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Lee,

We would like to make another attempt at mounting the receivers in a horizontal position. I've enclosed sketches of the modified version:

Fig #1. shows the proposed receiver locations. Positions 1 & 2 can be used for both new and old receivers. However, if the new receivers are mounted in these positions, mirror #3 (see Figs 2 & 3) must be moved closer to the BUS. Present receivers cannot be mounted in positions 3 & 4.

Fig #2 shows the present receivers mounted on the telescope. The receiver weight would be supported by the reference frame instead of the bushing/rod assembly. The bushing/rod assembly

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would be used for loading purposes only.

The center of gravity is ≈ 20 inches from the reference plate (away from the center of the BUS) and the box weight is ≈ 800 lbs.

Fig # 3 shows the new receivers mounted on the telescope. The receiver weight would be supported by the reference frame. Mirror # 3 and the receiver have been moved closer to the bottom of the BUS to prevent interference of the beam and reference frame with the telescope yoke at low telescope elevations.

The center of gravity is ≈ 3 " (away from the center of the BUS) from the reference frame. The receiver weight is ≈ 400 lbs.

Fig # 4 shows the receiver/reference frame assembly as it would be mounted to the BUS. Additional members may be needed to insure rigidity.

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Fig #5 is a detail of the receiver loading mechanism. The length has been cut from 100" to ≈ 68 ". The stiffening plates have been replaced as per our discussion.

Figs #6 & #7 show the reference frame. Additional members may have to be added to ensure stiffness.

Fig #8 shows the present receivers with the quasi-optics attached. The mounting plate would be welded to the receiver box at the point where the quasi-optics are bolted on the dewar (i.e. the top most part of the box - 72 inches from the rear of the box). The present receivers are supported to the 11 meter telescope with bolts at the back of the box.

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We would like to hold the position
of the reference frame to the following.

AXIAL STABILITY	$\pm 5\text{mm}$	Zenith	to Horiz.
LATERAL "	$\pm 2\text{mm}$	"	" "
ANGULAR "	$\pm 0.3^\circ$	"	" "

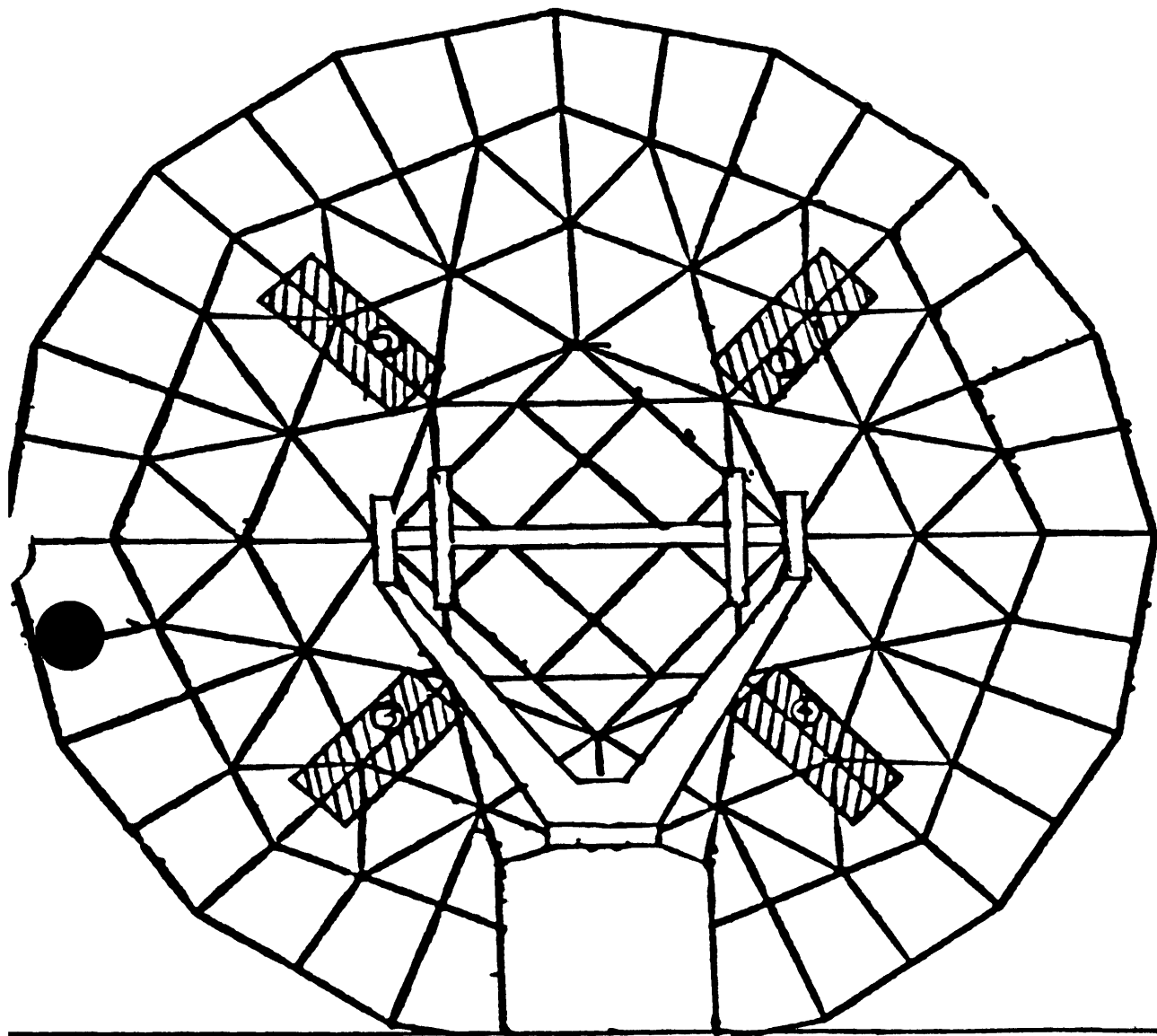
The angular stability differs from that
specified in memo #136.

