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CURRENT PROCUREMENT OF THE WAR DEPARTMENT

by

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## CURRENT PROCUREMENT OF THE WAR DEPARTMENT

It is an honor to have been asked to appear before the class of The Army Industrial College this morning, to discuss the problems and organization and procedures of the current, peace-time procurement work of the Army.

In his introduction, Colonel Jordan stated that your speaker is a graduate of The Army Industrial College. He did not, I believe, say how recent a graduate - so recent, in fact, that I have not felt certain whether I am about to deliver a lecture, or merely make another presentation under the watchful - but I hope kindly - eyes of the Director and the Faculty.

It is particularly gratifying to have present the members of the Reserve Officers' class. Because of your war-time assignments, your interest in your studies here lies mainly with the subject of procurement planning, rather than of current procurement. Even so, however, you have a large collateral interest in the Army's present day procurement system. Besides, most or all of you occupy active positions of responsibility in the industrial life of the country, with which the War Department's purchasing operations brings it into constant contact. I hope, therefore, that mutual advantage will spring from your presence here and your participation in the deliberations of the morning.

Procurement procedure in the War Department has not changed radically in the past few years. In assembling material for this talk I have, therefore, made bold to draw freely on previous addresses of my predecessors and other speakers on the subject, including those of the Secretary and The Assistant Secretary of War, with the object of bringing to you the best and most interesting material applicable to our present discussion.

At the outset I should like to quote briefly from the excellent address delivered before this College in November, 1934, by one of my predecessors, Lieutenant Colonel Earl North, Corps of Engineers. Colonel North stated the mission of current procurement in terms which are as applicable today as they were in 1934. This is what he said:

"The mission of current procurement is:

- "1. To procure supplies of the designated kind and quality in the quantities required and in time to make them available when and where needed.
- "2. To maintain satisfactory relations with the business world.
- "3. To procure supplies as economically as is consistent with the foregoing objectives and as is possible under restrictions imposed by laws and regulations from higher authority.
- "4. To establish a peace-time system of procurement which can be converted into a war procurement system with a minimum change."

It is scarcely necessary to remind this audience of how our Army, when it went into the nation's markets to purchase the great quantities of supplies and munitions of all kinds required for the World War, did so as five - and later, more - separate bureaus, competing with each other and with other purchasing agencies of our own Government and the Allies. Lacking adequate pre-war planning, and without effective coordination, the combined results of the separate efforts of the supply bureaus could scarcely be expected to be an efficient, smooth-working whole. By degrees a greater coordination and centralization of procurement activities was attained. The Assistant Secretary of War, Mr. Benedict Crowell, was made Director of Munitions, with responsibility for procuring and furnishing the Army the materials needed for the carrying out of its operations. And the Purchase, Storage and Traffic Division of the General Staff was organized, to take over and centralize procurement of the War Department, with what success I leave to your judgment.

As a result of our war experiences, the Congress provided, in Section 5a of the National Defense Act of 1920 - well known to all of you - for a permanent, peace-time business head of the War Department in the person of The Assistant Secretary of War, operating under the

general direction of the Secretary of War. The Assistant Secretary is thus charged, among other things, with supervision of the present-day procurement of all military supplies and other business of the War Department in relation thereto. This constitutes the Current Procurement, or peace-time procurement, side of the Assistant Secretary's statutory duties, - a portion of his activities which is conducted by means of the Current Procurement Branch of the Office of The Assistant Secretary. This does not mean centralized procurement, as it was intended to be carried out under the P. S. & T. of the World War days, but decentralized procurement, with centralized supervision.

The duties of the Current Procurement Branch embrace not only certain of the statutory duties, but certain non-statutory duties of The Assistant Secretary - i.e., of the duties delegated to The Assistant Secretary by the Secretary. The duties of the Current Procurement Branch may thus be stated to be: Taking first the statutory duties, the supervision of the current of all military supplies and other business of the War Department relating to such procurement, including in this term not only purchase, but manufacture and production of Army supplies at Government arsenals and factories; and, looking now to the non-statutory, or delegated duties, matters pertaining to the disposal of surplus property, foreign sales by the War Department, the use of patent rights by the War Department, authorizations for newspaper advertising, authorizations for burial expenses of deceased military personnel, approval of expenditures for extraordinary expenses of our military attaches, and the supervision of procurement of supplies and equipment for the Civilian Conservation Corps and of labor and materials for the construction of C.C.C. camps. While the special, delegated duties here referred to occupy considerable time on the part of the Current Procurement Branch, it is with the statutory duties of procurement supervision that this class is mainly interested.

