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THE ARMY INDUSTRIAL COLLEGE
Washington, D. C.

Course 1937-1938

THE ALLOCATION SYSTEM
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February 18, 1938

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AIC 150 (2/15/38)

THE ALLOCATION SYSTEM

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THE ALLOCATION SYSTEM

SECTION I -- INTRODUCTION AND WORLD WAR EXPERIENCE

1. Introduction. This morning we are to discuss the Allocation System. It is gratifying to note the interest which this class has taken in the subject, and I am glad that in general your committees approve what we are doing. You will recall the thorough manner in which your committee on "The Industrial War Load and Allocations" covered the ground. I hope that what I shall say now will add a few points that perhaps your Committee did not have time to cover. For further details I refer to your Committee's Report on Problem No. 6, I.I.C., February 2, 1938, and to my mimeographed lecture which, I believe, has been distributed.

The subject, as we already know, is complex -- complex in that it has so many ramifications, yet in principle allocation is simple. The term as generally understood means the assignment of a facility in whole or in part to a procurement agency for its use in peace-time planning and war-time procurement. Please note in this connection that a facility is a factory, plant, or source of material with its pertaining organization and equipment.

The system as you know heads up in the Army and Navy Munitions Board, and covers both Army and Navy. In fact, it goes beyond the services in that it considers civilian needs. For the guiding principles and their authority for allocation, reference is made to the Industrial Mobilization Plan, 1936. It is with the proportional division of industrial resources between the Army and Navy and with the assignment of definite facilities to an authorized procurement agency to meet its needs that allocation is primarily concerned.

That allocation is fundamental in the framework on which all our procurement plans are built is now well recognized. We do not pretend that it is a cure-all. It doubtless has many

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imperfections, to some of which I shall refer later, or to which you will call attention if I should forget. Let us never deceive ourselves into thinking that we will ever have a perfect system or that we shall ever get to that stage in planning where all we need to do is to press a button in the evening and production will be running smoothly by morning. I assure you that if M-Dry ever comes, and it may be nearer now than we realize, there will still be a premium on good judgment and hard work. But with any workness at my hand, I am convinced that the system is sound and workable, furthermore, that it is absolutely indispensable to the timely and orderly procurement of adequate munitions in war.

In view of what you have already covered in your course, I shall confine my remarks mainly to the system as directed through the Allocation Division of the Planning Branch. Furthermore, this Division has been charged by the Munitions Board with the responsibility for maintenance of the allocation records.

Broadly speaking, the activities of the Division covers the following:

- a. Survey of Production Facilities.
- b. Match Capabilities to Requirements
- c. Distribute Industrial Load.
- d. Maintain and Publish Directories.

These responsibilities touch practically every phase of procurement planning. Our work brings us into close contact with the Munitions Board, with the Navy, and with all the other divisions of the Planning Branch. Of necessity, our activities cannot be an airtight compartment.

2. World War Experience.

2. Confusion Due to Competition. To find the reason for an allocation system we need only to glance at World War experience. That experience was had more than nineteen years ago, yet it remains a most valuable lesson upon which to base future policies. A post mortem in the

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light of that experience discloses many things that could have been done before the storm broke out in 1917 which would have eased the stress on the economic structure. It also shows how things should not be done in a future emergency. This is especially true in respect to the distribution of the industrial load.

You are all familiar with the confusion caused by the extreme competition between procuring agencies for preferential treatment at the hands of a few preferred sources. Manufacturers, under a cross-fire of conflicting demands, attempted to please too many procuring agencies, at home and abroad, and became hopelessly overloaded. Promises were given which were impossible of fulfillment. Some of the prime contractors sublet the major portion of their contracts. In reality they became a secondary line of governmental procuring agencies, extending the confusion. What was the result?

- (1) Delay and loss of valuable time
- (2) Overloads on certain areas while capacity remained unused elsewhere.
- (3) Unnecessary congestion in traffic.
- (4) Undue costs, higher prices, exorbitant profits.
- (5) Promises impossible of fulfillment.
- (6) Great confusion.

b. Clearance of Orders. It was in the turmoil of this confusion that the germ of allocation originated. Early in 1917, the General Munitions Board in an effort to relieve the situation established the Clearance Committee. (See final report of the Chairman of the War Industries Board to the President of the United States, February 1919, pp. 12-13. U.S. Govt. Printing Office, Washington, 1935). Orders in which there were known shortages were cleared prior to purchase. Later the requirement of clearance was broadened to include all orders which involved production in congested areas and all orders necessitating new construction.

This method, however, was only an expedient pending the creation of a more effective mechanism. Other agencies came into being. By July 1918, the Commodity Section of the

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Board for clearance, the nature of which depended upon the immediate situation in the commodity in question.

Altogether there were some 29,000 clearances, 80% of which were for the Department, 15% for the Navy, and 5% for all other agencies.

c. Analysis. This method of clearance was applied to orders as such, not to facilities. For the average order neither the procuring agency nor the supervisory agency knew what productive capacity was available. Time did not permit the collection of detailed information from industry. One of the great handicaps referred to in the Final Report of the War Industries Board was the lack of complete and flexible statistics of the manufacturing resources of the nation. To meet that deficiency, a facilities division was created to obtain a working inventory of available facilities. The results of its efforts, however, were not satisfactory and pointed clearly to the fact that such data must be collected and carefully analyzed in peacetime in order that they may be made effective upon industrial mobilization.

In default of detailed information on facilities, clearances were necessarily broad. At best they merely reduced in some measure the areas of conflict. It is to be remembered also that clearance by orders naturally forced the coordinating agency into details which could have been handled more properly by operating personnel.

SECTION II - INITIATION OF A NEW SYSTEM

1. Analysis of the Problem. Naturally those in authority just after the World War felt that the system which had been used was not altogether efficient. Consequently, one of the first problems to which the War Department addressed itself was the formulation of a scheme for assuring adequate provision for future emergency needs through some system of centralized supervision divorced from detailed operations. It was felt also, with due regard for strategic considerations, that the procuring agencies should spread the load evenly over industry. This not only would tend to obviate undesirable competition but would

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reduce the wastages due to idle capacity and would mitigate some of the effects of the usual post war slumps. Associated with the desire to spread the load was the general aim of safeguarding the essential needs of the civilian population and industry at large and of providing resiliency for the shock of any unforeseen contingencies.

It was in the light of these facts emphasized in the hard school of war, that Section 5a of the National Defense Act came into being. Under that mandate, the attack on the "what, where, and how" was inaugurated. It is the "where" with which allocation primarily is concerned, for allocation answers that question. This question of where to get the items in the time and quantities required involves two main considerations 1. It is necessary to determine the capacity of industry or of specific facilities available and suitable to perform the required production. 2. This capacity must be apportioned equitably among the procuring agencies, including the Navy. If there is not enough existing capacity - plants in being - suitable for the purpose to meet all essential needs, then plans must be made for expansion or for new construction.

On the one hand are the needs of the various services - the job, if you please, on the other hand, the industrial resources or facilities - the means to do the job. Through the allocation system requirements related to resources in an attempt to secure a balance for those items which present serious problems in procurement.

2. Purpose of Allocations. But allocation goes further, more specifically

a. It permits exact and desirable prearrangement by the procuring agency and by the plant, for production of munitions. Each allocated plant, forewarned of the task it will be expected to perform, can now make preparations to meet it, thus facilitating early production.

b. It permits orderly distribution of the war load, especially initial production. Without such a system this load might be thrown haphazardly upon the country in an intensive and confused purchasing campaign when time is vital.

c. Undesirable competition, especially for the output of a single plant, is reduced to a minimum.