Thanks again for your help.

Dewey

copy: J. PAYNE
C. BURGESS

POSITIONS 1&2 for PRESENT
RECEIVERS.

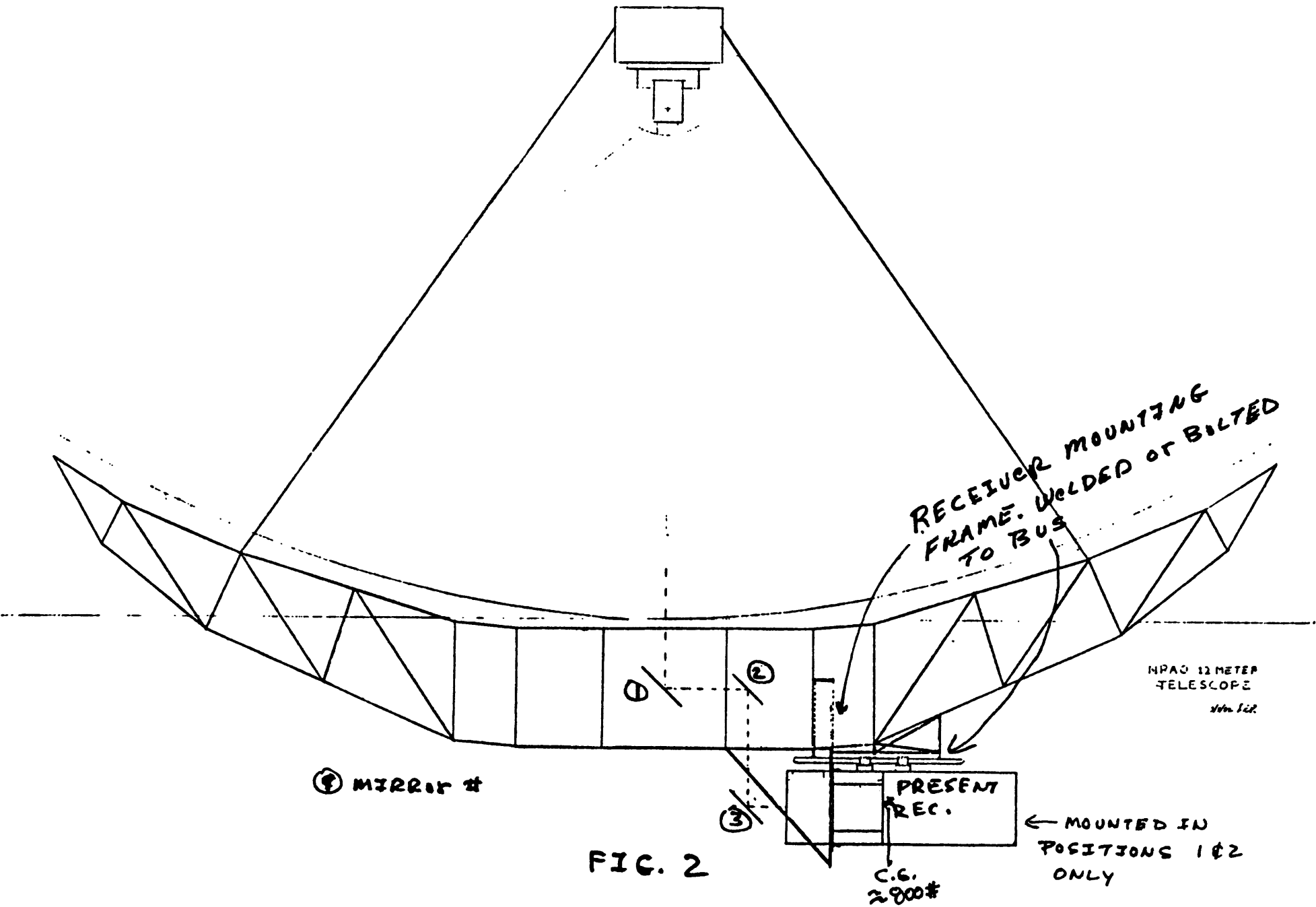


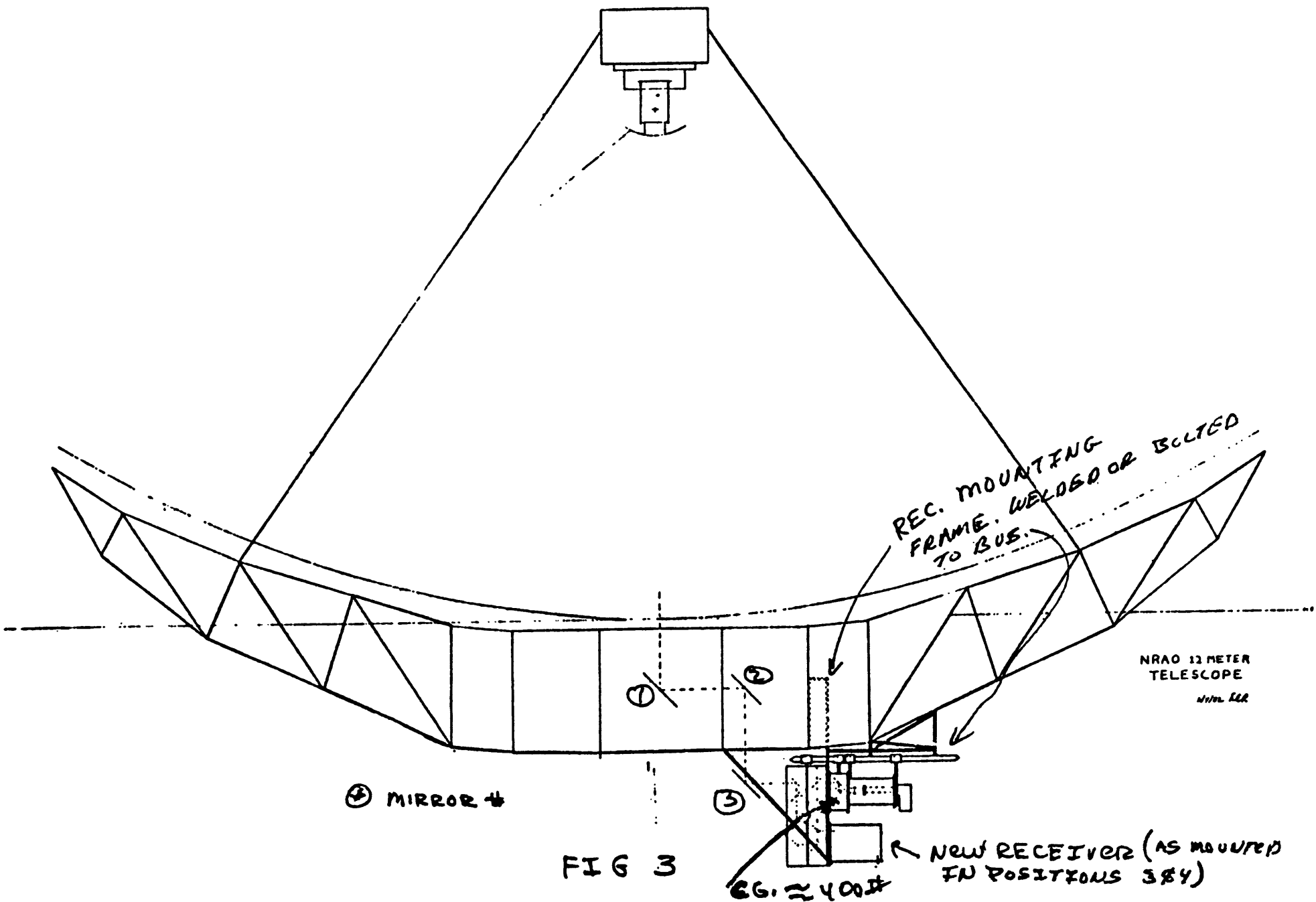