The Current Procurement Branch of the Office of The Assistant Secretary of War, in the exercise of its general duties of supervision, prepares for the supply arms and services general instructions respecting the procurement policies and procedures of the War Department; reviews complaints of bidders and contractors and other

interested civilian parties and determines controversial questions of contracts and awards; examines advertisements for bids, abstracts of bids received, and reports of open-market purchases; and contacts other Governmental departments in relation to current procurement matters - all for the purpose of seeing that the procurement business and relations of the War Department are conducted in a business-like way and that the laws, regulations and policies governing procurement are complied with.

In general, the Office of The Assistant Secretary does not interfere with the operation of the supply arms and services and only steps in when existing instructions and policies are not being carried out; or when it is believed that changes can be introduced which will make for more efficient fulfillment of the Army's procurement business; or when special questions arise in the every-day business which demand the special interest or action of The Assistant Secretary.

Because of the provisions of the Air Corps Act of July 2, 1926, the Secretary of War - and The Assistant Secretary, acting for him - are specially concerned with the matter of the procurement of military aircraft and aeronautical equipment. All awards and contracts made under the Air Corps Act must receive the personal approval of the Secretary or The Assistant Secretary. As a result, the Current Procurement Branch finds a very considerable portion of its time and labors directed to matters connected with aviation procurement. While actual procurement remains the function of the Air Corps, the relationship of The Assistant Secretary to this portion of the Army's procurement system approaches more closely the nature of operation, rather than merely supervision, and differs thus from the relationship with other Army procurement.

Time does not permit going into great detail into this interesting phase of the Army's purchasing business. It is of interest to note, however, that in the last few years there has been worked out a new aircraft procurement policy which has satisfactorily enabled contracts for quantity procurement of airplanes to be made as the result of competitive bidding in which all qualified manufacturers are permitted to participate, instead of through the medium, largely, of negotiated contracts, as was formerly the case. This policy has resulted in a material reduction

in the time elapsing between the inception of an airplane design and the delivery of planes for use of tactical units. It has also resulted in rapid progress being made in the efficiency of military aircraft, so that our latest combat airplanes under construction may be considered to be, in general, the best and most highly efficient airplanes of their types in the world.

Let us examine now into the organization of the Current Procurement Branch. First I should like to bring to your attention again for just a moment the chart shown you by Colonel Harris, in his excellent address of Monday morning on "Procurement Planning." (Chart 1.) Here we see how the Current Procurement Branch fits into the organization of the Office of The Assistant Secretary as a whole. As you recall, the duties of The Assistant Secretary are divided into the so-called "Statutory Duties" and "Delegated Duties." The latter duties are assigned in the main to the Executive Office of the O.A.S.W., but a few, closely related to procurement matters, fall into the sphere of the Current Procurement Branch. The Statutory Duties are divided into three main divisions, the Army Industrial College, the Current Procurement Branch, with which we are especially concerned this morning; and the Planning Branch.

The Current Procurement Branch, as shown on this chart (Chart 2), has a small and compact personnel, consisting of only five officers and eleven civilian clerical personnel. Of this small organization, one officer is engaged on special duties under the Chief of Staff, leaving only four officers for the actual work of the Procurement Branch. The organization of the branch is simple, being divided into an Administrative Section, located in the State Building, (the former State, War and Navy Building); and a Procurement Control Section, located here in the Munitions Building, forward of The Army Industrial College and next door neighbor to the Planning Branch. The Control Section is under the very capable charge of Major Matejka, of the Signal Corps, who will address you later this morning on the detailed work of his section.

The Administrative Section constitutes practically part of the immediate office of The Assistant Secretary, being located close by The Assistant Secretary's office in the State Building. The personnel is small and at

present consists, besides the Director of Current Procurement, of only two officers and two civilian stenographer-secretaries, one officer accredited to the Administrative Section on the chart being actually assigned to other special duties and not available for the work of the section. A large number of legal questions occur in connection with the work of the Administrative Section, and it is a special advantage, therefore, that one of the officers assigned is trained in the law and of great assistance from that standpoint. Even so, however, the office has the closest relations with the Office of the Judge Advocate General, from which we receive generous help on the many questions of a legal nature which we find it necessary to refer to the Judge Advocate General for advice and recommendation.

