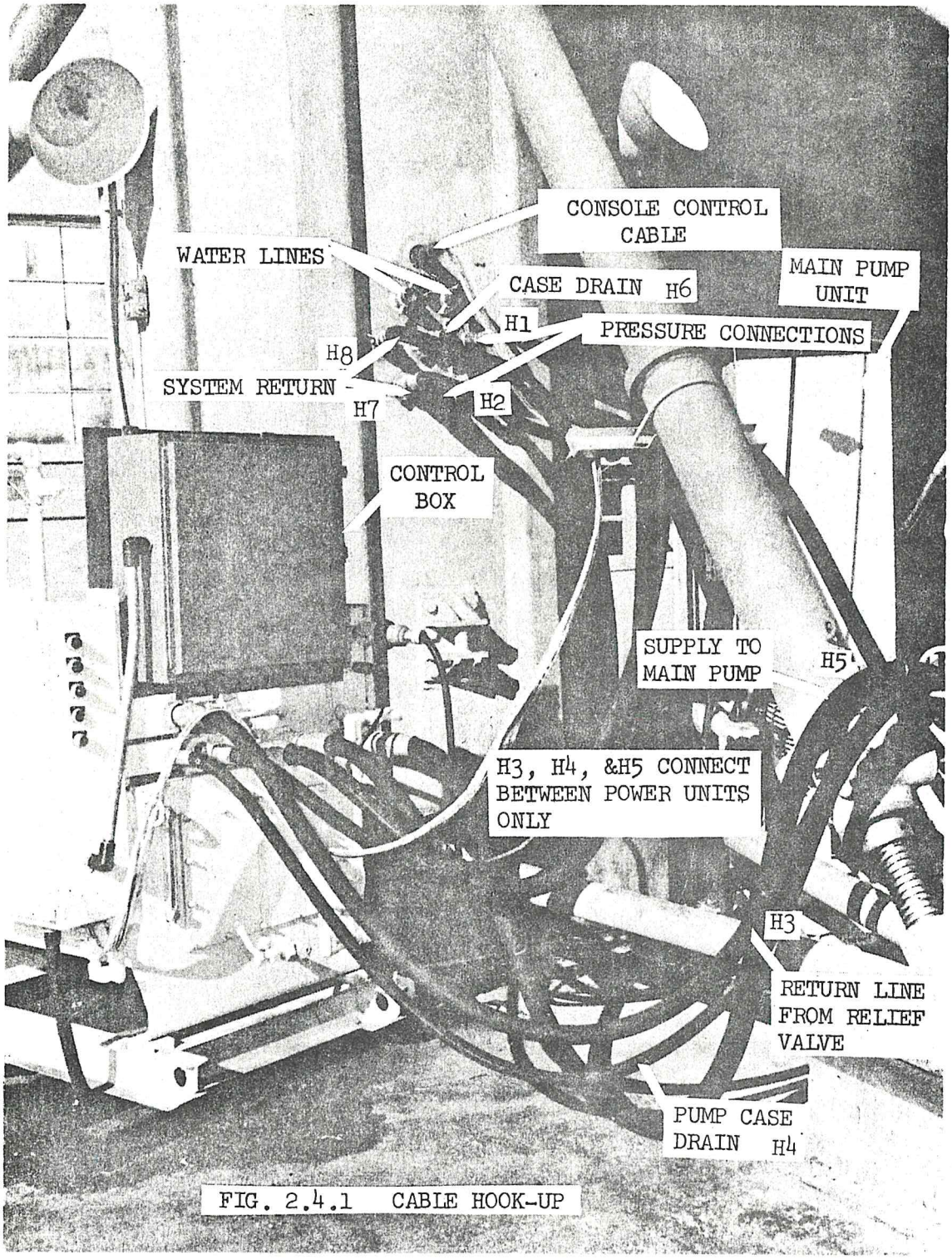


FIG. 2.4.1 CABLE HOOK-UP

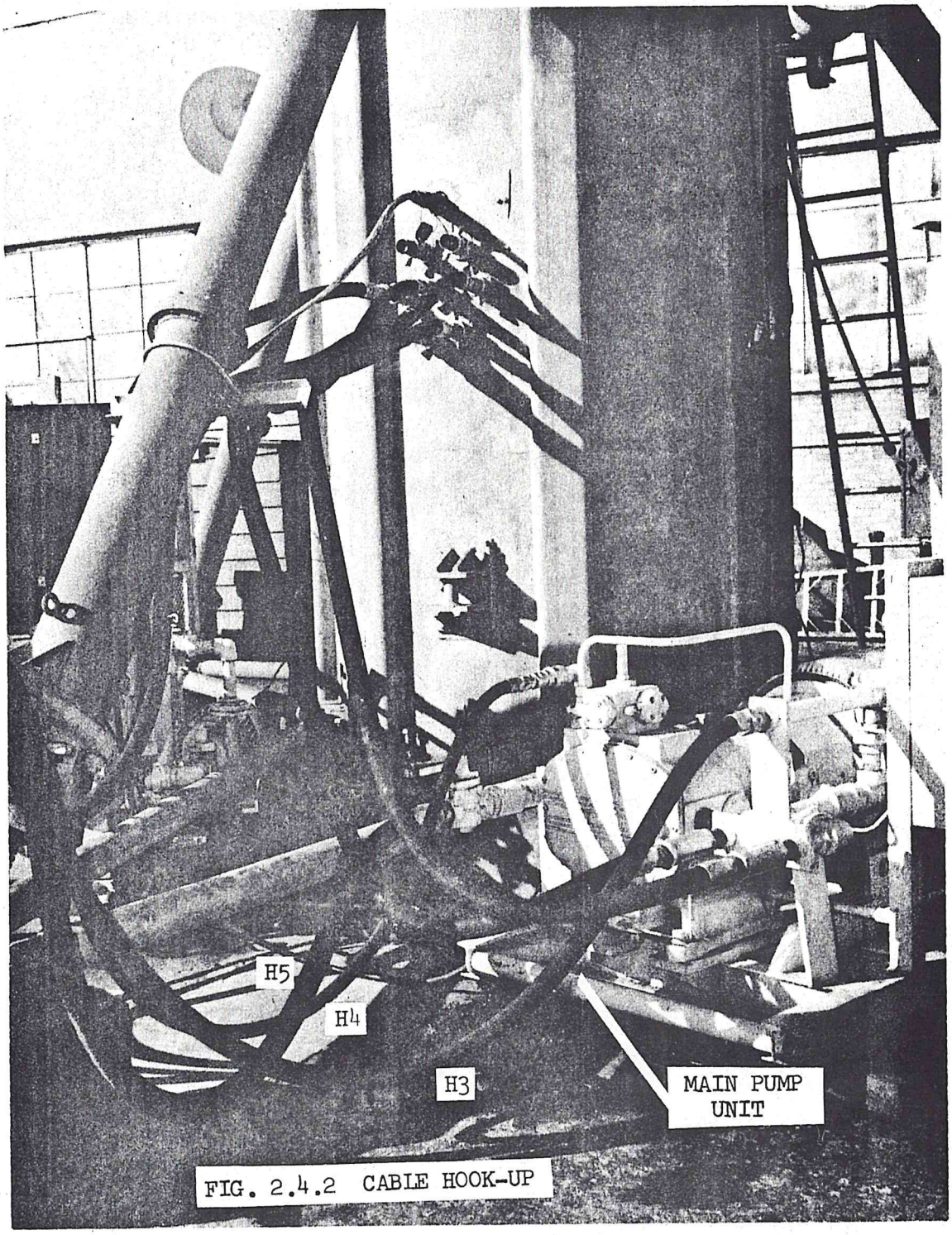


FIG. 2.4.2 CABLE HOOK-UP

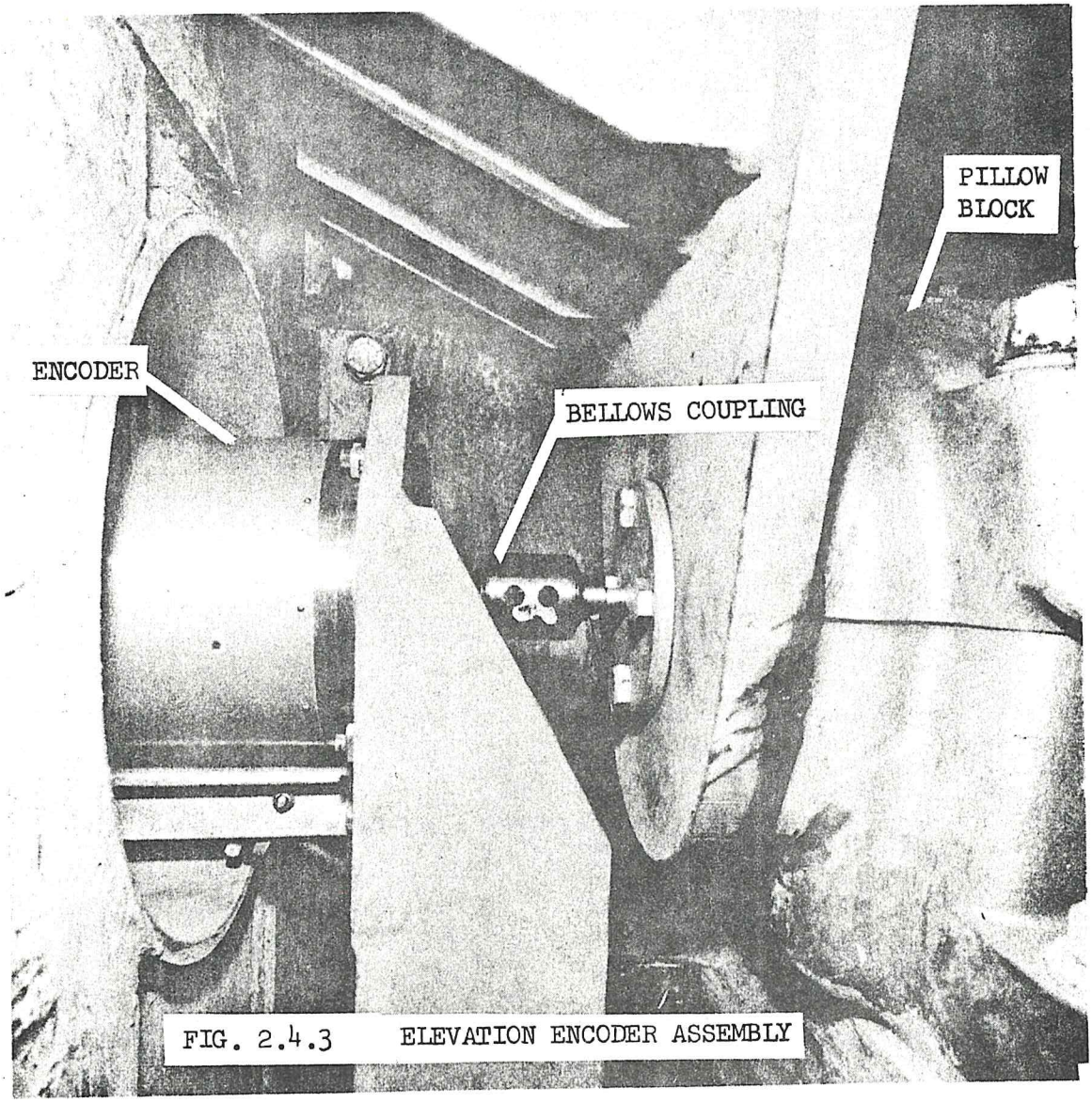


FIG. 2.4.3 ELEVATION ENCODER ASSEMBLY

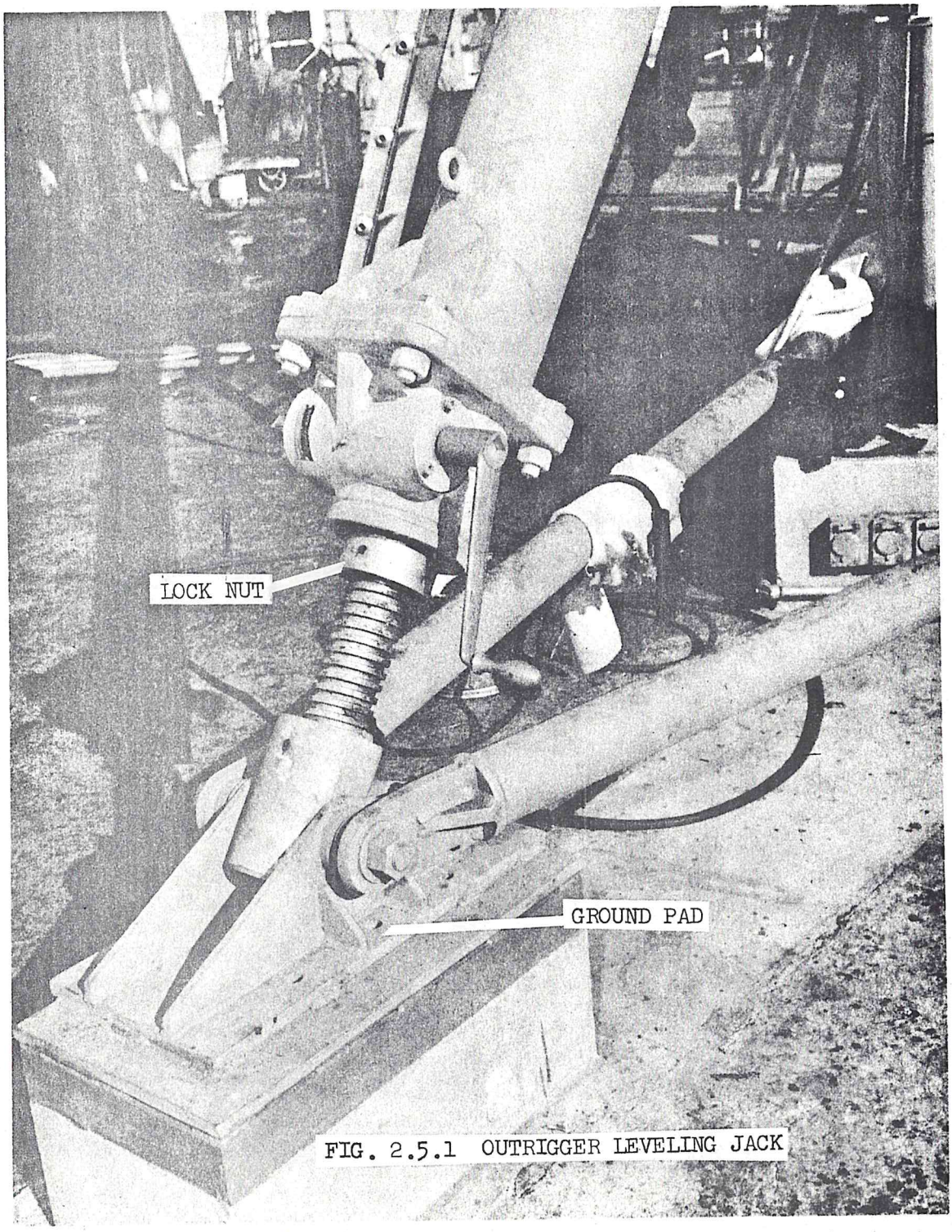


FIG. 2.5.1 OUTRIGGER LEVELING JACK

The outriggers are to be loaded in compression. This is to reduce to a minimum, the bending effect of the outrigger pad mounting plate.

(b) Reflector Contour Check - Figure 2.5.2

The no wind RMS average deviation from the least squares, best-fit paraboloid shall not exceed 0.030 inch. Ninety-five percent (95%) of the surface shall be within 0.060 inch of the best-fit paraboloid and no more than 0.3 percent of the reflector surface may deviate more than 0.090 inch from the best fit paraboloid.

Contour alignment of the reflector surface is made in the stow position (at zenith). Droop or sag due to gravity at other elevation position is determined by calculations. Alignment surface targets (.075) inch diameter holes) are located near each hard point and at two points near the center of each panel. The X-Y coordinates of each target is determined by the target template used to locate each target.

The theodolite is mounted on its tripod, leveled and centered with respect to the reflector. The centering of the theodolite is accomplished by sighting at the target located at the base of

