

525

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Course 1936-1937

PERSONNEL FOR PROCUREMENT

by

Captain W. E. Miles, O D
Planning Branch, O A S W.

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PERSONNEL FOR PROCUREMENT

Before beginning to discuss the subject assigned, I think I should point out briefly the position of the Planning Branch with reference to personnel affairs of the Supply Arms and Services. In the early days of procurement planning, considerable attention was given to such matters in the Planning Branch, even to the extent of allocating funds for the training of reserve officers. But now with policies more or less determined, the current attitude is toward a minimum of action along personnel lines. The guiding motive is that each branch must solve its own personnel problem within the limits of established policy.

Because of that circumstance I cannot speak with as much first-hand information as some of you may expect. What I have to offer is based on Planning Branch records, on mobilization plans, and on conferences with personnel and procurement planning officers of the supply arms and services. I do not intend to discuss the broad phases of the problem, as I think that is an appropriate prerogative of your committee. Instead, I shall try to bring out certain facts which appear to merit attention. I have attempted to arrange them around the framework of what persons are needed, how many are now on the rolls, and what are the plans and policies relating to the additional requirements. In other words, what is wanted, what do we have already, and what is being done about the remainder. It will be necessary to quote figures, and when I do I hope you will remember Colonel Jordan's definition of a statistician. Some of the data to be presented are relatively exact, while some are little more than educated guesses. If you will accept them as being reasonably correct so far as can be now ascertained, they will have served their purpose. If I make statements indicating that some branches have progressed farther than others in personnel planning, it is not done with the idea of invidious comparison.

The term "personnel for procurement", as commonly understood in the War Department, applies to the officers, enlisted men, and civilian employees who will be required in the event of war for the various manufacturing and purchasing activities of the supply arms and services, and for the supervisory functions of the Office of The Assistant Secretary of War and the Army and Navy Munitions Board. For the benefit of those who may not be familiar with the general scheme,

and as a matter of orientation, I think it will be worth while to delineate the agencies which are to be set up or expanded, and review briefly some of the pertinent plans and policies relating to them. Chart 1 (appended) shows the agencies with which we are concerned.

Submarine mines are to be procured for the Coast Artillery Corps by the mine depot at Fort Monroe. Early in mobilization the Materiel Division of the Office of the Chief of the Air Corps will procure aircraft and related material from Wright Field, after the districts are organized practically all procurement will be turned over to them. Anti-aircraft searchlights, aerial mapping equipment, and special types of locomotives will be purchased by the Supply Division, Office of the Chief of Engineers, other engineer supplies will be obtained by the districts. The Medical Department and Signal Corps intend to obtain practically everything through the districts.

The Quartermaster Corps will do its purchasing through its nine procurement zone agencies, and will manufacture clothing and equipage at the Philadelphia and Jeffersonville depots. The Chemical Warfare Service will do its purchasing through the districts, will manufacture gas masks in two government operated factories, will conduct certain chemical manufacturing, will operate two filling plants for smoke shell, and will test materiel at one proving ground under its own jurisdiction. Some C W S material will be tested at Ordnance proving grounds.

The Ordnance Department will do most of its purchasing through its districts, although contracts for propellant powder, explosives, and cartridge cloth will be signed in the office of the Chief. It will manufacture equipment in six arsenals, rehabilitate stocks of ammunition in two renovating plants, assemble artillery ammunition in five government operated loading plants, and test materiel at four proving grounds. A number of privately operated loading plants also are contemplated.

In five branches, procurement personnel will have little or nothing to do with storage and issue, while in three (The Coast Artillery, Medical Department, and Quartermaster Corps) procurement of supplies will be under the direction of officers who will in many cases deal also with storage and issue of the items they purchase. The idea there is to have one line of responsibility from factory through main depots.

Quartermaster and Medical Department districts are to be headed by Regular Army officers, in conformity with peace-time practice. Signal Corps districts will remain in charge of Regular Army officers only long enough for the Reserve Corps chiefs to become oriented and take over. Engineer district chiefs will be colonels of the Reserve Corps, with one Regular Army officer per district as executive. The latter will be relieved fairly early in mobilization. Chiefs of Air Corps districts are to be reserve colonels. Those districts have civilian supervisors in time of peace - industrialists who act in an advisory capacity to the Regular Army procurement planning officers.

Chiefs of Ordnance districts are to serve either as civilians or reserve officers as they and the Chief of Ordnance elect when the time comes. At the moment, five of the 14 Ordnance district chiefs are civilians not holding reserve commissions, and the same is true of several assistant district chiefs. Chiefs of the Chemical Warfare Service districts are civilians, and it is intended that they would continue on that status in war.

It is felt in the Ordnance Department and Chemical Warfare Service that procurement of non-commercial items in large quantities will involve more activity than the placement of contracts and inspection of delivered products, that more or less follow-up work will be necessary, and that considerable organizing may have to be done within districts because so many plants which will produce major items must obtain some components and sub-assemblies elsewhere. With that in mind, it is thought that a civilian district chief could take short cuts and exert influence through channels and by methods which would be less accessible to him as an officer.

The feeling that Ordnance and Chemical Warfare Service procurement will involve a certain amount of industrial integration is further reflected by the existence of district advisory boards. Each district of those two services has such a board, the membership consisting of recognized leaders in various lines of industrial activity. Under peace-time conditions, use is made of the boards chiefly by consultation with individual members rather than by formal board session. Most of the members reside fairly near district headquarters, although some may be in distant cities. The San Francisco C.W.S. board for example has Portland and Seattle. The number of members varies, averaging at least ten or a dozen.

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Comparatively few enlisted men are needed for procurement activities (Chart 1). Four are required for the submarine mine depot. An insignificant number may be used in connection with Engineer procurement initially, and the same may be said of Ordnance. The only requirement of note is that of the Chemical Warfare Service. Because certain chemical and shell filling operations are extremely hazardous it will probably be necessary to place the persons engaged therein under full military control, and a project calling for about 1400 enlisted men has been set up. Obviously, soldiers who are to perform dangerous operations with chemicals must have special qualifications, and mobilization plans take that factor into account by stating the qualifications necessary. As a matter of convenience, and because manufacturing may possibly have to be started by civilians, a civil service job designation is given for each position along with the military grade or rating deemed appropriate. In addition to these 1400 enlisted men who would really be workers in uniform, about 157 soldiers are needed for proof activities.

Somewhere around 117,000 civilian employees will be required (Chart 1). It will be noted that the heaviest demands are by the Ordnance Department, the Quartermaster Corps, and the Chemical Warfare Service. Time does not permit analyzing the figures for each branch, but a few high lights are in order.