The duties of the Administrative Section are indicated only briefly in the chart. In somewhat more detail they may be stated as follows:

Matters pertaining to the general supervision of peace-time procurement.

Advisor to The Assistant Secretary on all matters relating to peace-time procurement.

The preparation of general policies for peace-time procurement.

Matters pertaining to procurement of aircraft and aeronautical equipment.

Complaints of bidders, contractors, and other civilian interests, and other special cases.

Legal matters related to peace-time procurement.

Sales or other disposition of surplus property and supplies.

Sales to foreign governments.

Foreign purchases.

Patent and design matters.

Legislation relating to current procurement.

Major contacts on current-procurement matters with other Government departments and agencies.

Other miscellaneous matters related to current procurement.

I shall not here go into detail as to the work of the Control Section, as that will be covered later by Major Matejka. By way of contrasting the relative work of the Administrative and Control Sections, however, it may be pointed out that in general the duties of the latter, as indicated on the chart (Chart 2), are influenced by the location of that section, here in the Munitions Building, and by the fact that the clerical strength of the Current Procurement Branch lies mainly in this subdivision of the office. The Control Section thus performs all of the work related to the routine examinations and checks of procurement operations; maintains close contact with the supply arms and services here in the Munitions Building, with the Procurement Division of the Treasury Department, and with other departments and agencies of the Government as found advantageous; handles transfers of surplus property from other departments and agencies to fill needs of the War Department; maintains the file of information for the public on circular proposals issued, abstracts of bids received, and awards made; makes statistical studies; and has charge of preparation and revisions of War Department regulations and instructions concerning current procurement.

Procurement is only one link in the supply chain of the Army, and not the first link. Before quantity procurement can be begun, a great amount of preliminary work is required to be performed. Appropriations must be obtained from the Congress and this in itself involves a long-drawn out procedure of budget estimates within the War Department and through the Bureau of the Budget before presentation as part of the President's Budget to the legislative branch of the Government. Appropriations, after being finally passed, - always inadequate to meet all requirements - must be apportioned so that the most essential needs of the Army will be met with what funds are available. Experimentation, research, development and service tests must be carried on to determine the most suitable supplies and equipment; types and kinds found suitable must be adopted for procurement;

and the quantities to be procured must be determined in accordance with available funds.

These preliminary steps come under the supervision of the General Staff, as the military side of the War Department.

The preliminary steps having been accomplished, the kinds and types determined upon and the funds secured and apportioned, the actual procurement stage - the second link in the chain of Army supply - is reached. This stage comes under the supervision of The Assistant Secretary, representing the business side of the War Department.

The actual procurement is accomplished by the several supply arms and services which are charged with that duty by law. The Quartermaster Corps, besides making its own procurements, is responsible for obtaining all supplies of a commercial nature which are common to two or more arms and services. Special and technical articles are procured by the technical arms or services responsible for such articles - The Air Corps, the Chemical Warfare Service, the Engineers, the Medical Department, the Ordnance, the Signal Corps - and, to a minor degree, the Coast Artillery Corps. The National Guard Bureau makes procurements for that component of the military forces. Each chief of a supply arm or service coordinates and controls the procurement operations of his organization. The Assistant Secretary of War supervises the procurement activities of all these agencies.

Supervision by the Office of The Assistant Secretary of the peace-time procurement activities of the supply arms and services is accomplished by personal contact with the main purchasing agencies, by routine check of reports required to be submitted, and by inspections as occasion permits of Army purchasing agencies, Government manufacturing facilities, and industrial plants executing production contracts for the Government. Personal visits to contractors' plants are beneficial in creating a better understanding of the problems both of the manufacturers and of the Government, resulting in better cooperation and the elimination of many difficulties otherwise encountered.

It may be of interest to examine briefly into the amount and distribution of the War Department's procurement business which we are here considering.

From reports collected and tabulated by our Control Section from the various procurement agencies, it is found, as shown on the board (Chart 3), that some 434 million dollars worth of procurements were made by the War Department in the fiscal year 1937. These figures embrace all War Department procurements, including those for military purposes, those for the Civilian Conservation Corps, and those for river and harbor and other civil activities of the War Department. The 434 millions of dollars represented 1,182,000 purchases, of which some 660 thousands were made in the open market and some 521 thousands after advertisement or from other Government departments or agencies. Of the 434 millions of dollars of procurements, some 81½ million dollars represented procurements made under the supervision of corps area commanders, while the remaining 352½ millions were made by agencies directly under the chiefs of supply arms and services, distributed among them as shown on the board (Chart 3).