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d. Allocation should also ease post-war readjustment, since an effort is made to maintain a nucleus of civilian trade in each facility. Essential civilian needs are safeguarded.

In other words, it permits us calmly to make decisions and adjustments now which otherwise would have to be made on or shortly after M-Day. That is of tremendous importance.

3. Decision to Allocate Facilities. Pursuant to the mandate in Section 5a it was decided, early in 1922, that facilities should be allocated. How this was to be done and by whom was a question that caused considerable discussion. There was doubt at first whether allocations, especially to the Navy, could be made except by a superagency. Navy requirements obviously had to be considered. The Army and Navy Munitions Board was established in June 1922, but was not in shape to act on allocations until about three years later. There was no other higher coordinating agency in sight.

Colonel Ferguson, Corps of Engineers, then the Director of Procurement, by-passed the issue in the following significant declaration made on the 6th of February, 1922.

"No matter how allocations are made, they will be changed if they are not properly thought out and made as free from error as possible. No matter who makes them, we or a superagency, they will be changed if they are not made properly."

Observe, if you please, that at the very beginning it emphasized the fact that all elements must be carefully balanced in making allocations, otherwise they will not stand.

It finally was decided in 1922 that the Office of The Assistant Secretary of War would allocate facilities to meet War Department requirements. In any event, judging by world war experience, the War Department could expect to account for the major portion of the total industrial war load. It was felt, however, that the War Department should confine itself to half the productive capacity in any given facility, the remaining capacity would be held as a factor of safety for the Navy and for civilian needs. Several years later, when the Navy began to participate, this policy was modified to provide for limiting the combined load on a given facility to half of its productive capacity.

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On November 1, 1922, The Assistant Secretary directed the Supply Arms and Services to requisition facilities. A blank form was provided for this purpose which, for each facility desired, called for a statement of productive capacity and of land to be placed. It was realized that both of these statements would be estimated only. Not until 1924 was there a real military mobilization plan upon which requirements could be based, and since it is difficult to approach industry without definite requirements, little progress was made until that time, except the emergency adaptation familiarly plan. More to the point, the really important thing was that the allocation system had been launched.

Allocations initially were to be made for survey only, tentative for one year. Those made, however, were never revoked.

The first requisitions naturally were based on the facilities which had served the several services during the war, an unbalanced land distribution from the start which has taken years to adjust. Fortunately, as we shall see later, this condition is now fairly satisfactory when land as a whole is considered.

SECTION III - ALLOCATED AND RESERVED FACILITIES

1. Initial allocations. The first requisitions were received in December, 1922, and the initial allocations were made in January, 1923, just about fifteen years ago. The first Directory of Allocated Facilities, published in February 1923, listed some 5,400 concerns.

In the same year, an important policy, still in effect, was announced (in Memorandum of November 13) as follows

"The allocation of a facility to one supply branch does not mean that another branch is prohibited from getting supplies from that facility, but that the branch to which allocated shall have priority in its output, and that all demands of other branches on this facility must be presented to it through, or by satisfactory arrangements with, the branch or branches to which it is allocated."

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The basic purpose of the policy just quoted was to open the way for full utilization of the allowable capacity of the whole facility.

2. Joint Allocations. However, it has always been preferable, in so far as practicable, to allocate a facility exclusively to a single procurement agency. In this way the possibility of conflicts should be obviated and the burden of contacts on the facility reduced.

But from the beginning it was found necessary to approve joint allocations. From time to time efforts have been made to eliminate or, at least, inhibit them. At present the policy is to discourage joint allocations and to substitute therefor allocation by capacity credit, which will be discussed later.

When a facility is jointly allocated the Service having the basic allocation surrenders its exclusive interest. If the requirements of other services on the facility are relatively small, it is preferable to avoid joint allocation by placing their requirements through the procurement agency holding the original claim.

3. Subsidiaries, Plants, and Divisions. Originally the allocation of a facility included all of its subsidiaries and plants, no matter where located. Consequently, in many cases the allocation was so broad as to permit undue conflicts.

In 1931, it was announced that allocation of facility included the plants and division operated directly under the main office, but did not include corporate subsidiaries. This policy is still in effect. In fact, it has recently been extended to encourage plant allocations. Separate allocations of plants is particularly to be preferred in the case of important plants widely separated or situated in different procurement districts, and in which the main office of the controlling facility permits direct planning contacts with the plant. Allocation by plant not only facilitates detailed planning for production, but also affords a better supervision of load distribution, showing the production in the spot where it actually is located.

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4. Restrictions on Numbers of Allocations

Naturally at first there was a rush for facilities. By the summer of 1925 the Services had requested and had been given more allocations than could be surveyed. Many of those granted earlier had gone out of business and cancellations were in order.

Accordingly on October 7, 1925 the branches were required to furnish "A Priority List of Essential Items" for which procurement plans would be prepared. Allocations were to be limited to facilities required for these essential items. Rating of at least "A" (\$100,000) in Thomas' Register was also stipulated for allocated facilities, except in special cases. This limit has since been reduced to \$50,000. These policies were not strictly followed.

Allocations are not restricted to those items or commodities which present serious problems in procurement. Where potential capacity is greater than four times the combined requirements of the Army and Navy, and where the requirements do not involve substantial amounts of strategic or critical materials allocations are not ordinarily made. These rules of course are not ironclad and must be applied with reason.

On May 25, 1927, the Office of The Assistant Secretary made an important pronouncement in disapproving a request to place schedules for a small number of insignificant commercial items. It stated that "A listing of sources of supply for minor requirements of strictly commercial items in lieu of accepted schedules of production is believed to be inadequate for the purpose of procurement planning." (For further historical details in the development of allocations, see Lecture on Allocation System February 23, 1937, A.I.C., pp. 8-9.)

Allocations are now restricted to those items or commodities which present serious problems in procurement. It is neither necessary nor desirable to allocate specific facilities to produce all the requirements. Most of the material that is of commercial nature can be procured in time in the usual manner under competitive bidding. It is desirable of course to obtain competition wherever it is practicable to do so. It is mainly for the technical items with no commercial counterpart or where there is a shortage in capacity and serious procurement problems will be encountered, that allocation is made, for example, to cover items like guns, military aircraft, ammunition, fire control instruments, gas masks and special motor vehicles.

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It is also necessary to allocate sources of certain contributory materials, examples are machine tools and gages, without which mass production of critical munitions would be impossible. Other examples of important contributory items are woolen cloth, duck and webbing, rubber goods, aluminum products and steel products. For basic raw materials, however, like coal, iron ore, copper and cotton, allocation is not generally made. Plans for such materials fall under the Commodities Division of the Office of the Assistant Secretary of War and will be covered later by a representative of that Division.

The priority of the item determines whether allocation is necessary. No distinction is made between primary and contributory items, nor whether the supply man or service or the prime contractor will place the contract. In other words, it is impossible to draw a straight line, to set up any hard-and-fast rule to separate those items which should be controlled by allocations from those for which allocations are not desirable. Especially is this true in respect to components entering into the finished item. Each case must be weighed on its own merits due consideration being given to the importance of the coordination of the productive program.