In the Air Corps, inspectors comprise about one third of the total, with engineers, clerks, and stenographers constituting most of the balance. In the Signal Corps a little more than half of the employees are to be inspectors, while in the Corps of Engineers only about one-fifth of the total would have inspection responsibilities. About 75 per cent of the employees in the two Chemical Warfare Service gas mask factories would be women.

The estimate of 50,000 employees for Ordnance Department arsenals is based on figures compiled before the 1933 War Department Mobilization Plan was issued, but that estimate is considered relatively correct for current conditions. Revisions are being made, however. Estimates for the ammunition renovation and loading plants are not yet available, but it is thought that the total for all Ordnance procurement activities will exceed 75,000. The estimate of 10,000 for the districts may appear extravagant, but it is the best obtainable. Mobilization plans for all the districts are not yet in, but those which have been received indicate a heavy demand for inspectors.

Requirements for civilian employees have been and are being computed in terms of the work to be performed. In most cases those for the offices of the S. A. S. chiefs and districts are listed by civil service job designations, and in some instances specifications have been written out in detail. Civil Service designations have not been so extensively used for the Ordnance arsenals, but where they have not, requirements have been compiled in terms of occupation or skill. I am informed by a Q. M. C. planning officer that all employees for that branch are listed by civil service designations, and understand that the C. W. S. is proceeding likewise as it develops its plans. Thus at some future time, perhaps next year, it will be possible to prepare a tabulation showing the consolidated War Department demand for civilian personnel divided into categories according to the skill or qualifications desired.

The figures shown in the column "On hand" on the chart include procurement and procurement planning personnel. You will note that a nearly ten-fold increase is contemplated. With reference to recruitment, plans call for using civil service channels and methods initially, and thereafter proceeding according to circumstances. The Corps of Engineers has one advantage over the other supply arms and services in that employees already familiar with government purchasing might be borrowed by the procurement districts from the 40-odd Rivers and Harbors districts. It is estimated that about 90 persons might be so transferred, or about one-fourth of the total Engineer requirement.

The need for training certain civilian employees is recognized. The C. W. S. plans call for establishing at Edgewood Arsenal a training school for key personnel for the gas mask factories. The Q. M. C. mobilization plan provides for several training courses for inspectors dealing with shoes, subsistence, textiles, motor transport, and equipage. The Ordnance Department will train key inspectors at the arsenals, both for the districts and the arsenals themselves. A plan for training of key personnel for loading plants has also been prepared. According to the Engineer mobilization plan, no training for Engineer personnel after M-day is contemplated, other than what is received on the job. Reliance is placed on obtaining persons with the proper qualifications.

A total of about 5,550 reserve officers is considered necessary (Chart 1), of which about 2,805 have been enrolled and assigned. The objective has thus been met to the extent of about 51 per cent. It will be noted that the Ordnance

Department's quota is nearly as great as that of all the other branches combined. The Q.M.C. is next in order, with a call for approximately 1,374 officers. It is rather difficult, if not impossible, to fix the number required by the Q.M.C., because of combination of procurement with storage and issue to which I referred earlier in the discussion. About 94 per cent of the officers slated for procurement posts will be reservists, which means that their performance will be one of the critical factors in the procurement program.

In general, the quality of reserve officers now assigned is excellent, although a few are not considered adapted to their prospective duties. Dropping the euphemism, there very definitely is an increment of dead wood which varies, according to district executives, from practically none in some districts to 15 or 20 per cent in others. In contradistinction to this statement is the assertion by a planning officer of one branch which has small requirements, that every reserve officer on the branch rolls assigned to procurement duty is well qualified and has a civil job which entails more responsibility than his prospective war-time assignment.

Efforts to insure selection of suitable men for reserve commissions in the future are exemplified by the existence of job specifications which have been prepared for many of the positions to be filled. They have been made up for:

The Army and Navy Munitions Board

The Office of The Assistant Secretary of War

The Procurement Section of the Materiel Division,
Office of Chief of the Air Corps, and for the
Air Corps Districts

The Engineer Districts

The C.W.S. Districts and for procurement positions
in the Office of the Chief of the Chemical War-
fare Service.

Key field officers for Ordnance Districts, (one set
of uniform specifications).

Quartermaster Corps company officers having supply
and procurement responsibilities

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Some have also been prepared for the Medical
Department and Signal Corps.

While there is no uniformity in the form and content of those specifications, they all specify the business knowledge or experience considered requisite. Those for our own office present great variety, as over a hundred separate specifications are included in our mobilization plan. Although different, they all have one common denominator - executive experience in large-scale business.

Active duty training for reserve officers comes infrequently, the elapsed time between periods of instruction averaging probably about four or five years. That unhealthy situation is due to the perennial shortage of funds. There are nearly 100,000 reserve officers on the War Department rolls who are eligible for training, whereas appropriations have been sufficient to train only about 20,000 annually. Usually when officers slated for procurement are called to active duty they are given instruction in the office to which assigned. One exception of note is the Ordnance Department practice of holding summer training "camps" at the University of Michigan and the Massachusetts Institute of Technology mainly for inspectors.

Another well established custom is instructing S S reserve officers in the Planning Branch. Every year one or more courses of instruction covering War Department procurement planning and industrial mobilization are conducted, and branch chiefs are invited to send as many officers as they wish and can pay for out of their allotments. In November 1936 we had on duty for two weeks eight officers assigned to the Planning Branch, and twenty-four on the rolls of the S A S. Since the first reserve officer was given instruction in the Planning Branch in 1923 (he was a Brigadier General of the Finance Department) there have been over 500 attendances, representing I suppose about 350 different individuals assigned to the Planning Branch and to the S A S. Thus each branch has a few reserve officers who have some idea of the functions and activities of the Office of The Assistant Secretary of War and of the Army and Navy Munitions Board.

Occasionally, officers assigned to our office are called in individually and put to work for the Planning Branch instead of receiving instruction. Last year a member of the faculty of the Harvard Business School spent two weeks on price control, and this spring an authority on minerals will be called in to go over some of the commodity plans.

Organized inactive duty instruction in the districts varies all the way from none at all to a method employed in one of the Philadelphia offices whereby problems are written up by the district executive and solved by district personnel in formal session, each officer occupying his assigned post. Nearly all districts try to have meetings at least once a month at which district problems are discussed or appropriate lectures given. Attendance at such conferences is of course limited by geographical considerations. In a few cases officers whose business positions are with allocated facilities have prepared, on inactive status, elaborate plans for production of the items assigned.

Inactive duty of the kind I have just mentioned has genuine value, but at the other end of the scale are parades, map problems, and lectures on purely military subjects which officers occasionally attend as a means of piling up the 100 hours inactive duty credit prescribed for reappointment. However, the individual can scarcely be blamed for seeking any inactive duty which may be accessible, as there are not many correspondence courses dealing with procurement matters.