TC010-01

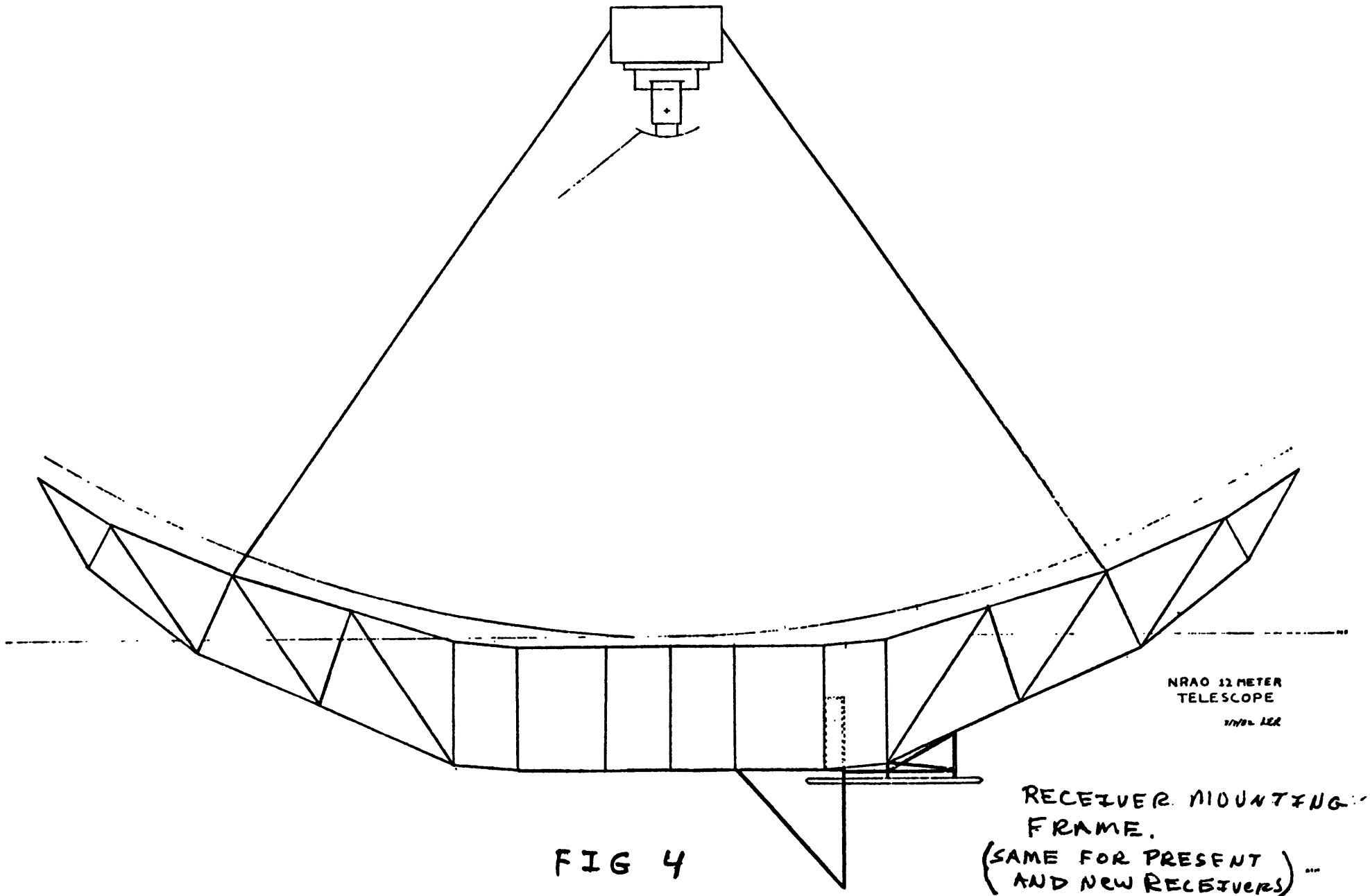
12 METER TELESCOPE
PROPOSED RECEIVER MOUNTING.