To illustrate The Quartermaster Corps has a facility allocated for production of special motor vehicles in the Detroit area. This facility in peace time obtains its chassis frames from another independent concern near by, and it desires to do so in war time. Therefore, other things being equal, it would appear desirable to allocate the independent concern to the Quartermaster to safeguard this contributory source to the prime contractor. Yet it would seem unnecessary to allocate the sales agency from which the prime contractor procures his paints, or the public utility from which he gets his electricity.

5. Contributory Requirements. The question as to whether commodities like machine tools, basic steel, aluminum products, and optical glass should be controlled through commodity committees or by allocation is a matter for careful study in each case. In this connection I refer to our allocation bible, "Planning Branch Circular No. 1," for the guiding policy on borderline commodities.

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It states, in effect, that for basic raw materials, allocations are not generally made. Allocations are granted, however, for essential contributory requirements in commodities which present serious problems in procurement and which are produced by manufacturing facilities subject to diversion to less essential needs.

Such allocations are contingent upon the practicability of making a reasonable division and assignment of the available capacity to the procuring agencies. This normally is decided upon the recommendation of commodity or allocation committees on which all interested procuring agencies have representation. When the plans have progressed to the point where a satisfactory division of capacity can be made, the problem then falls within the purview of the allocation system for administrative control. In such cases, commodity committees normally are continued in a fact-finding and advisory capacity. Typical examples of commodities handled in this way are machine tools and basic steel.

A large group of former allocations have been cancelled covering such raw materials as manganese, copper, cotton linters, coal and coke, as well as some semifinished products that rightly belong under the jurisdiction of Commodity Committees.

Items thus released from allocation control include building materials such as lumber, cement and ~~plumbing~~ supplies, petroleum products, including gasoline, kerosene, lubricating and fuel oil paint and paint products, and office supplies and equipment like paper, pencils and furniture.

Allocations in the great majority of cases are confined to potential manufacturing facilities. Sales agencies, jobbers, and importers are not ordinarily allocated, neither are governmental facilities and facilities outside the continental limits of the United States.

Let me mention what might constitute an exception. The Munitions Board recently divided the shoe capacity of the country between the Army and the Navy. One source

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apportioned to the Navy for shoes was the Federal Penitentiary at Leavenworth, Kansas. Also the optical glass capacity of the Bureau of Standards has been assigned to the Navy.

Initially allocation of some of the more complex facilities was suspended pending study, and the development of requirements. For example, General Motors was not released until 1927, the U. S. Rubber Co. 1928, and L. S. Starrett until 1932. General Electric, Westinghouse, and Standard Oil were suspended in fact until the "Reserved Facility" category was established.

6. Reserved Facilities. Thus far the discussion has been confined mainly to allocations made outright, as in the case of facility assigned wholly to a single service, or jointly to two or more services. I would like to explain now briefly the category known as "Reserved Facilities."

There are two classes, first those reserved by the Munitions Board - so called ANMB Facilities in which both Army and Navy have an interest, and secondly, those reserved by our offices - that is, OASW Facilities. Allocation of the productive capacity in these cases is made by granting capacity credits, especially applicable to certain large facilities in which all services inevitably will have requirements.

In the case of large complex organizations, production is so interdependent on common "bottle necks" and other common factors that the resolution of conflicts through straight allocation is impracticable. The first step was to group for special treatment all those facilities to which straight allocations could not well be applied. These included basic steel, the machine tool and gage facilities, and others jointly allocated in which three or more services were interested. They were listed separately under the two reserved categories to which I have referred.

7. Capacity Credit. Of course you understand the term "reserved" does not mean that such facilities are not available in peacetime to the procuring agencies. Once the productive capacity of a reserved facility has been estimated, portions of the available capacity, commensurate with their needs, are assigned to the services upon request. To these portions of productive capacity is applied the term "capacity credit"

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It is now felt that, in general, when two or more services have or may have important interests, allocation should be by capacity credit. This idealized concept of allocation proved the way for a fuller utilization of the available productive capacity and for more effective coordination of the separate demands by a system of central control. It is especially applicable in situations of indefinite or rapidly changing requirements, where maximum flexibility with centralized control is desirable.

8. Analysis. Perhaps the greatest disadvantage of the allocation system applies to administrative control after M-Dry, especially if the system is carried too far. Some people would allocate for everything - others for only the most critical items. Between these two extremes is a twilight zone through which reason and good judgment must point the way. Excessive allocations will bog down in red tape and might cause the whole system to collapse. As allocations are increased, the opportunity for free competition decreases. Negotiated prices that are too high will bring public condemnation, those which are too low will discourage effective production. Allocations, in order to stand, must be sound and justifiable before Congress and the people. For these reasons, the number in peacetime should be held to a justifiable minimum.

SECTION IV - SURVEYS AND SCHEDULES OF PRODUCTION

1. Questionnaires. To make intelligent allocations not only must requirements be known but also information as to what the individual facility can do is essential. It is necessary to find out how much capacity there is and where it is located. Plants must be studied and the management must be consulted. Obviously, not all firms are suitable for making munitions, nor is it desirable for some of them to attempt such production. The first method used in an effort to get this information was to flood industry with questionnaires relating to shop equipment and productive capacity. In many cases especially in the larger concerns, it would have taken considerable time and energy to compile the information requested. The reaction from industry was not favorable and some concerns complained to the Secretary of War. In May 1923, the use of questionnaires was forbidden. This ban is still in effect.

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2. Bureau of the Census -- General Information

As an alternative it was thought at one time that the Bureau of the Census could be used to assist in surveying industry. Late in 1945, the Bureau sent out special forms to some 15,000 facilities each having a value of product of \$500,000 or more per annum. The facilities were asked to state

- a. Principal commodity produced during the war.
- b. Amount produced
- c. Present status
- d. Type of work for which best suited.
- e. Alterations necessary.

The reports were received in 1927 and resulted in some 500 new allocations.

A second Census census was made from 1927 to 1929, but proved of little value. A third, inaugurated in 1929, completed in 1931, obtained certain information regarding skilled labor for the Navy and the Ordnance Department, but was of no great importance.

Some assistance as to capacity and distribution of industry is also obtained from time to time in publications of other Federal Departments and of State Governments.

3. Territorial Decentralization. Experience has shown, however, that for a detailed study of individual facilities requisite for planning as well as for procurement in war time, a territorial decentralization of activities is essential. Each of the services responsible for actual procurement has divided the country into procurement districts, the number and boundaries of which have been set to meet its particular needs.

In the average district there is a skeletonized staff consisting of the district chief, usually a prominent business man residing in the locality who may or may not be a Reserve officer, an executive assistant who is a Regular officer of the branch concerned, and the necessary clerical personnel. The district organization is maintained for two very important reasons: First, to make detailed survey and study of each plant to be used, and secondly, to form a nucleus for expansion in case of emergency.

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4. Survey of Industry. The Regular Army personnel at the several district headquarters are literally on the "firing line," for it is through them that the great majority of contacts are made with industry. They are the educational and sales^{agencies}/for procurement planning and it is through them that good will, so essential to effective industrial mobilization, is built up. By the procedure known as "survey" they acquire detailed information relative to a facility's equipment, its capacity, and prospective suitability to produce items required by a procuring agency.

Unallocated and Reserve Facilities may be approached freely. Those allocated to another procuring agency may not be approached without prior arrangement with the procuring agency to which allocated. Up to about three years ago, in order not to antagonize industry, surveys could not be made until facilities had been allocated. The normal cycle was requisition, allocation, survey and then cancellation or placement of schedules. This resulted in much wasted effort. The present policy, with more experienced personnel in the field, is to permit preliminary survey in advance to determine suitability before allocation. This policy not only has facilitated planning in the districts but also has obviated much useless work.