Considering that planning for procurement and industrial mobilization is a recent innovation in military preparedness, and since thought on the subject has been far from crystallized, it is not surprising that only a few such courses have been devised. Less than 100 hours is required to complete all courses in the branch having the heaviest schedule, but it should be emphasized that only two branches so far have failed to provide at least a short course dealing with their districts and war procurement problems. As time goes on I have no doubt there will be progressive improvement in this field. But when all is said and done, unless the reserve officer is a competent business man with talents which fit him for his potential work, all the instruction he can be given will be wasted. It is his everyday occupation and position which must furnish his fundamental training.

There is insufficient time to discuss the numerous policies relating to appointment, reappointment, and promotion of reserve officers, but among them are two which should be mentioned. One prohibits filling procurement posts to an extent greater than 60 per cent, the other suspends for an indefinite period all original appointments and promotions in the Specialist Reserve.

The basic reason for leaving 40 per cent of the procurement positions vacant in time of peace is the well founded belief that many highly capable and desirable business men who will not assume the obligations of a reserve officer in time of peace will seek commissions if war comes. Indeed, somewhere around half of the districts have some kind of a list of prospects who may be offered commissions at that time. The Q M C has been exempted from the 60 per cent limitation because of their practice of combining procurement with storage and issue responsibilities. As to the other branches, the 60 per cent limitation appears to have done little harm. If you will examine the figures showing requirements and the number of officers enrolled, you will find that each branch except the C W S. has leeway for additional recruitment. Incidentally, the strength of procurement organizations is nearly static, that is, the input is not far from equal to the output.

There were a number of reasons for suspending appointments and promotions in the Specialist Reserve, but I should like to digress a moment before taking up that matter. The Specialist Reserve constitutes the only procurement and industrial mobilization personnel body that has ever advanced beyond the blueprint stage. Three others have been proposed. One scheme which originated in a procurement district was to establish a Procurement Corps of selected business men who would have a quasi-military status, and would wear a uniform which would not be the same as that for officers of the Army. The idea was founded on the tenet that procurement is strictly a business proposition, but that the business man so engaged should have some kind of insignia or uniform to show that he was doing his bit.

Another proposal which went far enough to receive considerable attention was a so-called Munitions Battalion. To quote an officer who worked on the plan, "Colonel Ferguson (who was at one time Director of the Planning Branch) started an idea called the Munitions Battalion which had as its object the development in the universities of the country a corps of people who were interested in munitions production - something similar to the R O T C along industrial planning lines. I happened to have the job of drawing up a list of colleges and assigning some eighty or eighty-five men to this battalion. The idea was to get appropriations from Congress and canvass the universities for the most outstanding men. We never got anywhere with it but its object was to get the young men interested in the munitions problems and develop them into a group for munitions work."

Still another scheme is the proposed permissive draft of management outlined by Colonel Charles T. Harris, Jr., O.D. in his recent talk to you and contained in Title II of H.R. 5529, 74th Congress, 2nd Session.

Now to go back to the Specialist Reserve. Since it was intended to include procurement officers, I had expected to trace briefly its history. I see now there will not be time for that, and shall pass it by with the statement that the essential difference between it and other sections was that original appointments could be made in any grade up to and including that of colonel.

That one characteristic of the Specialist Reserve - original appointments in the higher grades - made it very attractive to officers who thought they were not progressing fast enough in their own branches, and to men with strong political backing who sought the title of an officer, preferably the title of colonel. Because of the difficulty in excluding those persons while at the same time appointing and promoting others of genuine adaptability and merit, all original appointments and promotions were suspended several years ago. Reappointments are made only in existing grades. The effect of the policy has of course been a decrease in the strength of that section, until now it totals about 608, distributed as follows:

O. S. W.	-	33	Q. M. C.	-	23
.C.	-	173	O. D.	-	161
C. of E.	-	52	Sig. C.	-	7
C. U. S.	-	14	M. D.	-	5
			Others	-	141

Current sentiment in the supply arms and services is preponderantly in favor of filling procurement posts with officers in the branch reserve, and some officers favor doing away with specialists entirely. The chief advocates are the Air Corps, Corps of Engineers, and the Ordnance Department. The latter two would prefer to keep it as a sort of ace in the hole, in case suitable branch reserve officers could not be found for key positions. Their attitude is illustrated by an existing situation. Just now one of those branches is experiencing difficulty in finding a suitably qualified colonel in its own section of the reserve corps to head one of the districts.

The Air Corps contends it must have specialists for procurement assignments because few business men of the desired type are pilots, whereas regulations prescribe that Air Corps reserve officers be so rated. However, under the provisions of a letter dated May 24, 1932 the War Department may make exceptions to that rule and authorize the appointment of non-fliers. Even so, the field is limited, because appointments can be made only in the grade of 2nd lieutenant or a grade held during the World War.

So far as our own office is concerned, we must rely on specialists or else have officers detailed from the various supply arms and services. We have not made many calls on them for officers, and as a consequence our strength is gradually dwindling. It is impossible to say when original appointments and promotion of specialists will be resumed.

Training of officers newly commissioned after World War I for procurement is to be conducted by each supply arm or service chief as he sees fit. Not many definite plans for such training have been made, and it appears to be the intention to have most of them get their instruction right on the job. The importance of inspectors has not been lost sight of, and while it is a live subject, plans relating to their training are mostly in the formative stage. In the mobilization plan for our office you will find an outline of a one-month training course for our new officers.

The total requirement for Regular Army officers amounts to 353 (Chart 1). That is 6 per cent of the total officer complement for procurement, and it is commonly assumed that it would be reduced as mobilization proceeded. In the column "On hand", officers engaged on both procurement and procurement planning are included.

The mobilization plan for the Assistant Secretary's office provides that the Current Procurement and Planning Branches will merge into the war organization, and that the Assistant Secretary will furnish 27 Regular Army and 20 reserve officers for the Munitions Board. All officers now on duty in the Assistant Secretary's office, including the staff and faculty of the Army Industrial College, are to be utilized. But 21 additional officers will be needed to make up the allotment of 57 Regular officers, 36 being now on hand.

Under existing regulations, the incoming class at the Army Industrial College is the source of those additional officers. Thus, if M-Day were tomorrow, twenty-one members of this audience who were designated by name last May would be held for duty here, and the other members of the class would proceed to the places indicated on the mobilization assignment letters now in their possession.

Drawing on the incoming class for additional officers has disadvantages which will occur to you, although from a purely administrative standpoint such procedure is simplicity itself. What prompted the establishment of that policy is not shown by the records of the Planning Branch. Suppose M-Day came in July, after one class had left and before the new class had arrived. What would be the qualifications of the men in that new class? In order to get some kind of answer to that query, the questionnaires filled out upon entry by the classes of 1932 to 1936 were examined, and the data shown on Chart 2 were prepared.