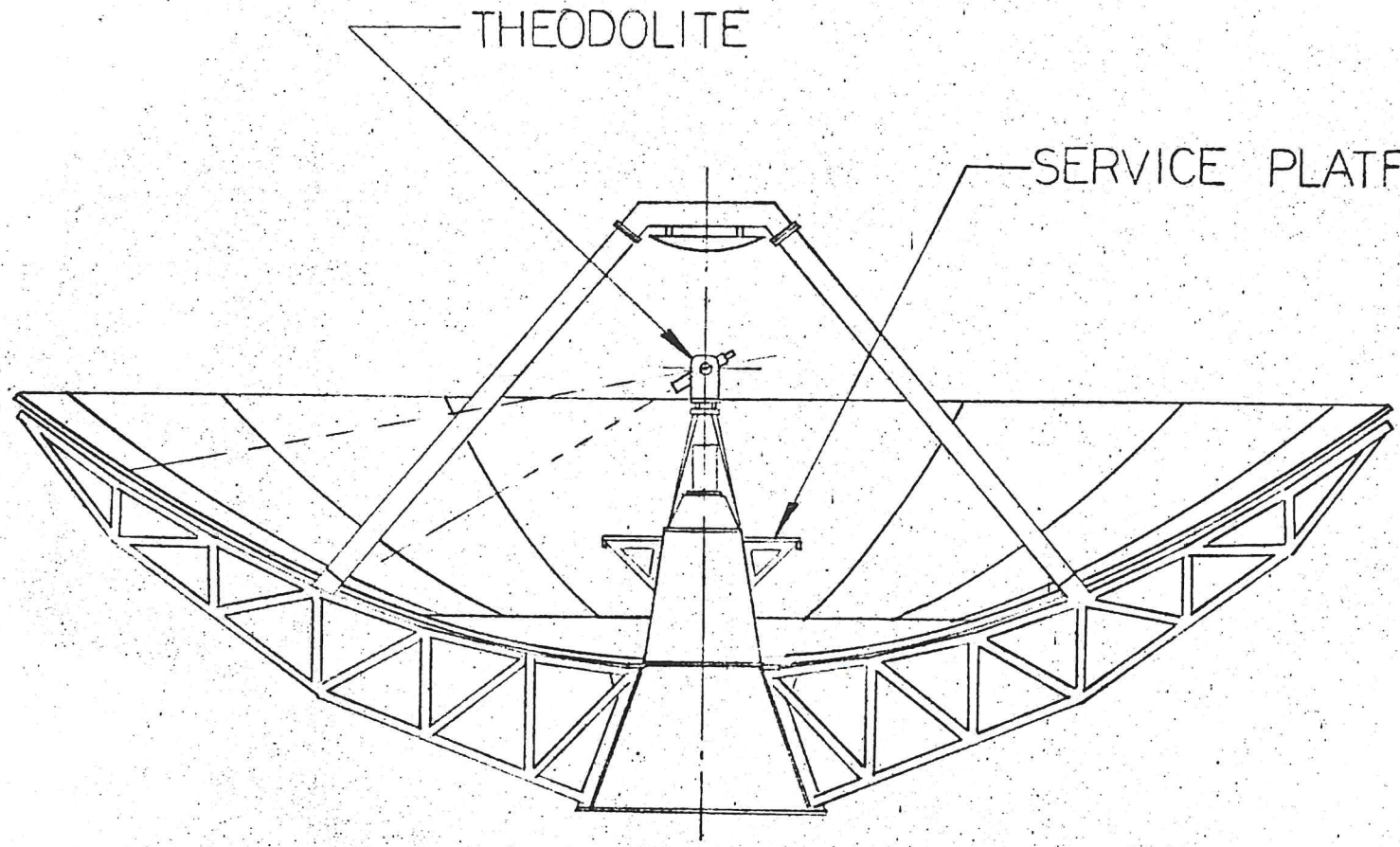


FIG 2.5.2
REFLECTOR CHECK-OUT

each quadripod leg and adjusting the theodolite until the line of sight lies within the four targets during 360 degree rotation of the theodolite.

Direct and reverse angle readings are taken for each quadripod leg target. The average angle of sight is determined from these readings. The height of the theodolite above the vertex of the paraboloid is calculated with this angle and the known coordinates of the quadriped leg targets.

The theodolite is sighted at the various panel targets. The line of sight is centered with respect to the target and the angle is recorded. Direct and reverse readings of each target should be recorded.

The RMS average deviation from the least squares, best-fit parabolid is determined from this data; angle reading to each panel target and the height of the theodolite.

If shimming is required; this is accomplished by shimming between the panel support bracket and the rib pad.

(c) Secondary Reflector Alignment

The mirror target located on the secondary reflector shall be coincident and perpendicular to the mechanical

axis of the primary reflector in the zenith position. The rigidity of the secondary reflector (quadripod) shall be such that the secondary reflector will not deflect more than 0.050 inch laterally or axially from its position at antenna zenith for any useable antenna orientation or acceleration under a no wind condition.

The quadripod support structure and the secondary reflector are installed on the primary reflector and hub assembly. After installation of the quadripod support structure and the secondary reflector, the assembly is checked for level; adjustments for level are made where needed. The theodolite is placed on its tripod, leveled and centered over the center target. The theodolite is sighted to the zenith at the mirror target mounted on the secondary. The secondary reflector is adjusted until the mirror target is coincident and perpendicular to the vertical axis defined by the theodolite. The height from a known X dimension on the theodolite to the mirror target is to be scaled with a tape. Distance from the vertex of the primary reflector to the vertex of the secondary reflector is to be 156 $\pm$ .060 inches.

2.6 Antenna Disassembly

(The detail of the disassembly procedure is the same as the assembly of the antenna except that the sequences are reversed).

(a) Rotate reflector to 0° elevation and 0° in azimuth, lock azimuth axis with stow locks and disconnect main power line.

(b) With prime mover, back the trailer No. 2 as close to the antennas possible so that the disassembled equipment may be easily loaded on trailer.

(c) Disconnect hydraulic lines, remove power supply units, boresight telescope, elevation encoder and bellows coupling, and nitrogen bottle, for packaging.

NOTES: (1) For ease of loading trailer No. 2 may be re-located during disassembly

(2) For loading information of trailer No. 2 see packaging arrangement Drawing 8038-861001

(3) Be sure the crane.

(d) Remove service platform from antenna with crane.

(e) Remove No. 1 outrigger assembly (one upper and two lower) with crane from the tower structure.

(f) Using the prime mover, back the trailer No. 1 (the rear of the trailer is facing No. 1 outrigger) until the rear of the trailer is about 5 feet from the antenna tower.

(g) Raise the antenna tower support rack to a vertical position with the hydraulic erection system on

trailer No. 1

(h) Assemble the rear trailer jacks (do not extend the jack screws at this time).

(i) With the prime mover slowly backing the trailer, align the trailer to the tower so that the tower locater on the support rack of the trailer is engaged to the tower locater on the tower structure. Place the center jack pads in position and lower jacks and trailer landing gears.

(j) Place the jack ground pads under the trailer rear jacks and raise the trailer until the upper plate of the tower locater makes contact with the tower locater of the trailer and adjust center jacks so that the jack pads are rested on the ground.

(k) Tie down tower structure to the tower support rack with 6 load binders.

(l) Remove No. 2 and 3 outrigger assembly with crane

(m) Remove the tie down bolts at the tower base and raise the tower with the trailer rear jacks until the tower base clears the ground pad by about 1/2 inch.

(n) Retract the tower support rack with the hydraulic erection system until the counterweight arms just clear the ground turn off power supply and remove counterweight assembly with crane.

(o) Retract the tower support rack with the hydraulic erection system until the yoke arms rest on the support of the trailer and turn off power supply of the trailer.

(p) Disassemble the reflector panels and sub-reflector support struts.

(q) Disassemble the reflector back-up structures

(r) Remove the transmitter package and support rack with crane from the RF box.

(s) Manual drive RF box 90° as follows:

(1) Install the manual drive gear box to the hydraulic motor, which has no tachometer attached, by inserting the gear box shaft into the hydraulic motor shaft coupling. Bolt gear box to hydraulic motor with 4 1/2" bolts.

CAUTION: Do not disengage the antenna brake before installation of manual drive.

(2) Open hydraulic motor manual drive by-pass valve

(3) Disengage the elevation brake as follows:

(a) Close brake line shut-off valve located on the yoke base above the hand pump.

(b) Open manual brake control valve by turning the valve handle to the right and actuating the hand pump until the brake cylinders are extended all the way out and release the valve handle.

(4) Turn on manual drive gear box motor switch until the RF box has rotated down 90° make sure the feed cone is properly seated on the trailer and turn off gear box motor.

(5) Close manual drive by pass valve"

(6) Engage the elevation brakes by turning the manual brake control valve handle to the left and hold until the brake actuating cylinders are retracted all the way in.

(t) Disconnect power cables of the hydraulic power supply and engage (h) manual stow locks.

(u) Tie down RF box to the trailer and install azimuth bearing tie down blocks on antenna.

(v) Disassemble and retract all trailer jacks and place jack pads on trailer. Figure 2.6.1, 2.6.2. Lower center trailer jack before lowering the rear jacks.

(w) Load trailer No. 2 in accordance with packaging arrangement shown in Drawing 8038-861001 and tie down equipment. See also Figures 2.6.3 and 2.6.4. The sequence of erection is shown in Figures 2.6.5 through 2.6.17. A list of NAA furnished equipment for erection, checkout, and disassembly of antenna is given in Table 2.6.1.

TABLE 2.6.1

NAA SUPPLIED EQUIPMENT FOR ERECTION AND CHECKOUT
(REF. 8038-555001)

Item	Description	Qty.	Used For
1	Theodolite	1	Reflector Checkout
2	Theodolite Tripod	1	Reflector Checkout
3	Optical Platform	1	Reflector Checkout
4	Scaffold	1	General Servicing
5	117 Piece Tool Set	1	General Servicing
6	Electrical Impact Wrench	1	General Servicing
7	Torque Wrench	2	General Servicing
8	Spanner Wrench	3	Outrigger Jack Leveling
9	Crank Handle	3	Outrigger Jack Leveling
10	Spanner Wrench	2	Ground Pad Tightening
11	Socket Adapter 1/2" to 3/8"	2	Reflector Panel
12	Phillips Type Bit	2	Reflector Panel
13	Phillips Screw Driver	4	Reflector Panel
14	Ratchet Box Wrench	4	Reflector Panel
15	Hex Jaw Wrench	2	General Servicing
16	Ratcheting Chain Wrench	1	General Servicing
17	Rope Hoist	1	General Lifting
18	Chain Sling	2	General Lifting
19	Levels	1	Trailer Leveling
20	Rope Slings	2	Reflector Panel Erection
21	18 Piece Socket Wrench Set (3/4" Drive)	1	General Servicing
22	Safety Wheel Chocks	2	Trailer Number 1
23	Line-up Punch	1 set	Erection
24	Metrological Tape	1	Checkout
25	Manual Drive Gear Box	1	Erection
26	Snatch Block	1	Erection
27	Jack Handle	2	Trailer Jack
28	Trailer Locater	1	Trailer Alignment