We attempt so far as practicable to arrange for joint surveys and to present combined requirements on important facilities at one time. In some cases, especially where two or more executives are stationed in the same city, they act as a joint committee to handle certain problems. Joint production studies have been made of General Motors, Rausch and Lomb, Budd Mfg. Co., Murray Corp., International Harvester, and others.

Let it be remembered in passing, that survey of industry touches one of the vital elements in procurement planning. It will be recalled that one of the great weaknesses at the beginning of the last war was the lack of comprehensive statistics on manufacturing facilities. It is desirable to have a complete and up-to-date survey at all times, not only to facilitate intelligent and equitable allocations but also to furnish data for the utilization of competitive bidding when in the interest of the Government. Obviously, the survey work is a continuing function. This is necessary because neither requirements

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nor resources can remain fixed. Policy calls for a survey of all allocated facilities at least once every three years. It must not be forgotten, however, that surveys entail a great amount of work and are restricted to fiscal limitations. Inquiries last year disclosed that in the districts more time was devoted to surveys and locating prospective facilities than to any other activity.

The supply arms and services, having computed their needs under the mobilization plans set up by the General Staff, apportion these requirements to their several districts. In doing this they attempt to spread the load as evenly over the country as practicable. Based upon the data which they have available or upon additional surveys if necessary, the districts search out the facilities best suited to do the job and submit requests through their branch chiefs to our office for definite assignment of the plants. These requests usually come in on special forms to which reference again will be made. When the requests for allocations are received in the Allocation Division they are analyzed to see if there will be any conflict with other services or with the Navy, and if so, adjustments are made.

If there is shortage of capacity, as in the case of certain critical items, it sometimes becomes desirable to have special studies made by allocation committees on which each interested service is represented. Notable examples where this has been done are in the cases of aeronautical materiel, machine tools, and powder and explosives. In such cases, of course, it is very important that the capacity be divided equitably in line with military priority. Attempt is made to meet requirements with existing plants, but in some cases it is necessary to plan for expansion or for new construction. Special studies have been made by the Construction Division of the Planning Branch and the areas where there is liable to be congestion in the building industry have been spotted. Any new construction is kept out of these areas as far as is possible to do so.

5. Accepted Schedules. After the plants are selected and the allocations approved, the requirements on each facility are finally submitted to the management by the districts on what is termed a "schedule of production". The management's signature to this schedule indicates the willingness and ability of the firm to produce the items at the rates prescribed. The "Accepted Schedule of Production"

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is the link which actually ties in the requirements with the resources.

Let us examine the accepted schedules a little further. They perform a very important function. True, they are not contracts, nor do they bind the Government or the facility in any way. But they do afford an incentive and fix definite objectives for the facility to plan in detail, and through the close contacts thus afforded, the elements of cost may more readily be studied in the development of war time contracts which should protect both industry and the Government. Determination of prices by negotiation at the outset of the emergency will be facilitated. More important, perhaps, is the fact that through these schedules industry becomes conscious of our requirements and our problems.

A large number of prospective facilities have been surveyed. The work has been in progress almost continuously since the World War. From among this number some 10,000 firms have been selected and are now on the allocated list. Thousands of these, without any obligation on the part of the Government, have taken the preliminary steps incident to production. Many have prepared factory plans. They have cataloged the additional machine tools required, they have studied their sources of raw materials, and they have made plans for conversion and expansion from their normal products to the noncommercial military items. In many instances Reserve officers have rendered invaluable assistance in the preparation of production studies pertaining to their own organizations. Without allocation these essential activities could not well be accomplished. This preliminary work will save months of vital time in starting production. In all these activities the War Department has received wholehearted cooperation from industry.

It is to be noted that the survey of industry by the War Department is performed by the Supply Arms and Services in accordance with policies formulated by the higher echelons in the Allocation System. In allocation, the higher echelons are concerned primarily with matters of policy, division of capacity, assignment of facilities, and general supervision over the distribution of load.

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SECTION V - LOAD

Let us turn now to a consideration of load, one of the most difficult yet one of the most vital elements in the whole allocation system.

1. Purpose. The purpose of recording the industrial capacity utilized by the several procuring agencies is to afford:

a. A broad picture of the war load to be placed on industry, so that suitable distribution may be secured, conversely, an indicator of the industrial capacity remaining after the load has been placed, and its location.

b. A check on the load placed on individual facilities or industries to insure that they are not unnecessarily overloaded, that a proper reserve is maintained, and that civilian needs are considered.

c. An indication of the amount of conversion, expansion and new construction that will be required to carry the load.

d. Data for analysis of the problems of labor, power, construction and transportation.

2. Potential Capacity. Load is the proportion of the potential capacity of a facility which will be used to meet war-time requirements. Potential capacity, which is the maximum output of an existing facility, is taken as the base against which load is computed. This base is given an index value of 250 points regardless of the number of shifts or hours that the facility can be operated. It is assumed that in war-time the great majority of facilities can run on a 24 hour basis, usually three 8-hour shifts. Since three 8-hour shifts are taken to be equivalent to two and one-half times one shift, the 250 point index is based essentially on the scale 1 shift equal to 100 points, 2 shifts, 200 points; and 3 shifts, 250 points.

3. Reporting of Load. The load is now reported separately-increase item under two categories, namely, item and plant.

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a. Item Load is the number of points of capacity out of 250 potential in any given item which is to be absorbed in meeting a given schedule. For example, suppose we have a facility producing only two items, shoes and overcoats, and that the war load takes the maximum output from the shoe department. The item load for this commodity then would be 250 points potential.

b. Plant Load on the other hand is the proportion of the 250 points potential of the whole plant which is to be absorbed in meeting given schedule. In the illustration just given, if the production of shoes absorbs one-half the activities of the whole facility, and we take all the shoes, then the plant load for shoes would be half of 250 or 125 points. (Exhibit "A" illustrates method of computing and reporting load).

c. Commodity Symbols. Item loads are grouped into general categories to correspond with subdivisions of productive industry. To each commodity group is assigned a commodity symbol consisting of a combination of letters on the plan outlined in the Federal Stock Catalog.

4. Verification of Loads. In spite of the importance of load it appears that no successful effort to obtain comprehensive data thereon was accomplished until 1935. On October 1 of that year the S₁S rendered load reports for all their allocated facilities. Reports of changes in old loads and reports for new loadings are now being submitted as they occur. Trivial load changes are not reported.

All loads are required to be verified at least once every three years. Since the last revision of Planning Branch Circular No. 1, Nov. 14, 1936, 64% of the allocation listings have been covered by revised C.A.S.V. Forms 100. Two services report 100% coverage. allocations in force for more than five years and against which no load has been reported are considered as potentially available for cancellation and reassignment.

5. Limitation on Loads. Almost from the start, consideration has been given to limitations on load. In 1926 it was suggested that a factor of safety be reserved

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In each allocated facility, and in that same year the SAs were required to report all facilities being loaded in excess of half their peace-time capacity. In 1932, loads were limited to half the productive capacity except in specific cases authorized in advance. This policy with certain modifications is still in effect. Any capacity added by plant expansion or new construction may all be taken for the military program.

By proper supervision in the higher echelons, a reasonably even distribution of load over industry is assured. Individual plants are not loaded beyond allowable capacity. As a result the load as a whole is now fairly well distributed. There should be no vicious competition among the producing agencies for the output of a single plant as was so prevalent in the last war. Overloading of plants and men will be reduced to a minimum.