Those figures show that approximately half the members of the first five classes had had no contact with procurement problems and that only a small proportion were acquainted with procurement planning. Moreover, the trend will be toward progressively fewer officers experienced in those matters in future classes. Each year additional graduates become available for procurement and procurement planning duty, and are assigned to that work whenever practicable.

Such being the case, recommendation was made last May that the additional officers needed be selected from the incoming class and graduates of the Army Industrial College. The recommendation was indorsed back with the statement that it would be given consideration at the next revision of Mobilization Regulations 1-8, sometime before July 1, 1937.

Assuming the proposed change is made, and since the graduates of the Industrial College are thought of as constituting a reservoir of trained personnel, suppose we look into the reservoir to see what it holds.

The number of graduates is as shown on Chart 3. Note that the Air Corps, Quartermaster Corps, and Ordnance Department have the largest number of graduates on the active list, and that the Quartermaster Corps tops the list of total graduates with 116 officers. Note also that there are 56 Navy and Marine Corps graduates on active duty. Parenthetically, the Navy's quota on the Munitions Board is 17 officers.

The percentage of graduates with reference to total branch strength is interesting (Chart 4). Ordnance leads, with 28.2 percent, and the C.W.S. is a close second with 27.1 per cent. Infantry and Field Artillery are last, as would naturally be surmised.

The ratio of graduates to the number of officers required for procurement duty is significant (Chart 5). The Signal Corps appears to be in the strongest position, with a ratio of 3.75 graduates for every procurement post. The Corps of Engineers is second, with 3.54 to one. The C.W.S., Q.M.C., and Ordnance Department are less happily situated, with ratios of less than one to one. In computing those ratios, the number of officers each branch is to furnish for the O.A.S.W. and Munitions Board was taken into account. While the Ordnance Department appears to be in the least favorable position, it should be remembered that among the 114 officers required for branch activities are a considerable number slated for production jobs at the arsenals and loading plants. I shall refer to the matter again in a few minutes.

The average age of all graduates as of 1936 is 47.4 years (Chart 6). Of the S.A.S. officers, those of the C.W.S. are the youngest as a group, while the Medical officers are the eldest. The Cavalry leads all branches with an average of 53.3 years. The three lawyers (J.A.G.D.) are at the other extreme, with 41.6 years (Chart 7).

Distribution within age groups is shown by this chart. Note that there is quite a spread, with the majority between the limits of 39 and say 55 (Chart 6).

Over half the graduates have not attended either of the other two general service schools, as is shown by Chart 8.

Among the graduates, majors outnumber those in any other grade (Chart 3). The distribution is as follows.

Captains	-	96	Lieut. Cols	-	132
Majors	-	158	Colonels	-	42
Brigadier Generals - 3					

The three Brigadier Generals are in the 1st Corps.

The Planning Branch has a partial record of the duties which have been performed by all graduates. Last summer we got all the questionnaires which have been filled out by incoming classes and recorded on a card for each officer the supply and procurement experience listed on the questionnaire. Then we went to all the personnel offices, and with the consent of those in authority copied from branch records the assignments held since graduation. The motive was to ascertain what sort of a field of choice was in prospect if we were permitted to select from all the graduates the 20-odd additional officers needed for the O. S. W. and Munitions Board for mobilization. I don't think we can take time now to consider the facts brought out, but I am sure your committee will find some interesting matters in the analysis which was made (Chart 9). In passing, it will probably be of interest to note that 117 graduates have had district planning experience, either before or after attendance at the College, and that 17 have served on the War Department General Staff, including the P.S. & T. Division during the War. These 17 are divided up as follows.

Air Corps	-	4	Q.M.C.	-	4
C. I. S.	-	1	Infantry	-	2
Ordnance	-	5	A. G. D.	-	1

A few minutes ago I referred to the number of graduates with respect to the number of procurement positions, and pointed out that the Ordnance Department might appear to some to be in the least favorable position. That situation naturally prompts the question, how soon will the number of graduates equal the number of officers required for war procurement? In an attempt to answer the question I prepared some data recently which gives an indication. I did not do it for the C. I. S. and Q. M. C. because of the volume of detailed work involved. A prediction for Ordnance is shown by Chart 10. The lower line represents the classes of 1924 to 1936, inclusive, and the top line represents later classes. In making the chart it was necessary to resort to assumptions. One was that officers would be separated from the active list in accordance with attrition rates which have been worked out by the Statistics Branch of the General Staff. The others were that all incoming classes would be between the ages of 33 and 50, that the Ordnance Department would send nine officers a year, five of whom would average 38 years of age and four who would average about 47. Based on those assumptions, there would be a one to one ratio after the class of 1940 had received its diplomas. There should be 125 graduates then, equaling the sum of the 114 Ordnance procurement posts, plus the eleven officers Ordnance is to furnish the O. S. W.

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Study of the Ordnance situation naturally suggested another project, and when one of our reserve officers who is a statistician came in for active duty last August he was given the practical problem, along with the customary instructions, of preparing a similar chart for all graduates of the College. The work involved making a separate prediction for each and every graduate now on the rolls, and group predictions for the future classes. Chart 11 shows that a peak of 750 graduates would be reached about 10 years hence, with stability at 700 being attained about 1955. This again must be regarded as a guess. The assumptions were that 50 Army officers would graduate per year, that attrition rates would be as predicted by the War Department General Staff, that all officers would be between the ages of 33 and 50 upon matriculation, that half of them would average 47 years of age and that half would average 38.

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5 Loading Plants))))))
4 Proving Grounds))))))
		1561	12,690	117,693	2835	5550	307	353

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SUPPLY, PROCUREMENT & PROCUREMENT PLANNING EXPERIENCE PRIOR TO ENROLLMENT AT ARMY INDUSTRIAL COLLEGE	NUMBER OF OFFICERS SO EXPERIENCED				
	1932	1933	1934	1935	1936
None(except with small troop units)	7	8	14	10	12
Supply only(Storage & Issue) . .	16	13	11	7	8
Procurement only .	1	0	2	3	3
Procurement Planning only	1	0	2	1	0
Supply & Procurement only	6	13	12	13	11
Supply & Procurement Planning only	2	2	1	0	3
Procurement & Procurement Planning only	1	0	0	0	1
Supply, Procurement and Procurement Planning	7	4	2	7	6
Total officers in class .	41	40	44	41	44

CHART NO. 2

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GRADUATES OF ARMY INDUSTRIAL COLLEGE
July 1, 1936

	Total Graduated	On Active List	Dead, Ret or Res
Navy	62	56	6
Marine Corps	18	16	2
Army			
A C	64(1)	60	4
C E	50(5)	46	4
C W S	27	25	2
M D.	35(1)	29	6
O D	101(7)	90	11
Q.M.C	116(3)	92	24
S.C	35(1)	30	5
C.I.C.	13(1)	11	2
Inf	14(1)	12	2
Cav	11	10	1
F.A	8	6	2
J I G D	3	3	0
F D	16(1)	14	2
I G.D.	3	3	0
Totals	576	503	73