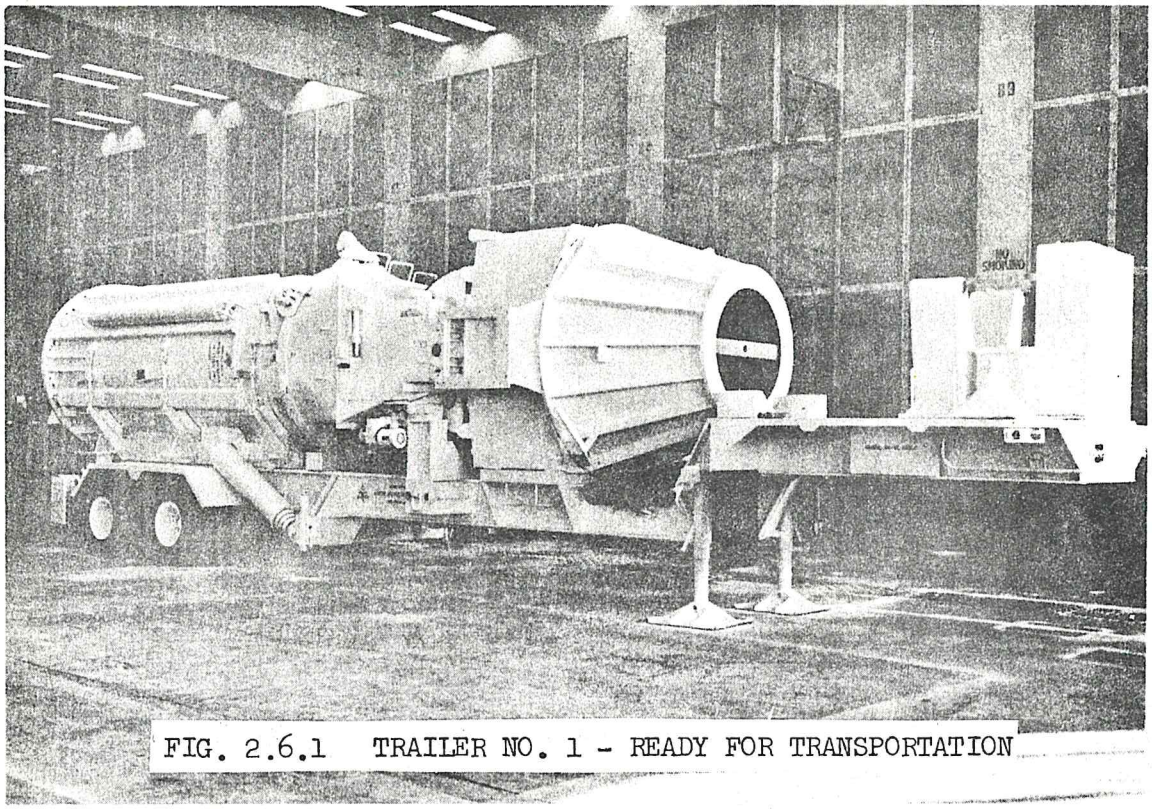


FIG. 2.6.1 TRAILER NO. 1 - READY FOR TRANSPORTATION

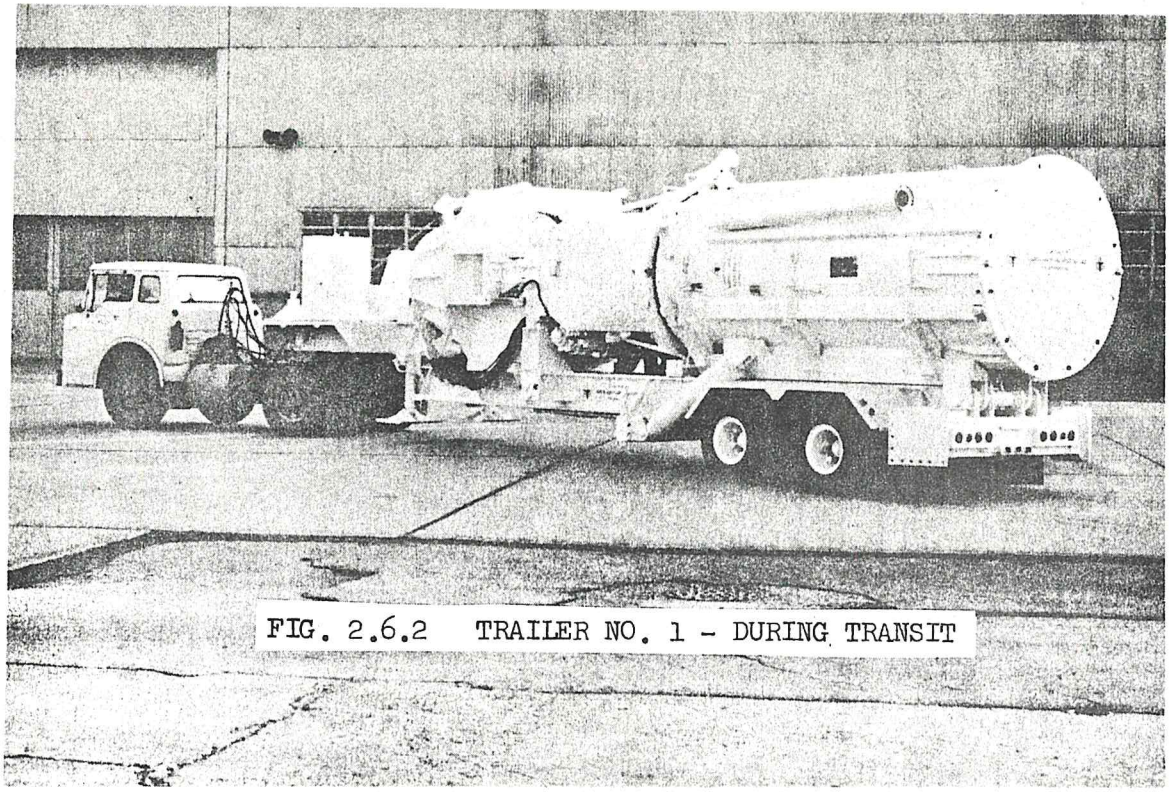


FIG. 2.6.2 TRAILER NO. 1 - DURING TRANSIT

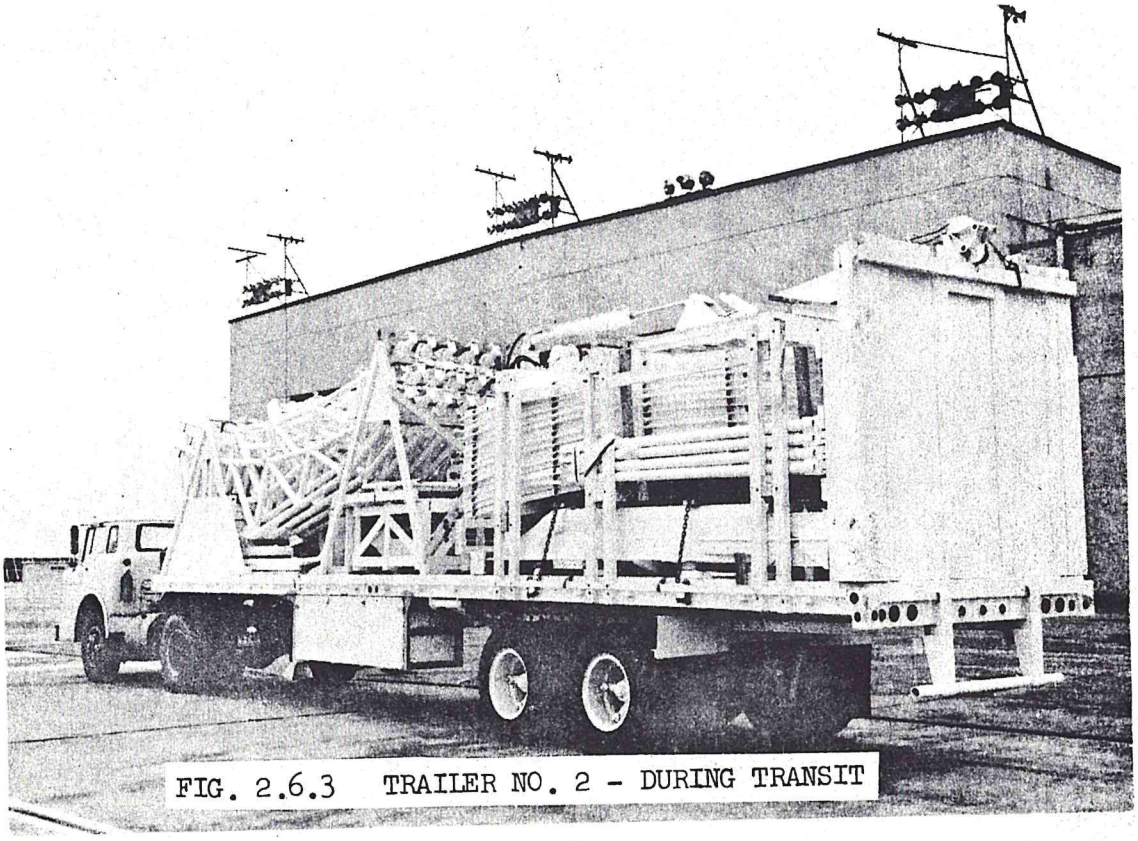


FIG. 2.6.3 TRAILER NO. 2 - DURING TRANSIT

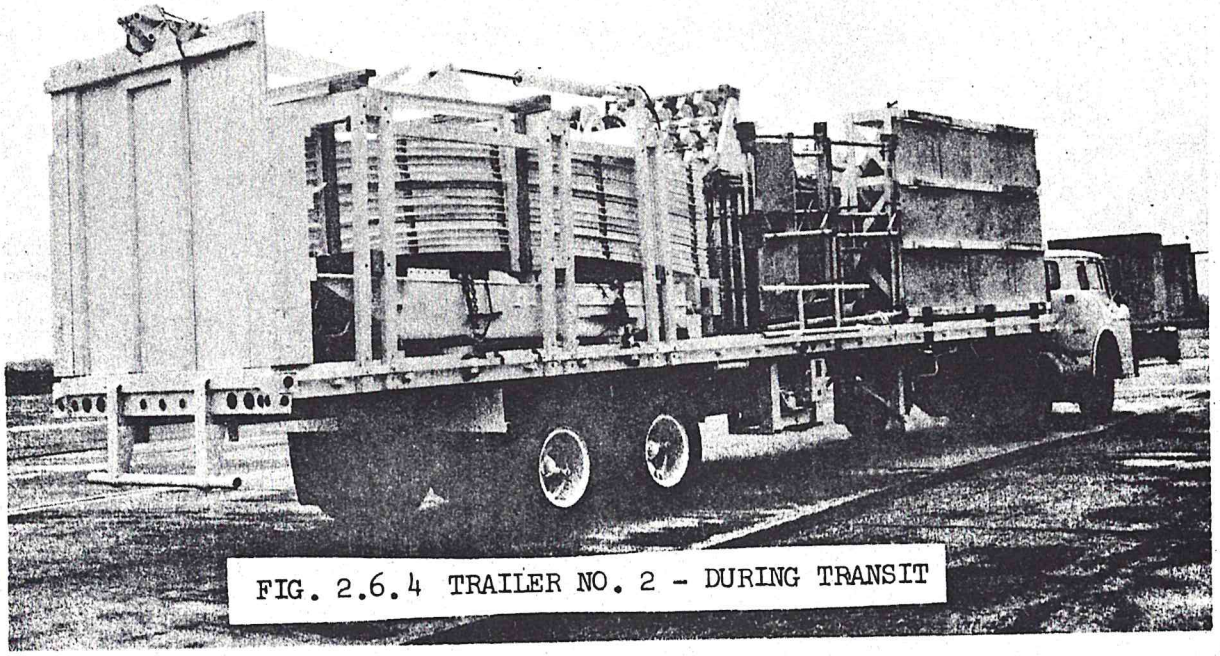


FIG. 2.6.4 TRAILER NO. 2 - DURING TRANSIT

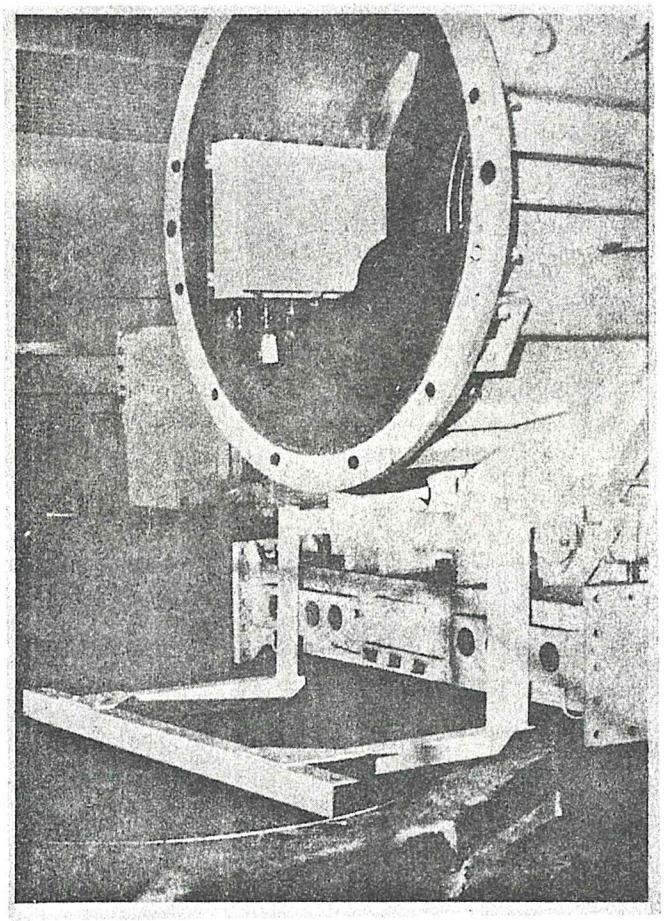


FIGURE 2.6.5 ALIGN TRAILER TO GROUND PAD
(USING TRAILER LOCATER)