As to distribution by methods of purchase, the reports submitted showed some \$358,000,000 to be on invitations for bids; nearly \$19,000,000 by procurement from other Government departments and agencies, such as the Procurement Division of the Treasury Department, the Navy Department, and the Federal Prison Industries, Inc.; some \$4,500,000 under Purchase Notice Agreements of the Quartermaster General; and about \$53,000,000 or 12 percent of the total, in the open market. It is to be remembered, however, that, even in the case of this 12 percent of purchases made in the open market, there was still the obligation on purchasing officers to place the orders only after informal competition to the extent practicable under the circumstances.

Certain fundamental principles underlie all Army procurement. The following list is not all-inclusive, but does represent what I consider the most outstanding. Incidentally, it may be stated that this list is based on certain committee studies made at The Army Industrial College last year.

The more important principles may be stated to be:

1. Economy of purchase.
2. Competition.
3. Assurance of quality.
4. Exact performance of contract.

5. Avoidance of personal interest.
6. Impartiality and fairness to dealers.
7. Fostering of domestic industry.
8. Compliance with law.
9. Prompt payment.

The principle of economy in all purchases - the securing of full value for all sums expended and the making of purchases at the lowest possible price - quality, cost of transportation, and the interests of the Government considered, is fundamental in War Department procurement procedure.

The making of purchases to the greatest extent possible by means of advertising and competitive bidding, open to all legitimate and responsible manufacturers and dealers, is a principle enjoined by law, except in special cases, and is a means at once of assuring fairness and impartiality to dealers and of securing the economy of purchase already referred to.

Assurance of quality. - In making purchases at the lowest prices obtainable, it is necessary to make sure that the goods obtained are adequate to the requirements. This is provided for by the use of carefully prepared specifications and by a system of rigid inspection of all goods delivered.

Exact performance of contracts. - The exact requirements as set out in the specifications and contract form the basis for competitive bidding. It is not only to the interest of the Government to secure performance as stipulated, but the requirement of rigid performance is an essential element of placing bidders on an equal and fair basis when preparing their estimates and bids.

Avoidance of personal interest. - It is a basic principle, established by law, that no officer acting in a procurement capacity may have a personal connection or interest in any concern from which he secures materials or services for the Government.

Impartiality and fairness to dealers. - All the checks and safeguards in procurement activities provided by law and the accepted policy of the Army tend to impose an attitude of impartiality toward all responsible dealers, which, in the final analysis, affords at the same time a better protection to the interests of the Government.

Fostering of domestic industry. - National legislation, as well as sentiment, favors domestic industry and labor, usually by means of suitable price differentials in awarding contracts and orders.

Prompt payment for services and supplies furnished, in accordance with contract provisions, is necessary as a matter of fairness to dealers and as an additional measure of economy to the Government in securing of discounts thus earned.

Finally, compliance with law. - Strict compliance with provisions of law applicable to procurement activities is, as you would expect, a basic principle inherent in the procurement activities of the military service.

The outstanding tenet in the War Department's procurement activities may be stated as honesty and economy of purchase. There are several reasons why economy in procurement is so important. In the first place, the War Department conceives it to be every officer's duty as a public servant to protect the interests of the public when he is acting as its purchasing agent. The Congress which appropriates the money and the taxpayers and buyers of Government bonds who furnish the money have a right to expect that it shall be spent wisely and economically. In the second place, the more economically we buy, the more we can secure with the funds provided and the higher the degree of defense preparedness which can thus be maintained. In the third place, economical purchasing requires efficient purchasing, and efficient purchasing in peace-time is good training for the duties of the much larger amount of procurement that would devolve on the Army in time of war. If inferior supplies or inordinate prices can be foisted on purchasing officers in peace-time, the same thing may be expected to happen, only to a greater degree and with more serious result, in the hurry and confusion of war purchasing.