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DER

FIG. 1





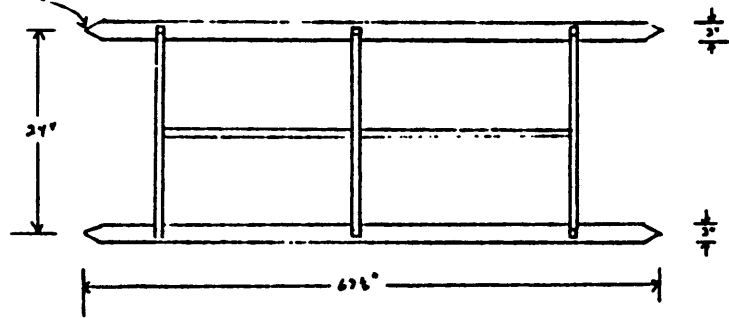


NRAO 12 METER
TELESCOPE
1/17/62 LER

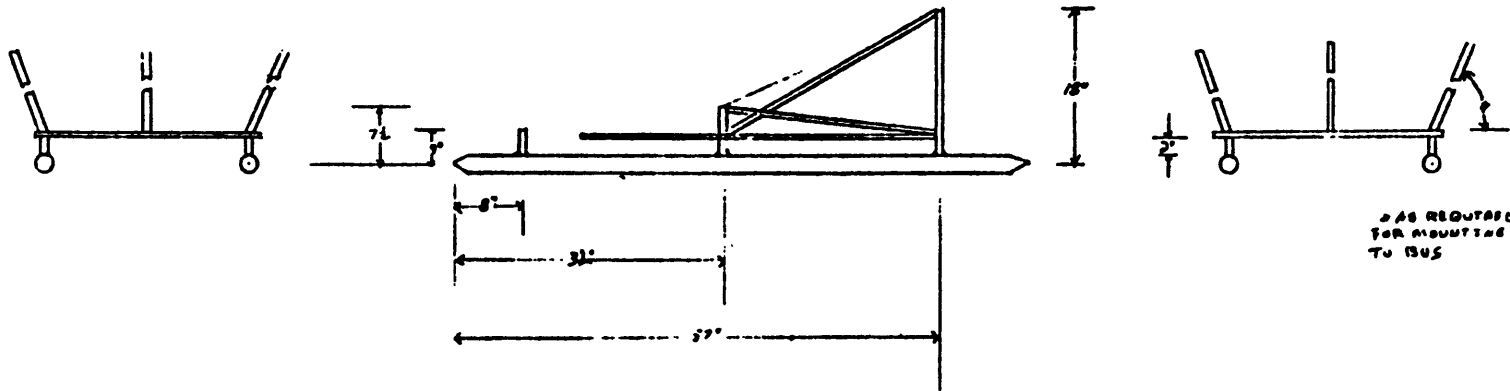
FIG 4

RECEIVER MOUNTING
FRAME.
(SAME FOR PRESENT
AND NEW RECEIVERS)