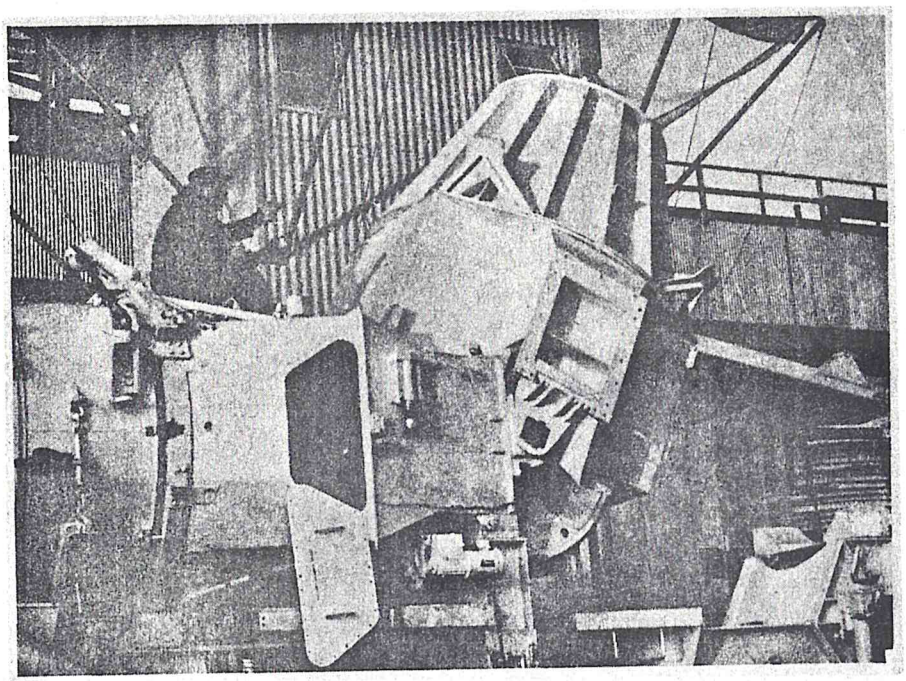


FIGURE 2.6.6 ROTATE R.F. BOX

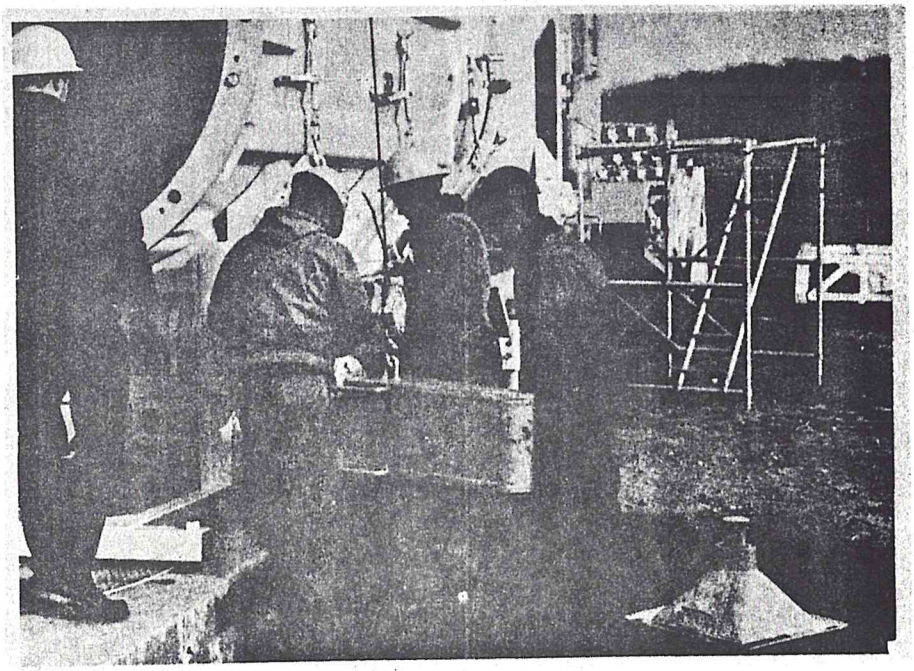


FIGURE 2.6.7 ASSEMBLE TRAILER REAR JACK

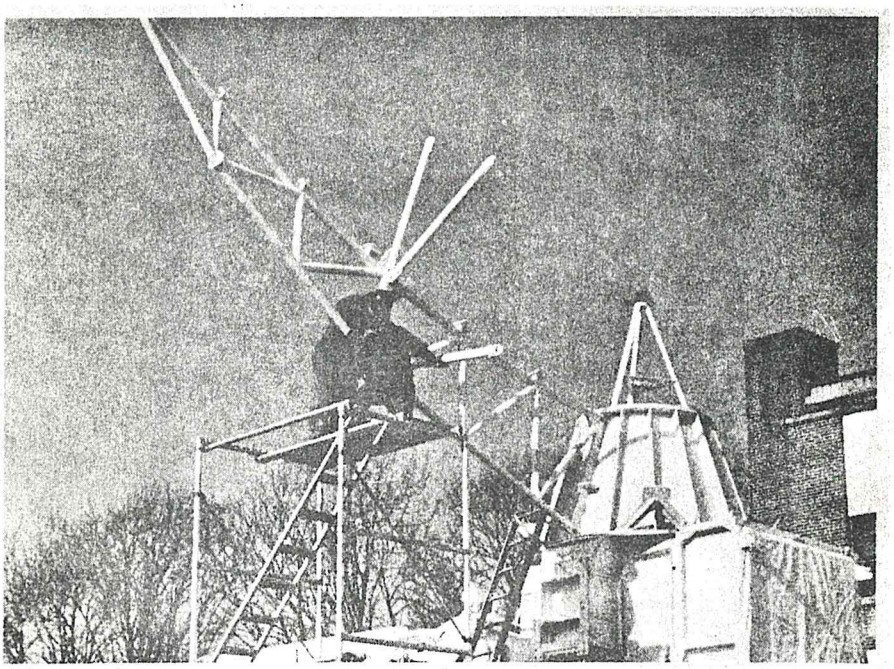


FIGURE 2.6.8 ASSEMBLE REFLECTOR BACK-UP STRUCTURE

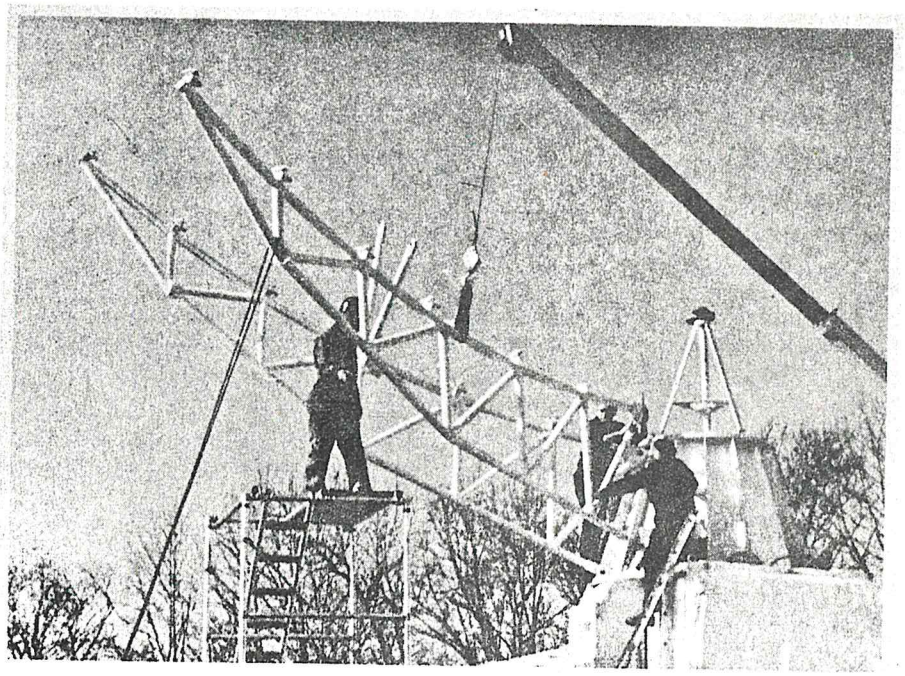


FIGURE 2.6.9 ASSEMBLE REFLECTOR BACK-UP STRUCTURE

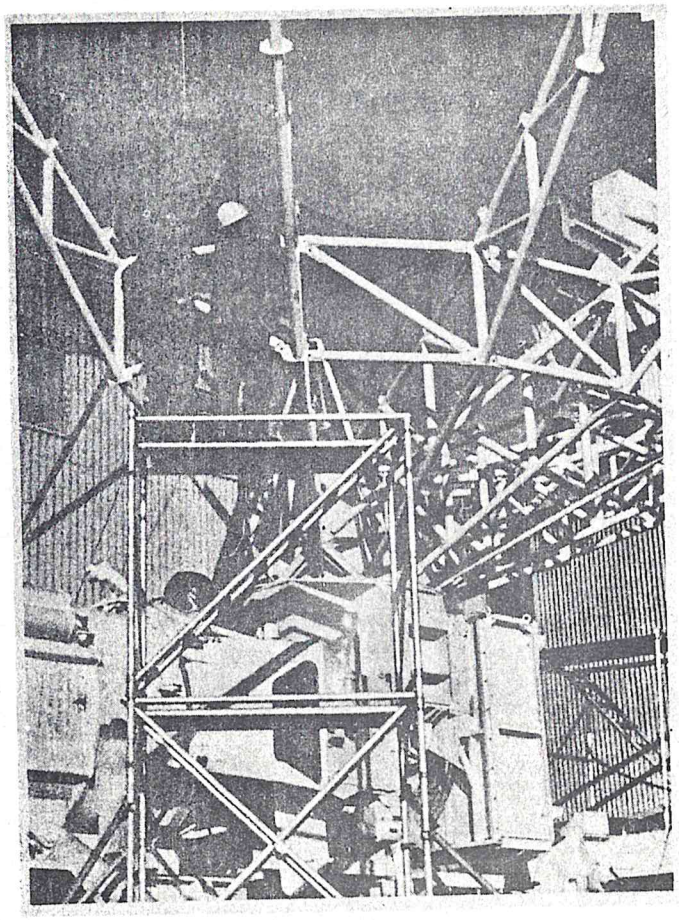


FIGURE 2.6.10

ASSEMBLE REFLECTOR

BACK-UP STRUCTURE