Figures in parentheses indicate special graduates, i e., officers who while on duty in the Planning Branch, O A S W., and other War Department offices, assisted in the instruction of students

GRADES BY BRANCH, July 1, 1936

Branch	1st Lt.	Capt.	Maj	Lt.Col.	Col.	B.G	M.G.	Total
A.C.		18	21	15	3	3		60
C.E		16	14	12	4			46
C W.S		12	4	8	1			25
M.D		2	12	6	9			29
O.D		10	36	38	6			90
Q.M.C.		24	44	15	9			92
S.C.		7	11	7	5			30
C I C		1		10				11
Inf			3	8	1			12
Cav		1	2	3	4			10
F.I			1	5				6
J I G D		2	1					3
F.D.		3	8	3				14
I G D.			1	2				3
Totals		96	158	132	42	3		431

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PERCENTAGE OF TOTAL BRANCH STRENGTH

BRANCH	TOTAL STRENGTH(1)	A I C GRAD	% GRAD
I C.	1882	60	3.2
C.E.	621	46	7.4
C W S	92	25	27.1
I .D	1326 ⁽²⁾	29	2.1
O D	319	90	28.2
Q M C	766	92	12.0
S.C	257	30	11.6
C I C.	991	11	1.1
Inf.	3479	12	0.3
Cav	885	10	1.1
F A.	1548	6	0.3
J.I.G.D	103	3	2.9
F.D	129	14	10.8
I G D	104	3	2.9

(1) April 20, 1936, including officers detailed from other branches

(2) Including D.C., V.C., and M.I.C.

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GRADUATES OF ARMY INDUSTRIAL COLLEGE
(INCLUDING CLASS OF 1936)

COMPARISON BETWEEN NUMBER OF GRADUATES AND
OFFICERS REQUIRED FOR WAR PROCUREMENT

BRANCH	OFFICERS REQUIRED			NUMBER OF GRADUATES	% GRADUATES v.s., OFFICERS REQD
	FOR BRANCH	FOR OASW	TOTAL		
O I.S W	57		57		
A C	21	7	28	60	214%
C.E.	7	6	13	46	354%
C W.S.	25	4	29	25	86%
M.D	23	4	27	29	107%
Q M C	100	9	109	92	84%
C.I.	136	11	147	90	61%
S.C.	4	4	8	30	375%
C.I.C.	2	3	5	11	220%
J I.G D		2	2	3	
Fin Dept		2	2	14	
I G Dept		1	1	0	
Any Arm or Service		4			

CHART NO 5

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GRADUATES OF ARMY INDUSTRIAL COLLEGE
(Including Class of 1936)

AGES BY BRANCH - 1936

Age	IC	CE	CWS	MD	OD	QMC	SC	CAC	Irf	Cav	FA	JAGP	FD	GD	Total
64															
63										1					1
62				1											1
61		1		1		2									4
60				3	1	2	2								8
59		1	1												3
58					2	2									4
57	1			1		2				1					5
56		1			2	4							1		8
55				4	1	1	2		2	1					11
54	2	1	1	1	1	2		1	1	1			2		13
53		3		3	3	5	1	2					1		18
52	2		1		3	4	1	2	1				2		16
51	3	3	1	1	5	5	1	1		1				2	23
50	7	1	1	2	1	13	1		1	1					28
49	6	5	3		2	6	3	1		1					27
48	4	2	1	2	3	3	1	2			1		2		26
47	2	1	1	2	11	6	1		3	1	1		1		30
46	3	4	2	1	7	7	4		2		1	1	1		33
45	2	4	1	1	3	8			1	1	2			1	24
44	3	6	3	1	8	2	5	1	1		1				36
43	5	1	2	3	8	7	1						1		28
42	7	3	2	1	5	3	5								26
41	4	2	3		13	5	2					1	1		29
40	2	4		1	4	2		1		1			1		16
39	1		1		1	2									5
38		2										1			3
37			1												1
36					1										1
35	1	1													2
34													1		1
33															
Total	60	46	25	29	90	92	30	11	12	10	6	3	14	3	431

AVERAGE AGE, ALL GRADUATES -- 47.4

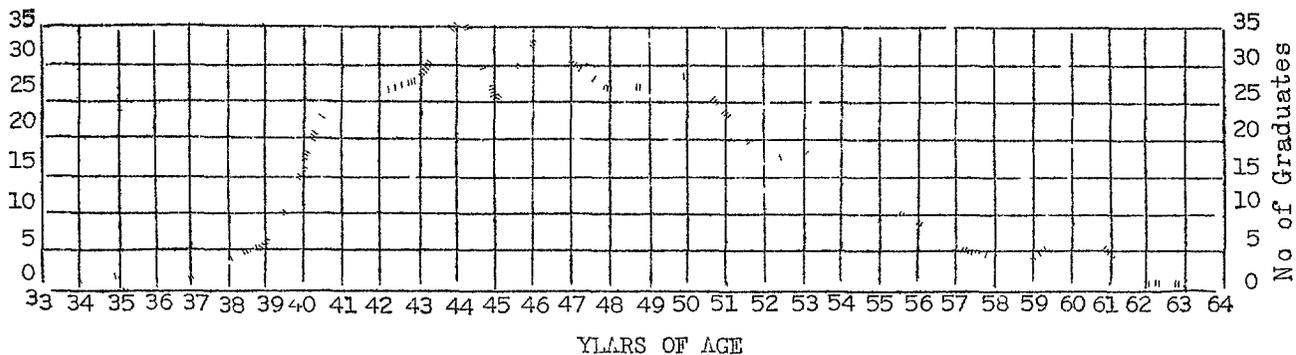


CHART NO. 6

GRADUATES OF ARMY INDUSTRIAL COLLEGE
(Including Class of 1936)

AVERAGE AGE, BY BRANCH
1936

BRANCH	AVERAGE AGE	BRANCH	AVERAGE AGE
A.C	46.0	C.I.C.	49.4
C.E	46.3	Inf	49.0
C.V.S.	45.8	Cav	53.3
I.D.	51.4	F.I.	45.8
O.D.	46.0	J.I.G.D	41.6
Q.M.C.	48.6	F.D	47.7
S.C	47.2	A.G.D.	49.0

CHART NO. 7

541

GRADUATES OF ARMY INDUSTRIAL COLLEGE
 (Including Class of 1936)
 WHO ARE ALSO GRADUATES OF
 THE GOVT/ND/ND GENERAL STAFF SCHOOL
 THE ARMY W/R COLLEGE
 THE HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
 THE BABSON INSTITUTE
 THE NAVAL W/R COLLEGE