SECTION VI - ARMY AND NAVY MUNITIONS BOARD.

1. New Participation. Let us examine now some features of Navy allocations. The Army and Navy Munitions Board was established in 1922, but made no allocations until about three years later. In 1925 one of its committees agreed to joint allocation of seventeen facilities, the first to the Navy. From that time on allocations to the Navy increased, yet it is only within the last few years that they have assumed real significance.

The past year has seen a greatly increased activity on the part of the Navy. This is reflected in about a 50% increase in the number of Army and Navy Munitions Board Facility Listings. To secure a proper balance between the Army and Navy will require a great deal of give and take and coordination through the medium of the Army and Navy Munitions Board. Productive capacity must be equitably apportioned. In case of conflict military priority set-off in war plans and by the Joint Board will govern. This will mean ultimately a readjustment of many of the allocations and placement of additional facilities in the Reserved (AMR) category, as has been done already in certain cases. (Exhibit "D-1" shows facilities by categories and changes during past year.)

2. To illustrate, let me mention the medical, surgical, gage, machine tool, projectile, and steel facilities in which the capacity has been apportioned and

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recorded. Allocation or commodity subcommittees are now at work on airplane bombs, shell forgings, optical and precision instruments, aluminum products, blankets, woolen cloth, duck and webbing, powder and explosives, rubber goods, all types, wire cable, and radio. It is expected that a division of capacity for some of these items will be made in the near future. (For further discussion of the foregoing items, see Lecture on Allocation System, Feb. 23, 1937, I.L.C., pp. 17 18).

3. It seems appropriate at this time to single out three extremely important categories for a little more discussion. Reference is made to aeronautical, machine tool and powder and explosives.

a. Aeronautical Facilities As regards production of aircraft a division of capacity between Army and Navy of aircraft facilities has been made essentially on a 50-50 basis. This 50-50 policy also holds with respect to airplane parts manufactures. The division of airplane facilities was made upon the recommendation of the Aeronautical Board, and the policy was followed by the Munitions Board to allocate facilities as far as practicable outright to the services. Some officers now feel that all aircraft plants should be Reserved (ANMB) Facilities with half interest in each to Army and half to Navy. Other officers are just as strongly opposed, and believe that single allocations should stand unless very cogent reasons can be shown for the change. The Aeronautical Board has a standing request to consider continuously all current work and make suitable recommendations whenever a change in allocation status becomes desirable. Only a few days ago a recommendation came through from the Board that the Curtiss Aeroplane Division, Buffalo, and the Glenn L. Martin Co., Baltimore, be changed from single allocations to reserved facilities with a 50-50 capacity credit for each service.

The Aeronautical Board has submitted also its recommendations to cover aeronautical loads to be placed on certain large automotive concerns. After considerable study and some changes, the loads have been approved by all concerned. This was an important accomplishment during the past year and opens the way for detailed aeronautical planning with the automotive facilities in question. (Aeronautical Board, Case No. 84).

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b. Machine Tools. Similarly, much work has been done on the machine tool problem during the past year. In 1936, the machine tool facilities were allocated, some outright to the Navy, some to the Army, and others were held as a reserve for both Army and Navy. It is recognized of course that adjustments in these allocations will have to be made as requirements change and planning develops.

Since 1936, plant surveys have been made of about half of those on the list. We are carrying at present on our allocation records as sources and potential sources of machine tools some 350 firms. There are about 150 concerns in the country now engaged primarily in producing machine tools. Some of the plants we are carrying are sources for special and single purpose machines, others make machine tools only as a side line.

In our planning we need the capacity of each machine tool facility by size and type of machine. At a recent two-day conference held in the Planning Branch with representatives of the industry the whole problem was carefully considered. The National Machine Tool Builders Association agreed to send out questionnaires, which we helped to prepare, to get the actual production of each firm from July 1, 1936, to June 30, 1937, by types and sizes, and their estimated potential capacity. The output over the period mentioned should reflect quite well the potential war-time production, since the industry during that year was running at about maximum capacity.

But irrespective of peace time allocations for machine tools, our plans provide for central control in war time. It is anticipated that within a few hours after M-Day the War Service Committee for this industry will be in Washington to sit down with corresponding personnel of the Army and Navy to allocate or apportion the capacity in accordance with priorities dictated by the situation at that time.

c. Powder and Explosives. Along this same line is the question of powder and explosives, and the presses and special machinery necessary in their manufacture. At a recent conference with the Hydraulic Machinery Manufacturers Association a working committee consisting of representatives of the industry and of the Army and Navy was created to study the subject of hydraulic machinery with special reference to forging presses, and machinery for making powder and explosives.

This committee on hydraulic machinery will work in close cooperation with the Ordnance personnel now engaged at Wilmington on the preparation of the joint powder and explosives plan. When this plan is complete and approved it will indicate a division of capacity upon which allocation and load can be based. In the meantime, DuPont, Hercules, and Atlas Powder Companies, the main existing commercial facilities, are carried as reserved without definite load so far as powder and explosives are concerned. It is to be noted that a tremendous expansion of existing capacity will be necessary, involving a large amount of new construction.

4. Routine At this time I would like to explain more fully the normal routine in making allocations. (Exhibit "B"). Take the Army side first. A request for an allocation or capacity credit comes in from a supply arm or service on O.A.S.W. Form 100. If the request is in order and it is evident the Navy has no interest the allocation is approved by our office. If there is any possibility that the Navy has or may have an interest, the request is referred to the Munitions Board for consideration. If it finds that the Navy is not concerned our office is so advised and the allocation is granted in the usual manner. On the other hand if the Navy does have an interest, the matter is adjusted by the Munitions Board alone or by assistance of an allocation subcommittee which it may appoint composed of representatives of the interested services, Army and Navy. Conflicts exclusively among the supply arms and services are adjusted by our office without reference to the Munitions Board.

Similar procedure is applicable on the Navy side, except that through the Munitions Board our office receives copies of all approved allocations or capacity credits to the Navy in order that load data and other records may be complete at all times. No loads of course can be placed on a Reserved (ANMB) Facility without prior approval of the Army and Navy Munitions Board.

SECTION VI. - DIRECTORIES AND FILES

Before leaving the subject of allocations, it seems appropriate to examine the records. As indicated before, the Allocation Division is the office of record for all matters pertaining to allocations. It maintains a master file to which you perhaps have seen recent press references. The division also publishes periodically several Directories.

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1. Master File The master file consists of completed O. A. S. W. Forms Number 100 which originate in the field and carry an abstract of pertinent survey data. The forms are arranged alphabetically by facilities in a visible Kardex file. These forms are the media between this office and the operating agencies, through which the field requisitions allocations and capacity credits. Exhibit "C" shows one of the forms. The data on file for each allocated facility include such information as name and address, list of plants operated with their location, number and kind of employees, financial rating, normal production, items to be produced in an emergency, date of accepted schedule, and the capacity utilized by the load. In support of these data is a mass of detailed survey information maintained by the services and the districts. In the current section of the Master file are recorded transactions covering over ten thousand facilities. As one writer recently put it, "about 12,000 names now slide out on steel files for ready reference at the touch of a finger." (Business Week Bureau, 12-12-36).

2. Directory of Allocated and Reserve Facilities. From the Master file is maintained a Directory of Allocated and Reserved Facilities, wherein the names of facilities arranged geographically according to zone, state and city. To the field and other interested agencies it indicates the status of allocations in force, and is for them the basic allocation reference.