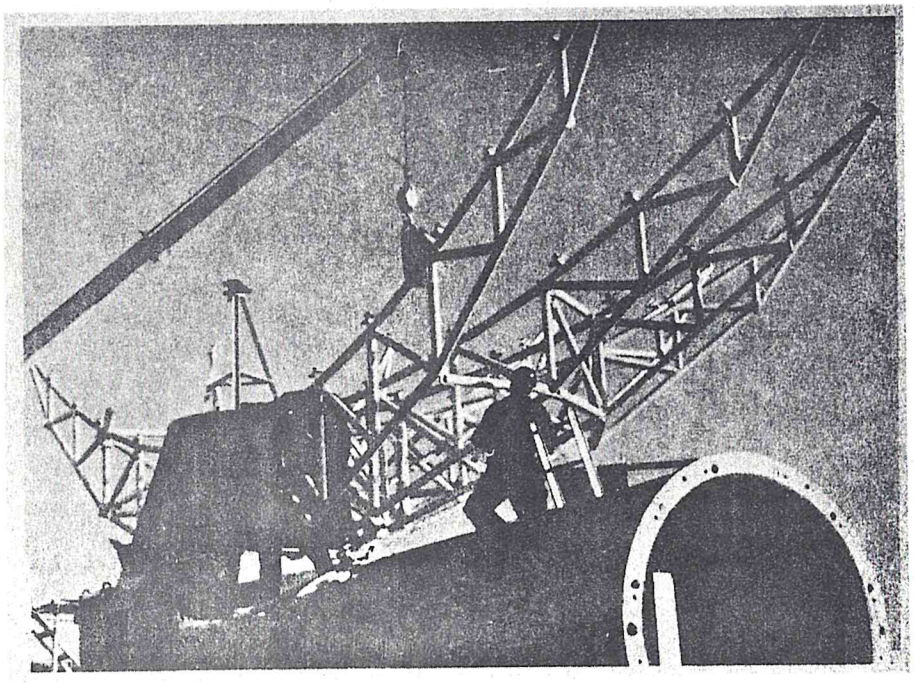


FIGURE 2.6.11 ASSEMBLE REFLECTOR BACK-UP STRUCTURE

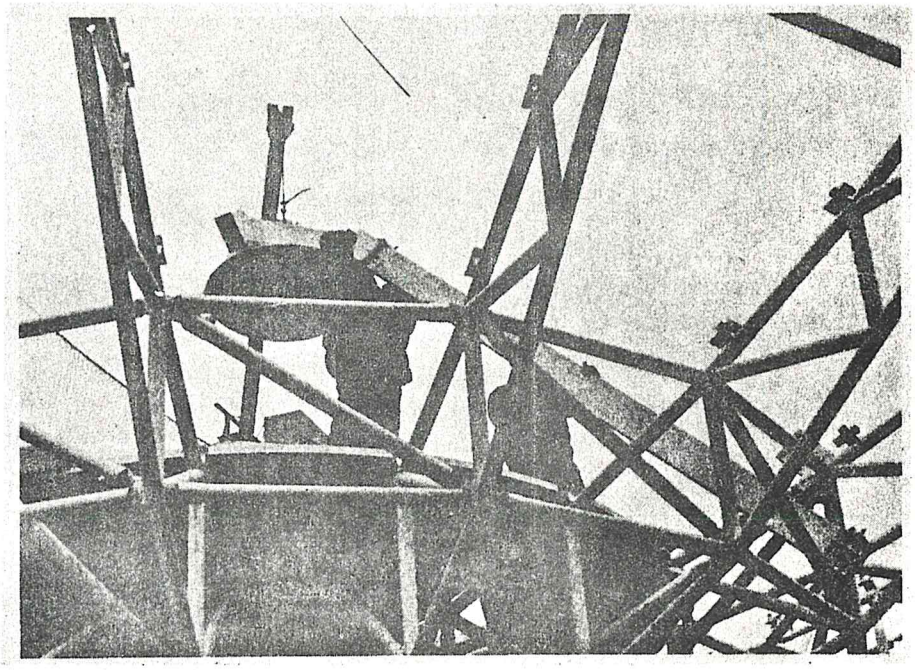


FIGURE 2.6.12 ASSEMBLE SUB-REFLECTOR

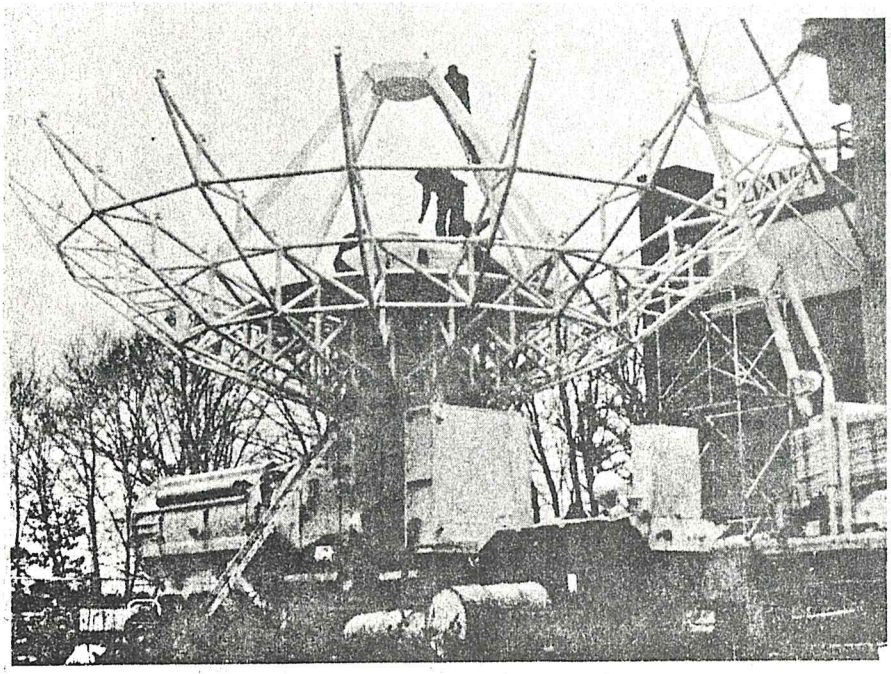


FIGURE 2.6.13 ASSEMBLE SUB-REFLECTOR

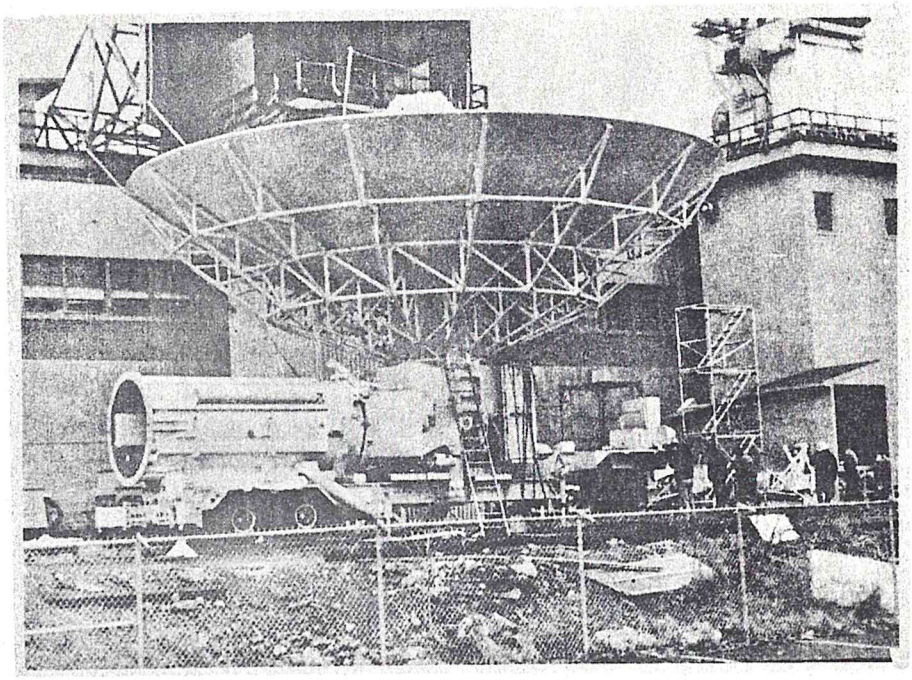


FIGURE 2.6.14 READY FOR ERECTION

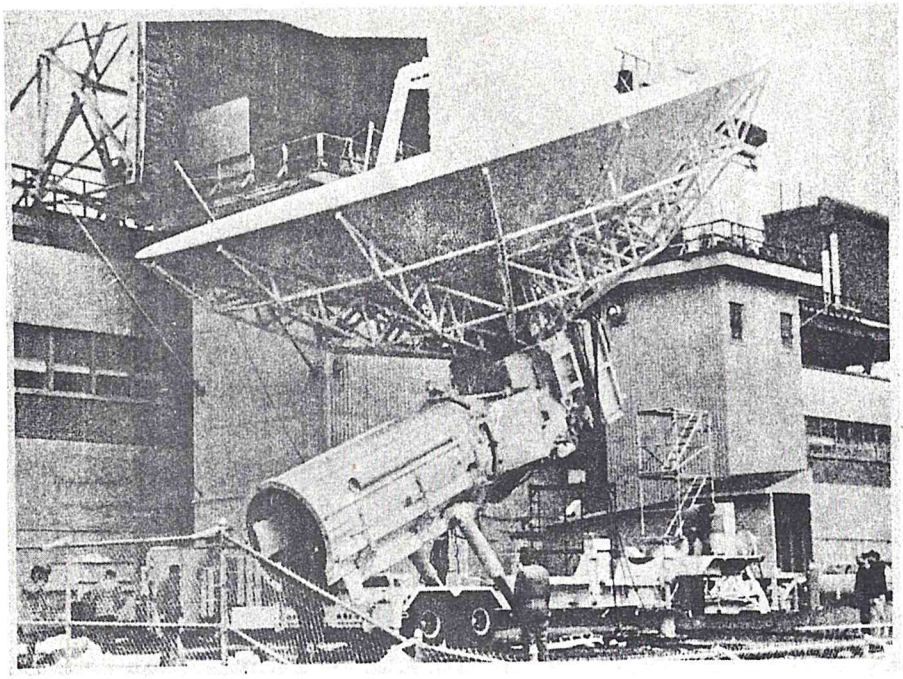


FIGURE 2.6.15 ANTENNA ERECTION

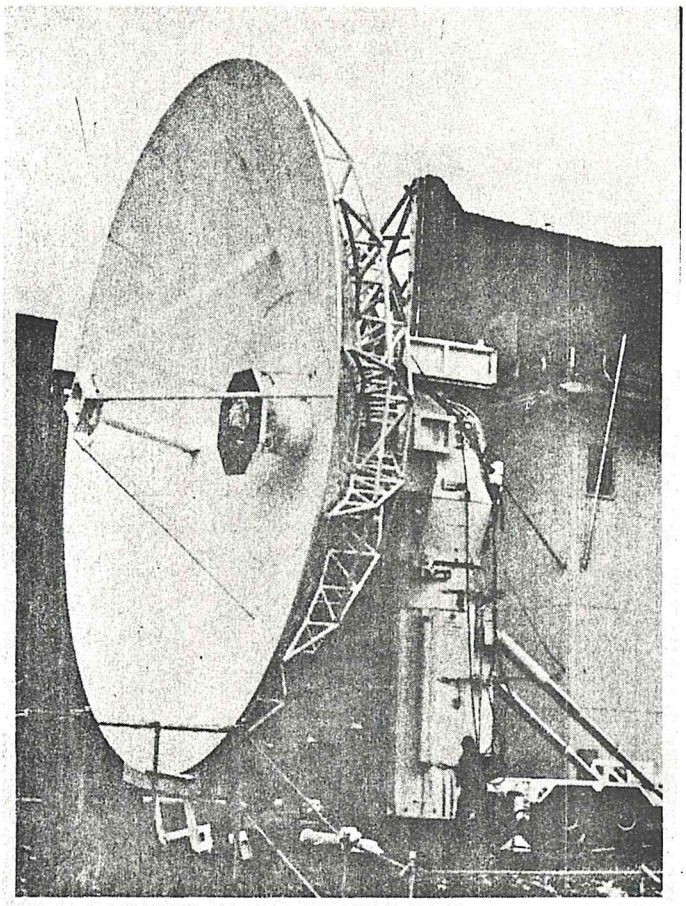


FIGURE 2.6.16