BR/NCH	AIC only	AIC & CGSS	AIC & AWC	AIC & HGSA	AIC & CGSS & AWC	AIC & CGSS & HCSBA	AIC & AWC & HGSA	AIC & CGSS & AWC & HGSA	AIC & Babson Inst	AIC & NWC	AIC & CGSS & NWC	AIC & CGSS & AWC & NWC	TOTAL
A.C.	32	6	6	11	2		1		2				60
C.H.	32	6	2		5					1			46
C W S	13	2	1	4	5								25
W D	22		3	1	3								29
O.D	56	3	14	9	5	1	1			1			90
Q M C	57	9	4	6	10	1	1		3		1		92
S C	8	5	2	7	6	2							30
C C	1	6			1			1			1	1	11
Inf	1	5	1		4							1	12
F.I.		4			2								6
Cav		5			4							1	10
J.L.G.D	3												3
F D.	13						1						14
I.G.D.	3												3
Total	241	51	33	38	47	4	4	1	5	2	2	3	431

CHART NO. 8

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Experience most applicable to war assignments in connection with procurement

Experience	Number Graduates with experience indicated													Total	
	A.S.	C.E.	C.I.S.	A.D.	C.D.	M.C.	S.C.	Dev.	J.C.	F.A.	Inf.	A.G.D.	F.D.		J.A.G.D.
one, in the categories listed hereinafter	14	4	9	1	30	15	8	4	4	4	6	2	7		109
Procurement only	14	24	2	2	1	22	1	1	1	4	6	2	7	1	83
Procurement planning (district) only	7	1	5	2		4			1						29
Procurement planning (O. Ch. of Branch) only	3		1	1	2	5		1							23
Fiscal, Office Chief of Branch only	1								1	1			4		8
O.S. only	1			1	7	2			1		2		1	1	21
Staff and Faculty A.I.C. only					1	1			1	1					4
G.S.C. with troops only					1			3			2				6
W.D. Gen. Staff only (Includes P.S. & T.)	2		1		3	2					2	1			11
Procurement															
Procurement Planning (Dist.)	3	10	1	6	1	14									35
Procurement															
Procurement Planning (O.Ch.Br.)	2			2	3	5	2								12
Procurement															
Fiscal, Of Ch. of Branch	1	1													2
Procurement															
O.S.	1	1		1	2	4	1							1	11
Procurement															
O.C. with troops		1													1
Procurement															
O.C.S. (Includes P.S. & T.)	2					2									4
Procurement															
Procurement Survey		1													1
Procurement Planning (Dist.)															
Procurement Planning (O.Ch.Br.)	4		1	2	3	4	1								15
Procurement Planning (Dist.)															
Fiscal, O.Ch. of Branch					1										1
Procurement Planning (Dist.)															
O.S.	1		2		1	3	2								9
Procurement Planning (Dist.)															
Staff & Faculty, A.I.C.					2		1								3
Procurement Planning (Dist.)															
G.S.C. with troops					1										1
Procurement Planning (Dist.)															
W.D.G.S.					1										1
Procurement Planning (O.Ch.Br.)															
O.S.W.	1		2	1											4
Fiscal, O.Ch. of Branch													1		2
O.S.W.															
Staff & Faculty, A.I.C.					3	1									4
O.S.W.															
G.S.C. with troops													1		1
Staff & Faculty A.I.C.															
D.G.S.					1										1
Procurement															
Procurement Planning (Dist.)															
Procurement Planning (O.Ch.Br.)	1		1	9	1	3	2								17
Procurement															
Procurement Planning (Dist.)															
O.S.		1		1	1	1									4
Procurement															
Procurement Planning (O.Ch.Br.)						1									1
O.S.W.															
Procurement															
Fiscal, O.Ch. of Branch															
O.S.I.		1													1
Procurement															
O.S.W.															
Staff & Faculty, A.I.C.		1													1
Procurement															
O.S.W.															
G.S.C. with troops						1		1							2
Procurement Planning (O.Ch.Br.)															
Fiscal, O.Ch. of Branch															
O.S.I.	1														1
Procurement Planning (Dist.)															
Procurement Planning (O.Ch.Br.)															
Staff & Faculty, A.I.C.	1														1
Procurement															
Procurement Planning (Dist.)															
Procurement Planning (O.Ch.Br.)						1									1
G.S.C. with troops															
Totals	60	46	25	29	90	92	30	10	11	6	12	3	14	3	431