The matter of economy through centralization of procurement is one much advocated. The Navy is commonly considered to have centralized procurement and the Army decentralized procurement. I do not presume to speak for the Navy. As applied to the Army, the question of the relative practical advantages and disadvantages of centralized procurement must include not only a consideration of peace-time efficiency and economy, but also a

consideration of the effect of peace-time procurement on procurement efficiency in time of war. Actually, there is in the Army a greater degree of centralization than is commonly realized so far as practical benefits may be expected to flow from such procedure. Procurement includes not only direct commercial purchases, but also embraces manufacture in Government arsenals and factories, where economical, and procurement by one branch of the War Department from another branch or from another Government department or agency. These are called interbranch or interdepartmental procurements. They take advantage of the Government's combined purchasing power - in other words, centralized procurement. For instance, it is mandatory that certain requirements for all Government departments and establishments be procured by the Procurement Division of the Treasury. Within the War Department itself, notwithstanding that we have some eight different purchasing organizations and hundreds of purchasing offices, the great bulk of Army procurement is still well centralized. Each of the supply arms and services is limited to certain items. If it needs other supplies, it procures them through the service or agency authorized to procure such supplies. Items are purchased by that arm or service which is best qualified by training and experience and which has the best facilities to procure that class of supplies. By this method the procurement of supplies of a particular class or kind is centralized in a single organization. The procurement of over two-thirds of all Army supplies is centralized in the Quartermaster Corps.

The long-established policy of the Government of purchasing by competitive bidding may well be considered the keystone of Army procurement. The law requires that all contracts other than for personal services, with only limited, specified exceptions, must be made as a result of previous advertising. Thus the vast majority of Army buying - all except a relatively small percent - is done after formal advertising and the public opening of sealed bids. Awards are made to the lowest responsible bidders, provided that low bids are reasonable and to the interest of the United States.

Continued effort is made to broaden the field of competition in all purchases and to correct any procedures which might restrict the number of competitors for the War Department's business. Material economies, as well as the attraction of desirable bidders, have resulted from this continuing action.

The War Department and the Army constitute one of the large business organizations of the country. Take, for example, the fiscal year 1937, the year which ended June 30, 1937, for which the War Department appropriations in round numbers amounted to 580 millions of dollars. 195 millions of this were appropriated for strictly civil - i.e., non-military - objects, such as the improvement of rivers and harbors, control of floods, the Panama Canal, and other civil projects. This left 385 millions of dollars for really military purposes, i.e., for the support of the Regular Army, the National Guard, the Organized Reserves, the R.O.T.C., and the C.M.T.C.

Of the 385 millions for military affairs, about 85 millions were for equipment and maintenance - not armament, but food, clothing, housing, motor transportation, fuel, and the like - articles that enter into the every-day commercial life of the country. For National Guard and Reserve activities about 40 millions were provided. About 60 million dollars were for aircraft and armament, including about 14 millions for actual arms and ammunition. Twelve millions of the fourteen were for expenditure by the Ordnance Department for manufacture of weapons and munitions in Government arsenals, leaving some two millions for purchase of arms and ammunition from civilian manufacturers - the munitions industry. It may be noted, thus, that there is little ground for the somewhat prevalent belief that peace-time appropriations find their way in any large degree into the pockets of munitions manufacturers.

From another viewpoint, it is of interest to note the estimate, made by the Chairman of the Senate Committee in charge of the 1937 Appropriation Act, that 90 percent of the whole military appropriation, or roughly a third of a billion dollars, was directly or indirectly for the pay of labor or some other form of personal work, going in large part as wages to men on the farm, in the mine, or mill, or other walks of life. The expenditures of the Army, therefore, go not only for national defense, but to the giving of employment, and make the Army, directly or indirectly, one of the largest employers of labor in the country.

Special efforts have been made the past several years to eliminate the requirement of unnecessary reports, to simplify routine procedures and to clarify existing instructions governing procurement. As a result of this effort, it is felt that purchasing officers throughout the

Army, in the non-military work of the Corps of Engineers, and in the Civilian Conservation Corps are operating in such a uniform and generally satisfactory manner as to minimize evidences of dissatisfaction on the part of bidders and contractors with their treatment at the hands of the War Department.

Some means must be used to disseminate instructions as to the various principles, policies and practices determined upon by the War Department to govern its procurement activities. These instructions are issued in the 5-series of Army Regulations and in the form of Procurement Circulars issued by the War Department. In addition, procurement officers give heed to the decisions of the Comptroller General. Special instructions applicable only to C.C.C. purchases, supplementing the instructions found in Army Regulations and Procurement Circulars, are issued as part of the War Department Civilian Conservation Corps Regulations.

