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Eng. 8-079

Chief, Supplemental Programs Division, OC

24 JAN 58

Chief, Engineering Division, OC

Proposal for Loaded Stub Antenna

REF: SPN 7-614

1. [] has submitted a proposal for the design, fabrication and measurement of a loaded stub antenna which will fulfill the requirement outlined under Paragraph 2A of the referenced memorandum.

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2. The contractor proposes to perform the following work:

a. Design, fabricate and measure one loaded stub antenna with reflector optimized at [] similar in configuration and not exceeding in size, an antenna shown in a sketch furnished by the Agency. One antenna and impedance measurement data are deliverable items.

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b. Perform a study of a cavity resonator as a means of devising a more efficient antenna than a loaded stub within the specified dimensional limitations. Duration of this study is for a maximum of two weeks, with results submitted in letter form.

The total cost for the work described is \$5818.45 based on a cost plus fixed fee task order type contract. The proposed delivery time is 90 days from receipt of authorization by the Agency.

3. Your concurrence is requested if the items outlined in Paragraph 2 are acceptable. A copy of the cost breakdown figures are attached for your information.

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FIG	25	REV DATE	10/4/50	BY	37169
FIG COMP	33	OPI	56	TYPE	2
FIG CLASS	5	PAGES	6	REV CLASS	C
FIG	22	NEXT REV	2010	AUTM:	NR 10-2



Best no longer exists per

[] SP/EA

10 Feb 1958

Attachment A

OC-E/R+D-EP/RME:mjr (23 Jan. 58)

cc: R+D Subject File/R+D Chrono/OC-E Chrono/EP Chrono

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per

SP/EA
10 Feb. 1958
20 January 1958

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Attention:

[Redacted]

Contracting Officer

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Subject: Proposal for Loaded Stub Antenna

Enclosure: (1) Three copies, [Redacted] Detailed Cost Estimate
(2) One copy, Description and sketch of Antenna

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Gentlemen:

In accordance with your request, we are submitting herewith our proposal for the design, fabrication, and measurement of a loaded stub antenna. This proposal is based on the following work to be accomplished.

1. Design, fabrication, and measurement of one loaded stub antenna with reflector similar in configuration and not exceeding in size the antenna shown in the sketch furnished by the agency. One antenna and impedance measurement data are to be delivered.
2. Study of a cavity resonator as a means of devising a more efficient antenna than a loaded stub within the specified dimensional limitations. Duration of the study is a maximum of two weeks and completion by a letter report of the results to be submitted in triplicate to the cognizant agency representative.

Proposed delivery is ninety (90) days from receipt of contractual authorization.

Our proposal on a cost plus fixed fee basis, included fixed fee, for the work described herein is \$5,818.45. This proposal is considered firm and valid for a period of ninety (90) days from the date of this letter and is proposed on the basis that a cost plus fixed fee task order type of contract will be used for this procurement.

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COPY NO. 1

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[Redacted]

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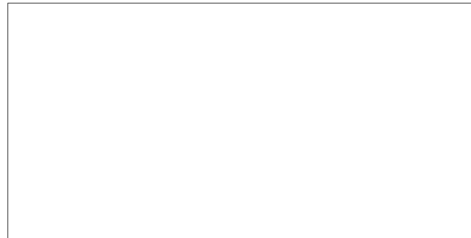
-2-

20 January 58

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If we may be of any further assistance or additional data is required,
it will be gladly furnished upon request.

Very truly yours,



Contract Administrator

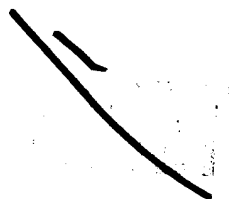
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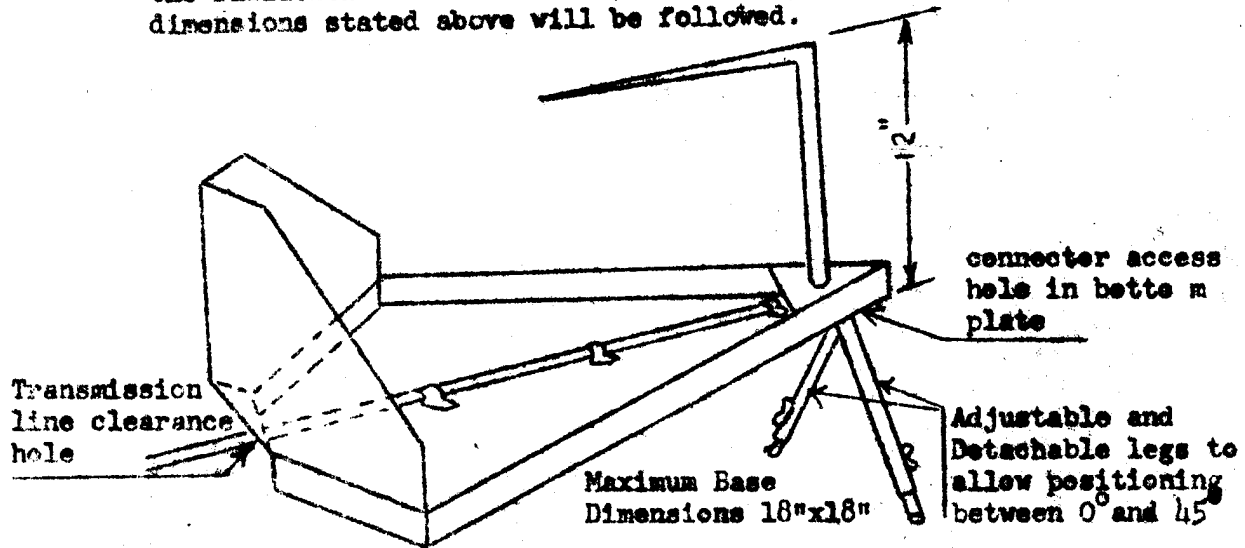
This work will provide for the design, fabrication, and measurement of a loaded stub antenna with reflector optimized at The design parameters are listed on the attached continuation sheets.

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1. Design Parameters

- a. The loaded stub antenna will be mounted on a suitable base with a reflector. It will be used as a transmitting antenna handling power in the order of 50 milowatts. The antenna impedance will match a fixed tuned transmitter output of 50 ohms.
- b. The maximum dimensions of the assembly will be 18" long, 18" wide, and 12" high. If either the length or the width can be reduced from that specified without adversely affecting the forward gain of the antenna, the reduction in size would be desirable. The weight shall be kept to a minimum commensurate with the strength required to withstand normal handling during shipment and field usage. The radiating element will be terminated in a type BNC female connector; transmission line is not required. Provide vertical adjustment for the antenna from 0° to 45°.
- c. The construction shown in the following sketch would be convenient for the packaging intended. This configuration will be used only if the design will not adversely affect the radiation characteristics; otherwise, the maximum dimensions stated above will be followed.



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2. Measurements for | si

a. Antenna Impedance

3. Cavity Resonator Study

The cavity resonator study will extend over a maximum period of two weeks. The purpose of the study is to determine the feasibility of constructing a cavity resonator within the size limitations shown in the sketch and having a substantial increase in gain over the loaded stub antenna. The study will be terminated by a letter report to include references and/or technical data on which the findings would be based. The report will be submitted in triplicate to the contracting officer or his technical representative.

4. Deliverable Items

a. One loaded stub antenna assembly.

b. Antenna study report - 3 copies in letter form.

5. The association of this work with the contract and/or the contracting organization is classified SECRET.

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