3. Directory of Load. Another document is the Directory of Load. In this Directory are indicated not only the facilities to be utilized for each commodity, but also the geographical distribution of the load under each commodity category by zone, state, and city, and the load placed or to be placed on each facility. The commodities are organized into over fifty major industrial groups with appropriate subdivisions under each group. A large amount of work is involved. Yet it is justified, for it affords a means for checking allocations and for assuring a proper distribution of load. Inequitable loadings as between and within different procurement districts automatically are signalled for correction.

4. Index of Allocated and Reserved Facilities. Still a third file is kept by the Allocation Division, namely an Index of Allocated and Reserved Facilities. It

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is published simultaneously with and forms a cross reference to the two directories just described. Essentially the index is a single list in alphabetical order showing name and address of each facility, the procurement agency to which allocated or reserved, and the commodities which each facility is to furnish.

5. These records are maintained on some 50,000 unit cards posted day by day. The information recorded is published to the procuring agencies by lithographic reproduction. By this means, both the Army and Navy, including their respective field agencies are kept advised of the status of allocations and the distribution of load. These records are kept in such shape as to be readily available for use by the Munitions Board or a superagency.

6. Analysis of Exhibits. At this point let us examine Exhibits "D", "E", and "F". They are self-explanatory, and require only a glance to note their significance.

For example, Exhibit "D" indicates how numbers of allocations have run by services since 1923. Note that with exception of the Navy there was a comparatively rapid build-up in numbers for the first few years, then a more or less gradual reduction which is still in progress as the unjustifiable allocations are being culled out. The large reduction in the Quartermaster Corps number in 1928 was due largely to the cancellation of its food facilities. The Navy started in with 17 (joint with the Army) in 1926 and has had a conservative increase since that date.

Exhibit "E" shows the percentage distribution of allocations and load (money value) by zones and services as compared with the 1929 production (money value). The total Army loads for Zones I and II are only slightly larger than the 1929 production figures. The Signal Corps load for Zone I is 59 per cent of the total, yet it must be remembered that about 75 per cent of the communication equipment capacity

* Figures for column headed "1929 production" in Exhibit "G" were taken (nearest whole per cent) from Committee Report on Problem No. 12, ' I.C , Course 1936-1937

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of the country is in Zone I. The Chemical Warfare Service shows a very favorable load with respect to Zone I, and a comparatively heavy load in Zone II. Yet if the load to be placed on Edgewood Arsenal were included, Zone I figures would be materially increased. As will be seen later in Exhibit "F" the Signal Corps, Medical, and Chemical Warfare loads are small in comparison with the whole, and do not greatly influence the percentage distribution of the total War Department load.

The Air Corps shows 34 per cent load for Zone I, a slight over load in comparison with present aircraft productive capacity of about 30 per cent. For Zone II it shows 49 per cent load as against present capacity of about 40 per cent, and for Zone IV, 17 per cent load as against about 30 per cent present capacity.*

The Ordnance Department load in Zone I shows a close correlation with 1929 production, while Zone II load is slightly above 1929 production. Its load in Zone IV/comparatively small but is expected to increase (Exhibit "D-2" shows facilities by W.D. Zones and changes during the past year).

Cost figures for Navy load were not available, but is to be noted that 59 per cent of its allocations are in Zone I.

While these figures do now show local overloads, if any, they do indicate a fairly equitable distribution of the load as a whole in comparison with 1929 production.

Exhibit "F" shows the number of allocations and capacity credits (interests) at the present time by services against corresponding loads in dollars for the first year only. The average load per interest is about \$700,000.

It is interesting to note that the Ordnance Department carries almost half the total allocated load on its 104 interests (allocations or capacity credits), an average of some three million dollars per interest. The Quartermaster

* Present capacity figures taken from Committee Report on Problem No. 12, A.I.C. Course 1936-1937.

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Corps, on the other hand, has 5901 interests to meet less than one-third the total load, an average of about \$300,000 per interest. This suggests the thought that typically the Ordnance deals with relatively large-scale industrial units.

It is to be noted that the Quartermaster Corps load given in Exhibit "F" does not include subsistence.

At the moment the Navy has 656 active interests. Assuming its requirements at about 20 per cent of the whole its load would fall somewhere under the Q.M.C. load, between one and one and one-half billion dollars.

SECTION VIII - M-DAY ACTIVITIES AND DECISIONS

1. Plans for Expansion. Detailed plans have been made for expansion of the three facilities divisions in the allocation system to handle the increased work in an emergency. The duties will be analogous to those in peace time. The Allocation Division will administer allocations within the War Department, and will submit requisitions to the Army and Navy Munitions Board, or higher authority, for additional facilities required to meet the needs of the supply arms and services. The Facilities Division of the Munitions Board will coordinate and administer allocations between the Army and Navy, and the Facilities Division of the superagency for the nation as a whole. Suffice it to say that the organization set-up is simple and flexible and built for smooth transition to an emergency basis.

2. Authority. For authority to suspend competitive bidding reference is made to Section 3709, Revised Statutes, which reads in part that "When immediate delivery or performance is required by the public exigency the articles or service required may be procured by open purchase or contract. * * *" This was used in the World War. Let me quote one paragraph of Mr. Baker's letter of April 12, 1917 (General Orders No. 49 W.D. 1917): "ORDERS

1. It is hereby declared that an emergency exists within the meaning of Section 3709, R.S., and other statutes which except in cases of emergency from the requirement that

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contracts for and on behalf of the Government shall only be made after advertising, as to all contracts under the War Department for the supply of the War Department and the supply and equipment of the Army and for fortifications and other works of defense, and until further ordered such contracts will be made without resort to advertising for bids in the letting of the same."

Section 120 of the National Defense Act gives specific authority to the President to place obligatory orders in war or when war is imminent, and to appoint a Board on Mobilization of Industries Essential for Military Preparedness.

Back of all, of course, are the war powers of the President.

3. Adjustments and Decisions. Inauguration of the system probably will require some adjustment in peace-time allocations. By virtue of the complexity of the problem some decisions must of necessity be left for M-Day. Current governmental orders in allocated facilities naturally will be given full consideration. Any necessary or desirable adjudications in such orders or allocations will be made by the proper authority as circumstances may dictate. It is expected that government contracts in force on M-Day normally will be carried to completion. If allocations are adjusted in peace time to take full advantage so far as practicable of experience on current work as is now being done, then the number of changes in allocations as a result of such orders will be reduced to a minimum.

The extent to which allocations are to be applied will depend upon the nature of the emergency and other circumstances which cannot now be determined. If it is a maximum effort, the problem is comparatively simple. If a lesser effort, a greater degree of competitive bidding may be used. In either case some desirable competition will obtain even among allocated facilities within each service. During the period of strained relations information would undoubtedly be available upon which reasonable decisions could be made as to what items should be placed in allocation and what facilities should tool up for their production.

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Let us remember that the system is flexible --not fixed--
moving--not static--responsive to changing conditions.
If it is not kept up-to-date and fully in accord with the
times it will lose of course much of its value.

SECTION IX -- SUMMARY

Conclusion. In conclusion, the Allocation System
grew out of World War experience. Its purpose is to obviate
undesirable procurement features of that experience in a
future emergency, and to facilitate procurement. To the
procuring agencies are left the operational details, to the
central agency is given an effective means through which war-
time control measures may be applied. Allocation enters both
phases of the responsibility under Section 5a. It is an
essential step in procurement planning. It also enters
industrial mobilization in that the system is built to
continue to deal with those industrial units which are to
function in war.