The 5-series of Army Regulations constitutes essentially the bible of War Department purchasing. It consists of fourteen different regulations, numbered from AR 5-5 to AR 5-360. The general duties of The Assistant Secretary of War are covered in AR 5-5. Regulations concerning sales of surplus and salvage property appear in AR 5-50. General provisions governing procurement are published in AR 5-100, while instructions appear in still others of the regulations relative to advertising for bids; opening of bids and making of awards; contracts, both formal and informal; bid and performance bonds; open-market purchases; certain special procurements - periodicals and books, burial expenses, foreign purchases; inter-branch and inter-departmental procurement; and finally, in AR 5-360, the general War Department instructions governing inspection of supplies purchased.

It has been the objective of the Current Procurement Branch to clarify and bring up to date the 5-series of Army Regulations. This work has devolved primarily on the Control Section. The entire series with the exception of the basic regulation, AR 5-5, on the general duties of The Assistant Secretary, have been rewritten and now bear dates of either 1936 or 1937. This work has been carried out with great care and with the active cooperation and help of all the offices of the chiefs of supply arms and

services concerned, as well as of the offices of the Chief of Finance, the Judge Advocate General and The Adjutant General, and, as necessary in certain particulars, of other departments and agencies.

The Army Regulations contain instructional matter of a supposedly permanent nature. The Procurement Circulars, on the other hand, contain instructions of a temporary nature, or those involving changes in the 5-series of Army Regulations and later to be published in the Army Regulations as revised or in formal Changes of Army Regulations. Constant efforts are also made to keep these Procurement Circulars as nearly up to date as possible, rescinding the older ones. Thus in a few days all procurement circulars issued prior to 1936 will be superseded by newer instructions, and it is hoped in about a month to be able to rescind all such circulars issued prior to January 1, 1937.

In addition to the procurement instructions issued by the War Department in Army Regulations or in the series of Procurement Circulars, the chiefs of supply arms, services, and bureaus issue such special instructions as necessary for procurement within their own branches, not inconsistent with or repetitive of the general instructions of the War Department; and, under similar restrictions, special instructions are likewise issued as necessary by corps area and other commanders governing procurement in their respective jurisdictions.

In conclusion, it may be stated that, while the Office of The Assistant Secretary insists at all times that all War Department purchasing must be conducted with scrupulous honesty, efficiency and economy, we try to keep our feet on the ground and remember that procurement is not an end in itself, but a means to an end - not the master, but the servant, with the business of supplying the Army with what it needs when and where needed to carry out the great primary mission of national defense.



ORGANIZATION OF CURRENT PROCUREMENT BRANCH, C.A.S.W

THE ASSISTANT SECRETARY OF WAR

CURRENT PROCUREMENT BRANCH  
.....  
Director of Current Procurement

ADMINISTRATIVE SECTION
<u>Personnel:</u> 3 Officers 2 Civilians  <u>General Duties:</u> General Supervision of Procurement; Aircraft Procurement; Complaints of Bidders and Other Special Cases; Surplus Property Sales; Miscellaneous Matters.

PROCUREMENT CONTROL SECTION
<u>Personnel:</u> 1 Officer 9 Civilians  <u>General Duties:</u> Routine Check of Procurement; Munitions Building contacts; Procurement Division contacts; Information for Public; Incoming Surplus Property; Statistical Studies; Procurement Regulations.

CHART 3.

WAR DEPARTMENT PROCUREMENT, F. Y. 1937.

Total Procurement for Year, \$434,100,000.

1,182,000 purchases:

- 660,790 open market.
- 521,385 other purchases.

Distribution by agency:

Corps Areas	\$ 81,600,000.
Supply arms and serv...	352,500,000.
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Engineers.....	163,100,000.
Quartermaster Corps..	109,500,000.
Air Corps.....	57,800,000.
Ordnance.....	14,000,000.
Signal Corps.....	4,300,000.
Medical.....	2,800,000.
Chemical Warfare Serv.	1,000,000.
Coast Artillery.....	61,000.
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	\$434,100,000.

Distribution by method:

On invitations for bids..	\$358,000,000.
From other Government Departments and agencies	18,700,000.
Under Purchase Notice Agreements (Q.M.G.).....	4,500,000.
Open market.....	52,900,000.
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	\$434,100,000.