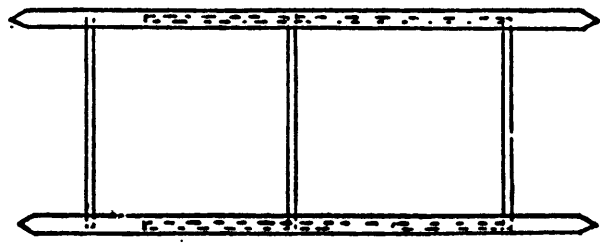
2" STAINLESS
ROD
OR
THICK WALL
TUBE



RECEIVER
MOUNT
DETAIL



AS REQUIRED
FOR MOUNTING
TO BUS



12 METER TELESCOPE
PROPOSED RECEIVER MOUNT

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FIG 5

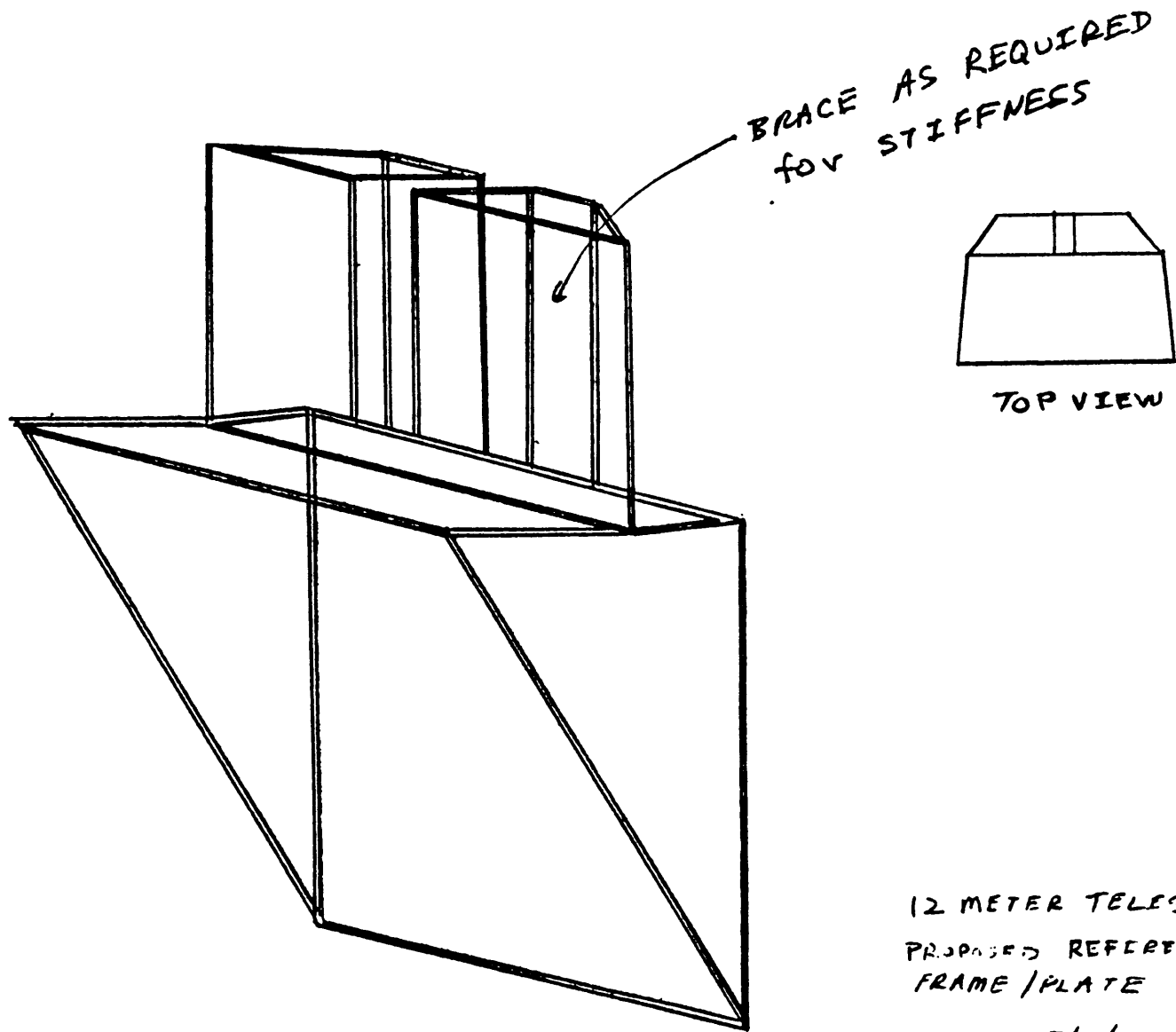
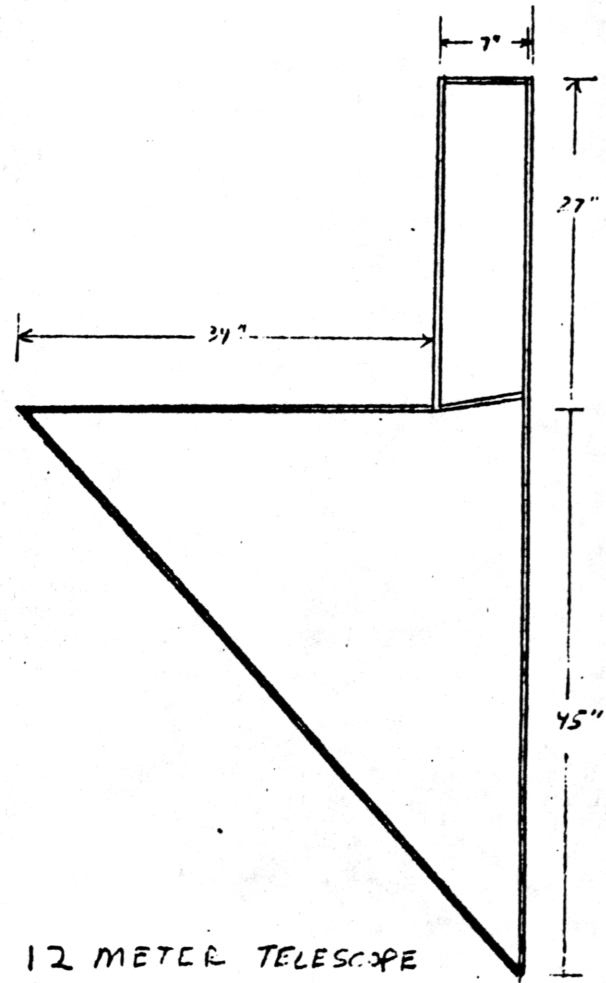
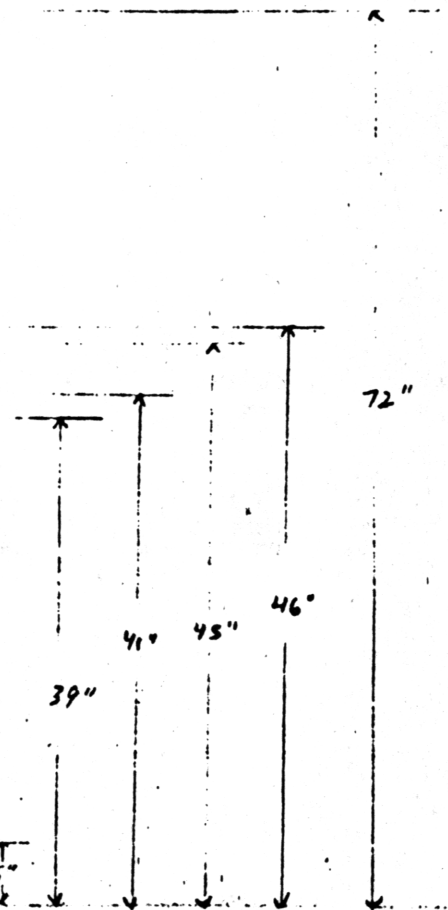
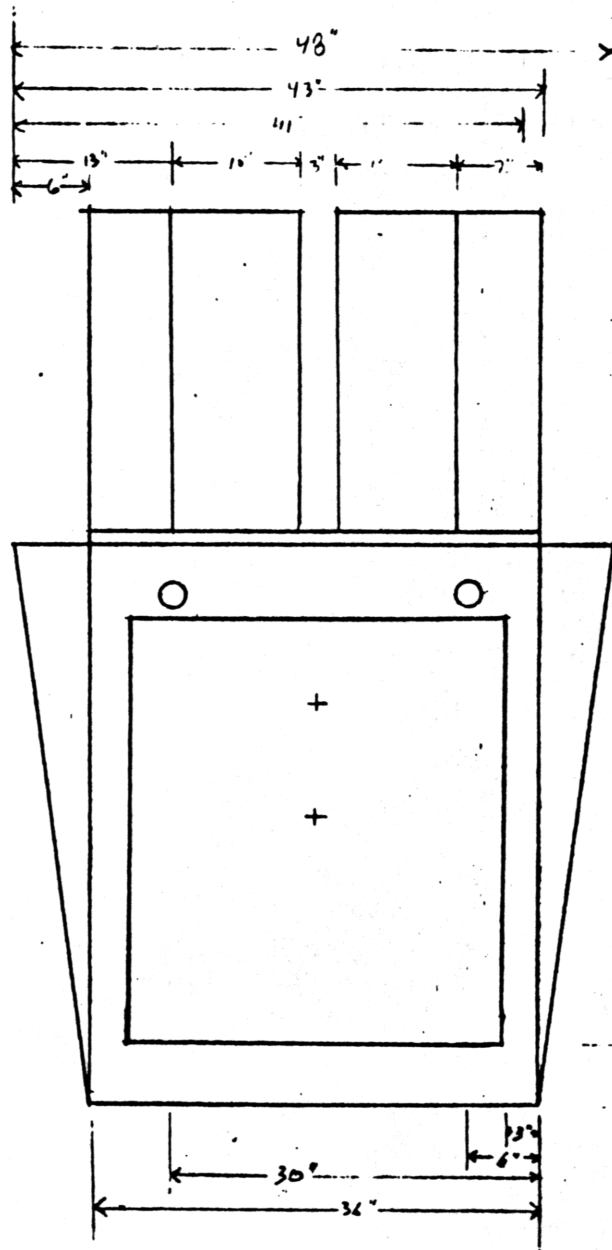