*In Office Chief of Ordnance

ORDNANCE DEPARTMENT GRADUATES OF RAY INDUSTRIAL COLLEGE

Probable number on Active List



Classes 1924-36



Classes 1937-57

NUMBER OF OFFICERS

160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

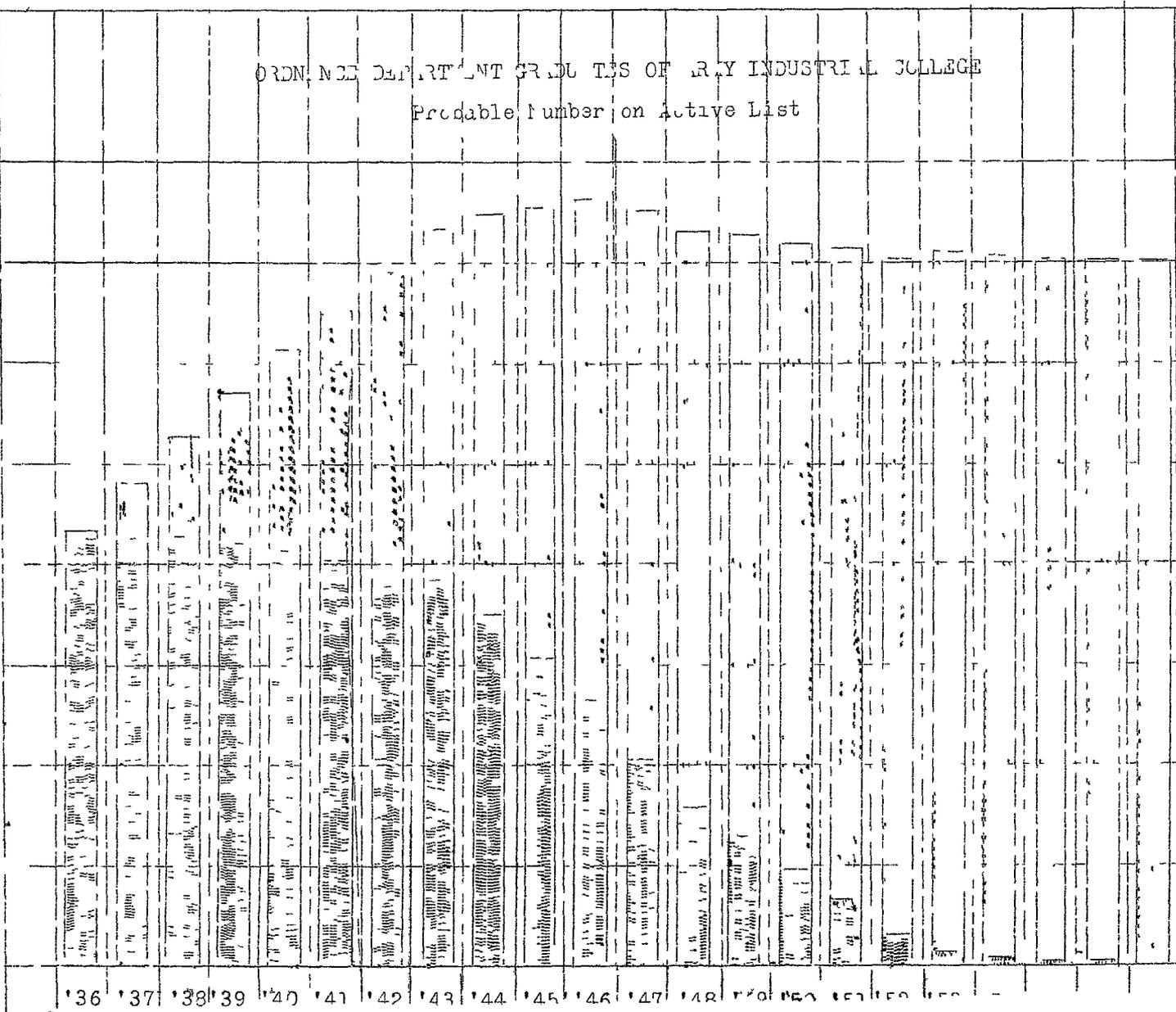


CHART NO 10

C 10

ARMY INDUSTRIAL COLLEGE - ALL BRANCHES

Probable Number on Active List

Classes 1924-36

Classes 1937-57

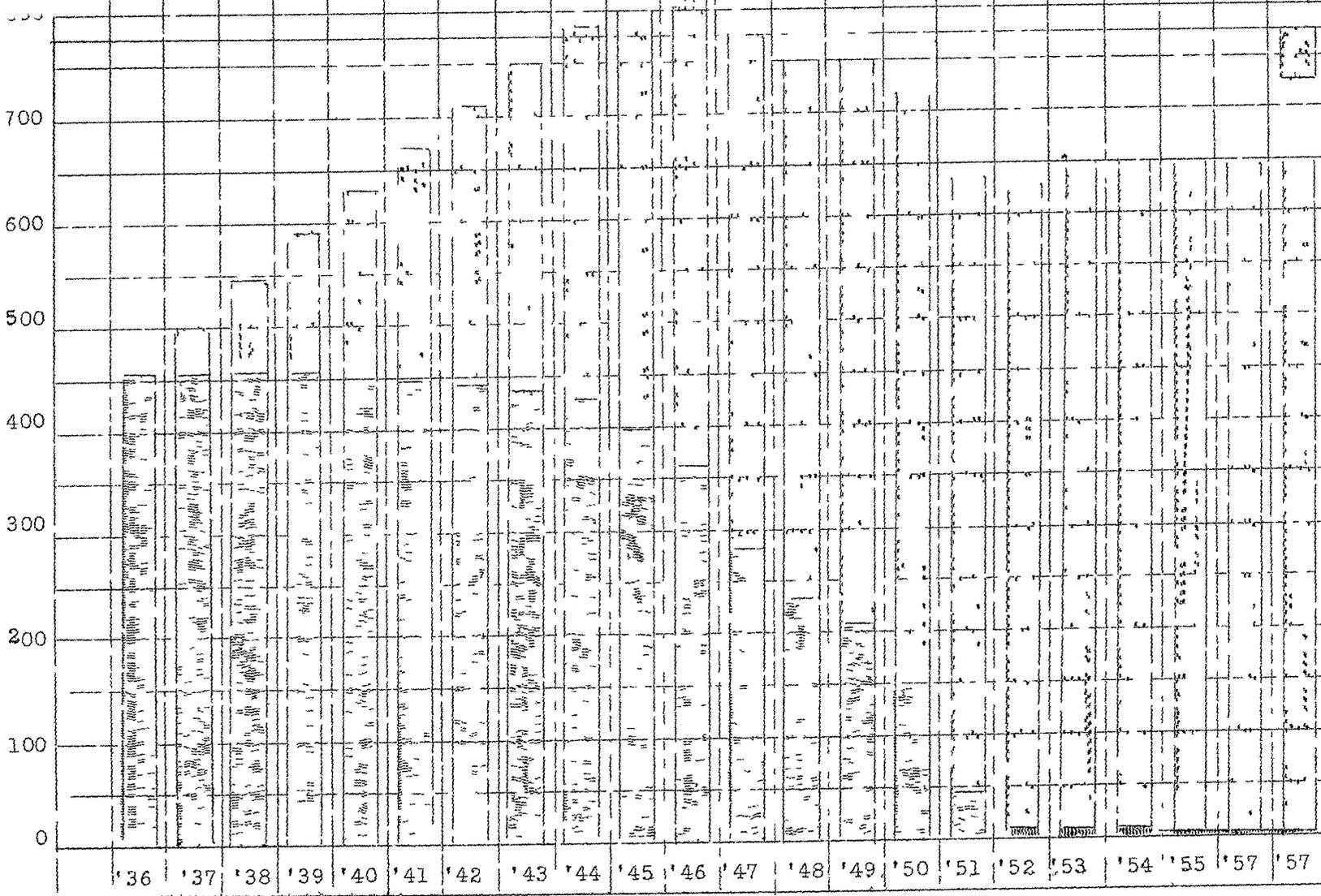


CHART NO 11

147

DISCUSSION FOLLOWING LECTURE
"PERSONNEL FOR PROCUREMENT"

by
CAPTAIN W. E. NILES, O.D., PLANNING BRANCH, O.A.S.W.

The Army Industrial College
January 9, 1937

Q. In connection with the training of Reserve Officers, have you considered the possibility of establishing a ^{Course of instruction} Corps Branch of the Army Industrial College similar to the ^{Correspondence} ~~Corps~~ Branch they have at the Command and General Staff School?

A. Colonel Jordan, would you help me out on that, sir?

Colonel Jordan: We have not. We have so few instructors now that we can barely keep ahead of sixty energetic young men and until the Secretary of War gives us more instructors we are not going to search out additional work.