Within the past few years, under the direct
personal leadership of the present Director of the Planning
Branch, the Allocation System has developed into a potent
force in the scheme of industrial preparedness. True, only
the pattern has been finished. Much work remains to be done.
But policies have been established and principles enunciated
to guide future activities. In all procurement planning it
is axiomatic that the efforts of the Army and Navy should be
coordinated. That coordination is provided for in the
Industrial Mobilization Plan of 1936. The Army and Navy,
through the Army and Navy Munitions Board, are now working
side by side to match requirements in the solution of
allocation problems which are common to both services.

Through the Allocation System effective
decentralized procurement planning is realized. In fact,
allocation is vital in the framework upon which is built
all detailed plans. In the words of Colonel Harris, it is
the key to the supervision of procurement.

LOAD DIAGRAM

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CAPACITY

A AUTOMOTIVE DEPT

Half of total activity of the facility devoted to production of automotive equipment

B AIRCRAFT ENGINE DEPT

One-fourth of total activity of the FACILITY devoted to production of aircraft engines (Potential capacity 3000 engines yearly)

C DROP FORGING DEPT

One-fourth of total activity of the FACILITY devoted to production of miscellaneous drop forgings

EXISTING FACILITY

COMMON DENOMINATOR

See par 3, page 27, Planning Branch Circular No 1, November 14, 1936

B
AIRCRAFT
ENGINE
DEPARTMENT

LOAD

2250 engines yearly
 $\text{Item Load} = 250 \times 75 = 190 \text{ Points}$
 $\text{Plant Load} = 190 \times 25 = 48 \text{ Points}$

Half of Drop Forge Dept converted to production of armor plate castings by installation of high frequency induction furnaces.
 $\text{Item Load Displaced} = 250 \times 50 = 125 \text{ Points}$
 $\text{Plant Load} = 125 \times 25 = 31 \text{ Points}$

TOTAL PLANT LOAD = 48 + 31 = 80 Points

A
AUTOMOTIVE DEPT

RESERVE

C
DROP FORGE
DEPARTMENT

ALLOCATION FLOW CHART

SUPERVISION

OPERATION

SUPERVISION

SUPERVISION

OPERATION

L.S.

W R A
FACILITIES DIVISION

PLANNING BRANCH,
O A S W
ALLOCATION DIVISION

ARMY & NAVY
MUNITIONS BOARD
FACILITIES DIV

WAR PROCUREMENT
PLANNING SECTION,
FLEET MAINT DIV
O N O

OFFICE OF RECORD

APPROVED REQUESTS
FORMS & 100

Q	O	A	E	C	S	M
---	---	---	---	---	---	---

7 SUPPLY ARMS
AND SERVICES

Q	O	A	E	C	S	M
---	---	---	---	---	---	---

JOINT
ALLOCATION
SUB-
COMMITTEES

Bu	Bu	Bu	Bu	Bu	Bu	Bu	Bu	SH	M
A	NA	ENG	LR	OPD	MS	YD	SA	EST	C

10 BUREAUS AND OFFICES
OF THE NAVY DEPT

Bu	Bu	Bu	Bu	Bu	Bu	Bu	Bu	SH	M
A	NA	ENG	CR	OPD	MS	YD	SA	EST	C

Q O A E C S M

49 DISTRICT OFFICES

Q	O	A	E	C	S	M
10	14	6	6	5	4	4

12 NAVAL
INSPECTION DISTRICTS

--	--	--	--	--	--	--	--	--	--

INDUSTRY

7 PRODUCTS DESIRED	ITEM	QUANTITY (GIVE UNIT OF MEASURE)		ITEM LOAD	PLANT LOAD	SHIFTS/HOURS PLANNED	SCHEDULE		COMMODITY SYMBOL
		TOTAL	MOS				PLACED (DATE)	TO BE PLACED	

8 NAME AND/OR ADDRESS OF PLANTS OR DIVISIONS OPERATED

9 NAME AND ADDRESS OF SUBSIDIARY FACILITIES AND/OR DIVISIONS CONTROLLED BUT NOT ACTUALLY OPERATED

13 ALLOCATION CAPACITY CREDIT APPROVED
DATE
(SIG)

ARMY AND NAVY MUNITIONS BOARD

10 ALLOCATION CAPACITY CREDIT REQUESTED
DATE
(SIG)

11 ALLOCATION CAPACITY CREDIT RECOMMENDED
DATE
(SIG)

12 ALLOCATION CAPACITY CREDIT APPROVED
DATE
(SIG)

(OVER)

(OVER)

W D ZONE NO

DISTRICT

PROC AGENCY

ALLOCATION DIVISION PLANNING BRANCH OASW

1 FACILITY NAME

2 ADDRESS (MAIN OFFICE)

14 RESERVED FACILITY

OASW

ANMB

↑ START TYPING HERE
AND AFTER TYPING ON
BOTTOM LINE HAS BEEN
COMPLETED DETACH THIS TAB

FOR DETAILED INSTRUCTIONS SEE
PLANNING BRANCH CIRCULAR NO 1 OASW

IF ANY SPACE ABOVE IS NOT SUFFICIENT
ENTER IN THAT SPACE AND CONTINUE
ON REVERSE SIDE OF FORM.



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1/1/38 FACILITIES ALLOCATED OR RESERVED - SUMMARY BY YEARS - - - 1923 - 1938

	1923	1924	1926	1928	1935	1936	1938	
TOTAL	\$,450	13,872	20,455	15,142	12,624	10,728	9,515	TOTAL
RESERVED FACILITIES								
TOTAL					597	370	533	TOTAL
ANMB					355	272	423	ANMB
OASW					242	98	113	OASW
JOINTLY ALLOCATED FACILITIES (ARMY)								
	62	217	460	271	185	205	154	
SINGLY ALLOCATED FACILITIES								
TOTAL	5,388	13,655	19,995	14,871	11,842	10,153	8,825	TOTAL
NAVY			17	171	367	395	397	NAVY
ARMY	5,388	13,655	19,978	14,700	11,475	9,758	8,428	ARMY
Q	2,463	9,110	13,665	9,232	7,805	6,604	5,772	Q
O	1,082	1,328	1,375	1,140	874	858	793	O
A	400	590	700	623	470	422	404	A
E	82	993	2,134	1,738	854	721	443	E
C	199	284	330	304	372	278	243	C
S	290	426	522	467	506	350	348	S
M	872	924	1,252	1,196	594	525	425	M

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FACILITIES, ALLOCATED OR RESERVED

1936 - 1938

BY CATEGORIES

	TOTAL	RESERVED			JOINTLY ALLOCATED	SINGLY ALLOCATED		
		TOTAL	ANMB	OASW		TOTAL	NAVY	ARMY
JUNE, 1936	10,728	370	272	98	205	10,153	395	9758
%	100	3.4	2.5	.9	1.9	94.7	3.7	91.0
Net Changes - June - Dec 1936								
Additions		9	14		1			
Cancellations	433			5		443	21	422
JANUARY, 1937	10,295	379	286	93	206	9,710	374	9336
%	100	3.7	2.8	.9	2.0	94.3	3.6	90.7
Net Changes - 1937								
Additions		157	137	20			23	
Cancellations	780				52	885		908
JANUARY, 1938	9,515	536	423	113	154	8,825	397	8428
%	100	5.6	4.4	1.2	1.6	92.8	4.2	88.6