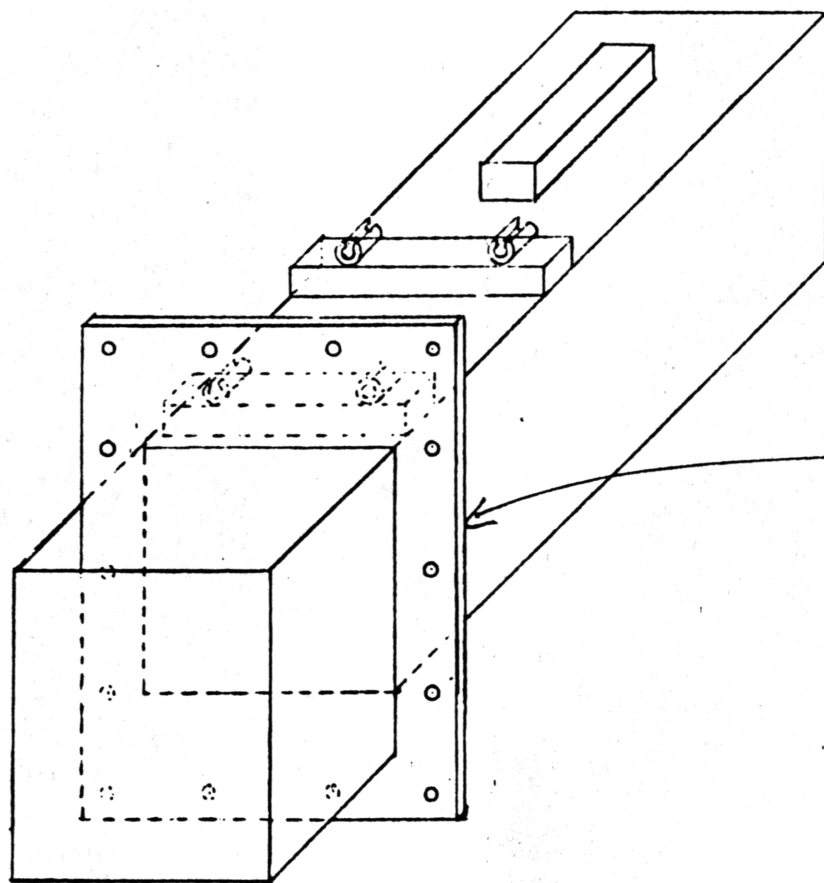
FIG 6

NOT TO SCALE



12 METER TELESCOPE
 PROPOSED REFERENCE
 FRAME/PLATE
 3/5/82 DER

FIG 7
 0.1" = 1"



REC. MOUNTING
PLATE TO BE
WELDED TO
REC. BOX

12 METER TELESCOPE
PRESENT DA, RECEIVER
(in J. field for proposed antenna)

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DER

FIG. 8