

The requirements for space in the new engineering research building currently under construction total 5700 square feet. This includes both laboratory and office requirements and is based upon our current and future research program.

The originally requested space for this section was 6,000 square feet. This has somehow been reduced to 3,000 square feet at occupancy, with a total of 5000 square feet through expansion in 1960.

By careful planning, the section space requirements have been determined not only for initial occupancy, but through the year 1960 and the foreseeable future beyond that date. These space requirements, together with a detailed lay-out, a detailed laboratory furniture list, and an equipment list, have been previously submitted for consideration of management.

The nature of the space medicine research program demands an integrated effort by a team of trained personnel, each of whom is mutually cognizant of the interdependence of the various problem areas involved. A very carefully arranged facility is, therefore, required in order to make efficient use of personnel and equipment. Such an arrangement has been delineated, and does not lend itself <sup>nor require</sup> to a periodic expansion or re-arrangement due to the continuing nature of the long-term research studies to be conducted therein. For these reasons, the requirements have been predicated upon initial installation and will not require subsequent re-arrangement to accommodate expansion.

*expand*  
The 3000 square feet between columns E to K are planned for biological, bacteriological, and bio-chemical research on photosyn-

+ L.H.S. research.



thesis and related aspects of atmosphere regeneration and control, and bio-physical and physiological research on the problems associated with maintaining man in an artificial spatial environment, and the necessary support facilities common to all phases of the total effort, including sterilizer and glass washing room, cold room, experimental animal colony, stores and balance room, etc.

The 2700 square feet between columns 4 and 9 are intended for accommodating the following functions:

1. E.S.A. 7484-516-639, Development of Sealed Cabins

Using Small Animals. This will require an area of 800 square feet to accommodate the experimental chambers, associated instrumentation, and auxiliary physiological and psychological equipment necessary to the successful completion of this study.

2. Reaction Control Simulator for Space Vehicle. This research study will require 800 square feet of space to accommodate the hardware of the simulator, plus the associated instrumentation and controls necessary for the physiological and psychological studies involved.

3. The glass-blowing shop will require 400 square feet to accommodate the equipment and supplies necessary to properly support the activities of the section research team. Since at least 95% of the requirements for this shop will be generated within the section, and since it is planned to man this shop by the section personnel

as necessitated in the course of their work, a location within the section is considered mandatory in order to best serve the needs of the section.

4. Approximately 700 square feet of office space will be required to accommodate the section personnel. While certain space will be available throughout the laboratories for immediate research calculation needs, none is available for regular office-type functions and office furniture.

It is considered essential to the success of the space medicine research program that the space allocated be arranged so as to secure maximum efficiency in use of equipment and research personnel. The detailed laboratory plan previously submitted will fulfill these requirements at minimum cost.