ANTENNA ERECTION

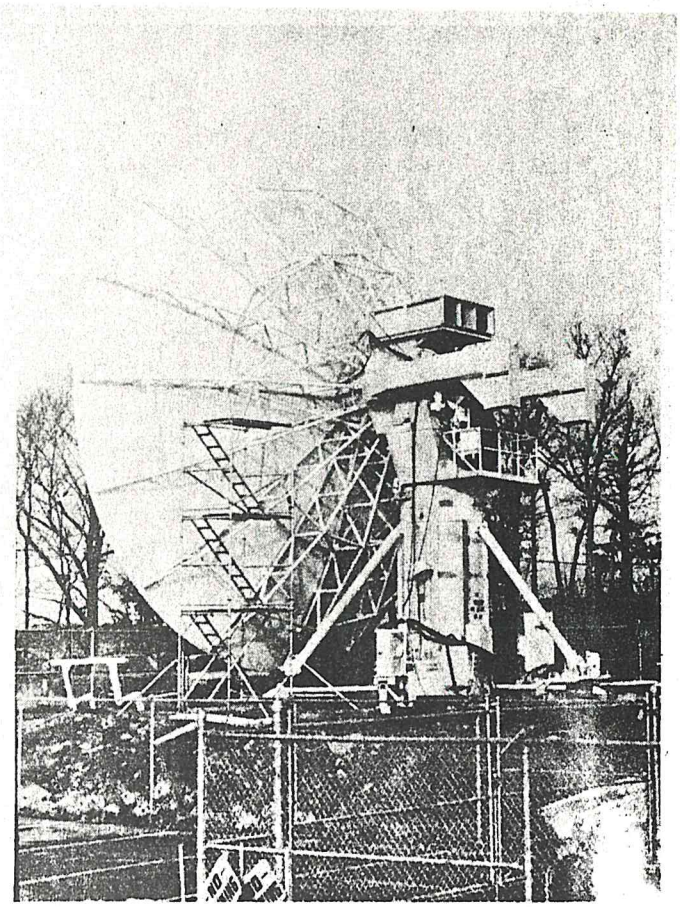


FIGURE 2.6.17

ERECTION COMPLETE

2.7 Foundation Requirements

2.7.1 Introduction

This document established the design requirements of the foundation required for Item 1.0 (Antenna Sub-System) of ATS Statement of Work Number ATS-SOW-1, dated 4 February 1965. Minimum structural design criteria are given for design requirements. Wind loads, acceleration torques, weights and mounting dimensions.