EXHIBIT

- D - 1

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FACILITIES, ALLOCATED OR RESERVED

- 1936 - 1938 BY WAR DEPARTMENT ZONES

	TOTAL	ZONES			
		I	II	III	IV
JUNE, 1936	10,728	5,254	3,756	943	775
%	100	49.0	35.0	8.8	7.2
NET ADDITIONS - June - December				34	
NET CANCELLATIONS - June - December	433	319	120		28
JANUARY, 1937	10,295	4,935	3,636	977	747
%	100	47.9	35.3	9.5	7.3
NET ADDITIONS - 1937					
NET CANCELLATIONS - 1937	780	440	319	16	5
JANUARY, 1938	9,515	4,495	3,317	961	742
%	100	47.3	34.8	10.1	7.8

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1/1/38 ALLOCATIONS AND CAPACITY CREDITS - BY PROCURING AGENCIES AND CATEGORIES

	FACILITY INTERESTS	A L L O C A T I O N S		CAPACITY	CREDITS
		SINGLE	JOINT	N M B	O S W
TOTAL	9880	8825	327	596	132
%	100%	89.4	3.3	6.0	1.3
NAVY	656	397	-	259	-
%	100	60.5		39.5	
ARMY	9224	8428	327	337	132
%	100	91.5	3.5	3.6	1.4
Q	5901	5772	72	41	16
%	100	97.8	1.2	.7	.3
O	1024	793	113	79	39
%	100	77.5	11.0	7.7	3.8
A	517	404	57	43	13
%	100	78.2	11.0	8.3	2.5
E	555	443	47	37	28
%	100	79.8	8.5	6.7	5.0
C	288	243	17	15	13
%	100	84.4	5.9	5.2	4.5
S	376	348	13	6	9
%	100	92.5	3.5	1.6	2.4
M	563	425	8	116	14
%	100	75.5	1.4	20.6	2.5

1/1/38 INDUSTRIAL STATES WITH 100 OR MORE FACILITIES ALLOCATED OR RESERVED

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	FACILITIES	ALLO C A T E D		R E S E R V E D	
		S I N G L Y	J O I N T L Y	N I B	O . S W
TOTAL	9515	8825	154	423	113
ZONE I	4495	4146	55	234	60
New York	1397	1275	15	75	32
Pennsylvania (East)	1146	1083	12	45	6
Massachusetts	758	701	17	35	5
New Jersey	372	334	5	20	7
Connecticut	329	292	3	27	7
Rhode Island	155	144	2	7	2
Maryland (East)	141	105	1	4	1
Balance	197	182	-	15	-
ZONE II	3317	3011	91	170	45
Illinois	822	758	23	27	14
Ohio	774	682	33	44	15
Michigan	332	284	6	33	9
Wisconsin	282	203	7	10	2
Indiana	241	221	8	10	2
Pennsylvania (West)	230	197	7	26	-
Missouri	216	200	2	11	3
Minnesota	121	120	1	-	-
Balance	299	286	4	9	-
ZONE III	961	942	4	12	3
Texas	190	190	-	-	-
Georgia	167	166	1	-	-
North Carolina	142	140	1	1	-
Balance	462	446	2	11	3
ZONE IV	742	726	4	7	5
California	546	533	4	5	4
Washington	103	100	-	2	1
Balance	93	93	-	-	-

PERCENTAGE DISTRIBUTION OF ALLOCATION & LOAD BY ZONES

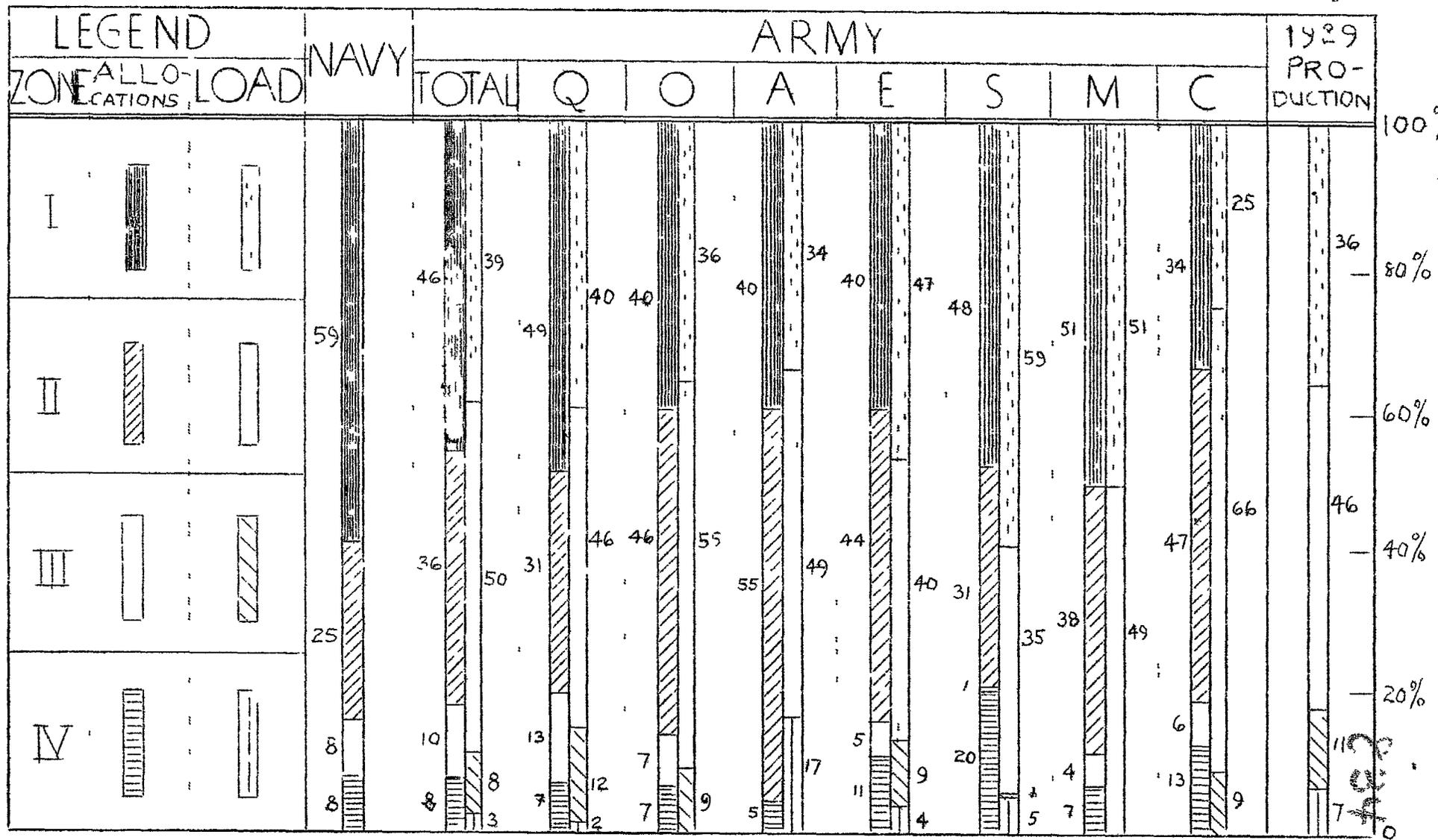


Exhibit "E" 2/18/3

ALLOCATIONS-(INTERESTS)

VS

835

LOAD BY SERVICES

January 1, 1938.