2.7.2 Design Requirements

Natural Frequency

The required minimum natural frequency of the combination foundation and soil in any mode (torsional, tilting and vertical) is twenty (20) cycles per second.

Mass Moments of Inertia (total system exclusive of foundation and soil)

(a) About vertical centerline - 97,050 slug-ft^2 minimum

(b) About horizontal centerline through base of antenna tower - 634,500 slug-ft^2 minimum

Angular Deflection

The total angular deflection at the interface between the base of the tower and the foundation due to tracking accelerations and operational winds shall be less than one (1) arc second in either bending or torsion.

Long Term Settlement

The long term settlement measured at the top of the foundation, with releveling of antenna structure required yearly, shall be:

(a) Differential 3 arc seconds maximum

(b) Uniform 0.050 inch maximum

Torques Due to Antenna Accelerations

The torques due to antenna accelerations are:

(a) Torque about elevation axis 4680 lb-ft

(b) Torque about vertical axis 5260 lb-ft

Dead Weight, Ice and Wind Loads

The dead weight, ice and wind loads at the foundation are listed in Table 2.7.1.

Mounting Dimensions

The antenna dimensional mounting requirements are shown in Figure - 2.7.1.

Dead Weight Load on Trailer Outrigger Pads

The dead weight load on each trailer outrigger pad during erection is 80,000 lbs.

2.8 Preparation for Shipping

When the antenna is being shipped, by air, rail or sea, every precaution must be taken to insure that equipment is properly loaded, fastened and blocked on the carrier floor.

When the antenna is being shipped by sea, it should be completely covered by a tarpaulin to prevent possible corrosion effects.

Before transporting the antenna in trailer number 1:

(a) Remove 3 cap screws directly above the tie down lugs (marked by arrow on the pedestal) and install 3 azimuth bearing tie down bolts, torque all 3 bolts to 300 in-lbs.

(b) Engage elevation manual stow locks

(c) Install 8 tie down bolts

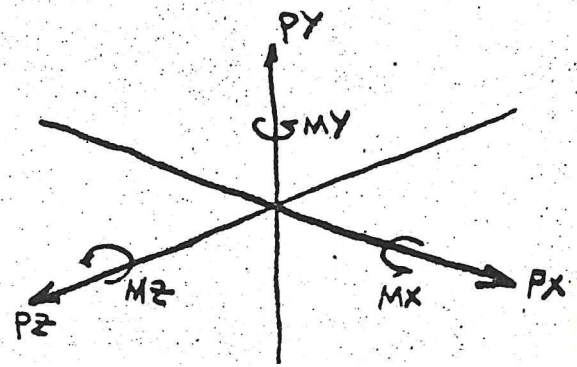
Load trailer number 2 in accordance with packaging arrangement Drawing Number 8038-861001.

Before moving trailers be sure that the air springs are inflated to their maximum height and check tire pressure for proper inflation.

DEAD WEIGHT, ICE AND WIND LOADS AT PAD OF ATS ANTENNA

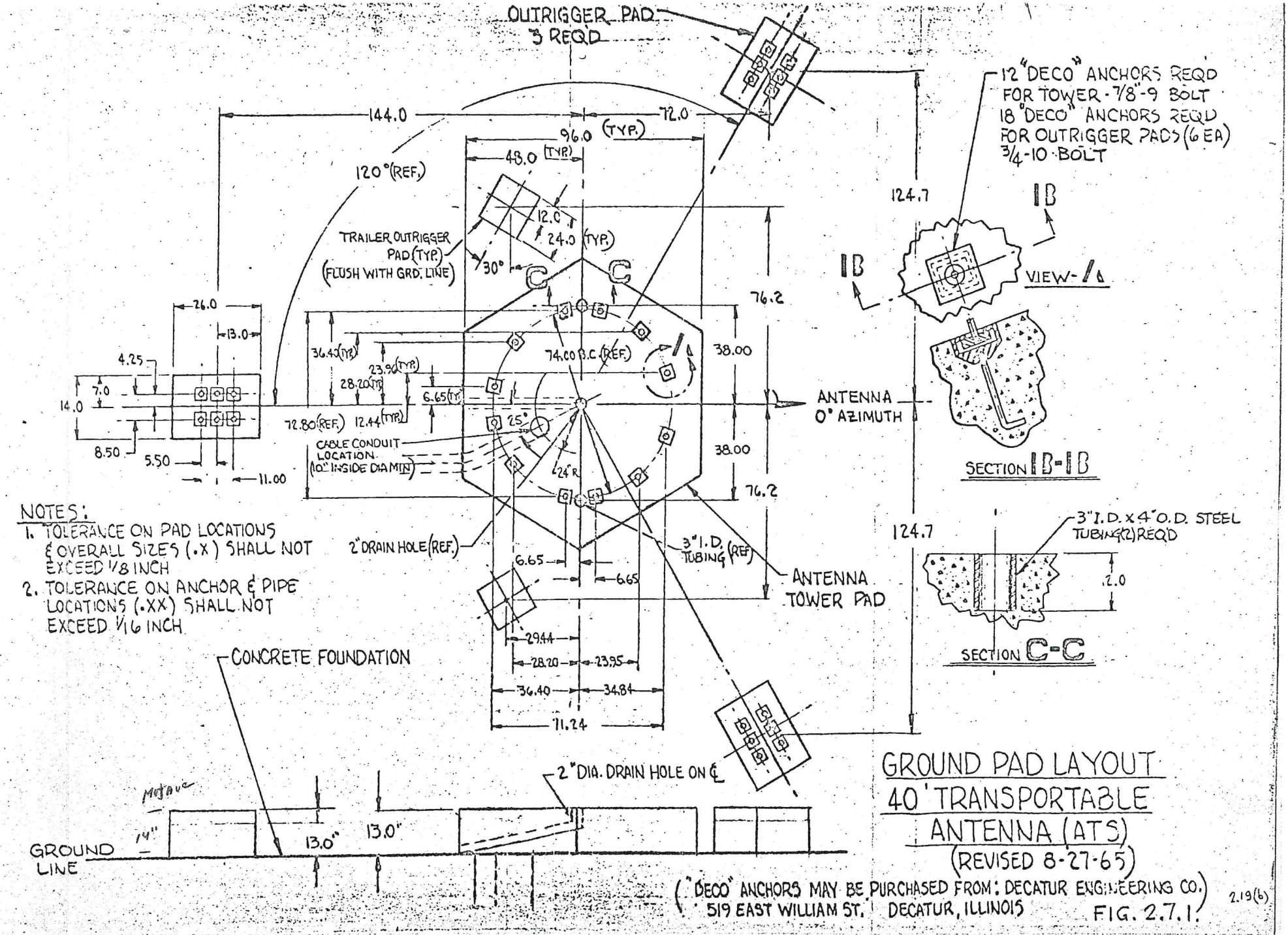
Condition	Ψ Azimuth	Θ Elevation	P_X Pound	P_Y Pound	P_Z Pound	M_X Ft-Pound	M_Y Ft-Pound	M_Z Ft-Pound
Static				-65,000				
Static-2 ft snow		90		-85,000				
125 MPH wind, 59°F		90		-69,000	-24,000	-936,300		
80 MPH wind, -25°F, 1 in. radial ice		90		-92,000	-11,800	-458,500		
60 MPH wind, -25°F, 3/4 in. ice	180	0		-74,000	-15,500	-431,500		
60 MPH wind, -25°F	180	0		-65,000	-15,500	-343,000		
60 MPH wind, -25°F	120	0	-6900	-65,000	5,400	113,300	-86,300	60,200
60 MPH wind, -25°F, 3/4 in. ice	120	0	-6900	-74,000	5,400	201,700	-86,300	60,200

TABLE 2.7.1.



Y Axis is vertical axis

The axis system may rotate 360° about the Y axis



NOTES:

1. TOLERANCE ON PAD LOCATIONS & OVERALL SIZES (.X) SHALL NOT EXCEED 1/8 INCH
2. TOLERANCE ON ANCHOR & PIPE LOCATIONS (.XX) SHALL NOT EXCEED 1/16 INCH

GROUND PAD LAYOUT 40' TRANSPORTABLE ANTENNA (ATS)

(REVISED 8-27-65)

("DECO" ANCHORS MAY BE PURCHASED FROM: DECATUR ENGINEERING CO. 519 EAST WILLIAM ST. DECATUR, ILLINOIS)

FIG. 2.7.1