Q. Captain Niles, I was very much interested in the statement you made that civilian personnel for procurement would be secured initially by calls upon Civil Service, and thereafter according to circumstances you would obtain that personnel. I have gone into a few of these plans about that and that is virtually all they say. Now, of course, what we realize will happen will be something like this: If you need in your zone or district a thousand inspectors, technical men some of them, some of them with less technical qualifications, you will call on Civil Service and will probably get a list of eligibles of perhaps three or four, and that would not help you appreciably, so

you are just where you started from. Should not these plans for civilian personnel go into that matter and definite plans be adopted by which to obtain this personnel for not only inspection but other angles of the procurement problem, from schools or colleges, or have definite plans to draw them from industry, or just what the source of these people will be? I would like to hear what you think about that proposition.

A. I am glad you corroborated my statement, because that is about what the plans do say. Considerable attention is being given to that subject. For example, all the branches, or several of them, are working on the possibility of using commercial testing laboratories both as to facilities and as to personnel, probably drawing personnel from them. I know the Signal Corps is counting on obtaining a lot of their technical people from the radio and telephone industries. How they are going to get them I do not know. I do not know that the plans have gone that far, but you must remember that in planning for procurement and industrial mobilization personnel has had second priority. I think in general the thought has been that the people will be there when the war comes and you won't get materiel unless you have plans for that first, but as plans have progressed they have gone into personnel. There has been more and more rapid progress in the last two or three years and I think that will be taken into account as they go into the matter further.

Q. Following that same line of thought a little further, we are endeavoring in all this planning work to be sure we do not have

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competition between the Army and Navy and between the various supply arms and services for materiel. We have heard it stated here repeatedly that on the outbreak of war the personnel requirements of the various arms and services and the Navy and possibly other Government agencies will be filled by going out into industry and getting the personnel required. Has any study been made as to whether there is likely to be any conflict or competition between the Army and the Navy or between different arms and services of the Army with corresponding services of the Navy in securing these additional personnel, particularly the key men which we would need in a war effort? In other words, is there a chance of the same type of difficulty we have in getting expansion in personnel that we are trying to guard against by this procurement planning in expanding our materiel?

A. I do not know of any such study. As a starting point you have to have the requirements end and the requirements haven't been computed entirely yet. When they are available I think such a study could be started, but it cannot be done now.

Q. In connection with that, the State of Pennsylvania, in compiling their mobilization plan for the National Guard, called upon the State Employment Service and they cooperated in furnishing statistics for the different grades and specialists, and we might be able to do the same thing in connection with the Social Security Board. In other words, they will have pretty complete statistics in reference to grades, occupations, and specialists. We might find a reservoir there.

Q. Going back to this ^{Academy} Corps course for Reserve Officers, I

wondered what becomes of the Regular Officers who graduate from the school and do not go into procurement. You said we are using three hundred five at the present time and there are close to five hundred graduates - Infantry, Field Artillery - that have gone back to probably Staff jobs or some place else. Procurement planning is changing each year and it seems to me (granted that the school cannot keep up with the present personnel and finances) that The Assistant Secretary of War's Office has that responsibility, and I am wondering whether or not these officers, once they get away from procurement planning, are kept in contact as to what changes are going on and what the school is doing? It seems to me there is a field there. If it isn't being done it should be done. Is there training of Infantry Officers and Field Artillery Officers, etc. of the branches that were trained ten years ago that they might know procurement planning today?

A. No. I can tell you what they have been doing since graduation but I cannot tell you what information they have received on procurement planning and development of industrial mobilization.

Q. I would be interested to know what they have been doing as a whole since graduation.

Colonel Jordan: In connection with the officers of the arms who have attended this College and who are in attendance now, it is the hope of the College that these gentlemen will ultimately end up on the General Staff of the War Department, that they may there give that leaven to decisions of the General Staff which is needed from

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a procurement industrial mobilization viewpoint. We do not expect, in any great number, the line graduates of this College to be on procurement duty in war, but we do want them in the controlling elements of the War Department so they will temper the wind to the shorn lamb. The last year General Craig increased the number of line students at this College to ten, with the idea that ultimately some of the graduates of this College would get on the General Staff. As to the duty on which graduates are put after they finish with the College here, that is entirely up to the Chief of their arm or branch. The College and the Assistant Secretary of War has no strings tied to those people except as the Assistant Secretary of War can get them into his own office. When an Ordnance Officer graduates from this College he reports to the Chief of Ordnance, and it is the job of the Chief of Ordnance to assign that man to a position. He may put him on something entirely different, but the chances are a man who has had industrial mobilization planning will be given a job along those lines.

Q. I would like to express a rebuttal to Colonel Stuart's remark about avoiding competition by inviting attention to General Motors' policy. You will notice that they are very careful to provide competition between the branches of their company. Chevrolet is in competition with Pontiac, and they believe it pays. We might be keeping up increased interest by providing a little competition between the Army and Navy in the matter of personnel.

I would like to ask a question. Has any thought been given to using women to the maximum among the civilian employees as

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inspectors and research people, etc., so as to release the maximum number?

A. Yes. I think if you will examine the Ordnance Department Mobilization Department, you will find that they plan on using women to the maximum extent where it can be done - inspection, and work that isn't heavy. At Frankford Arsenal right now there are lots of them - in ammunition.

Q. Those are on production.

A. That is what I am talking about.

Q. Has any thought been given to using women in testing and research jobs that might have to be filled?

A. I doubt if they have gone down very far in that. The job specifications for Civil Service employees just list the abilities desired. Of course, a lot of them could be women but I do not think that many of the branches have designated how many employees will be required. As I said before, the Chemical Warfare Service intend to have about seventy-five per cent of the gas mask employees women.

Q. I could not see that you had charged the Navy with carrying any of the burden of supplying officers to the Munitions Board.

A. I have just been talking about Army personnel this morning. I did point out, I think, that they have fifty-six graduates on the active list and they are required to furnish sixteen or seventeen for the Munitions Board.

Q. They are not expected to carry any of the burden in

the Secretary's Office?

A. No, not in the Secretary's Office, but on the Munitions Board, yes.

Colonel Harris: In the first place, I would like to respond to the question of keeping an officer on procurement duty after he graduates from here by stating that it would be inadvisable. He should keep himself informed as to the general progress of procurement planning. Having been trained once, I look upon him as potentially able to fill the job in the future. We would not desire officers in any of the supply arms to stay on procurement planning all the time because that would be in violation of the work of the supply arms. In Ordnance, for example, they serve a tour on technical work, then on maintenance work in the field, and then on planning work or procurement work. It is very desirable that they be well rounded out officers. Another thing about personnel and assigning them positions, etc., you cannot treat people as commodities, and we do not want too much arbitrary arrangement as to people. It doesn't go in this country. It might go in Germany, Italy, or Russia, but it won't go here.

With reference to time of war, some one asked what plans had been made for getting people, and in his own question, to my mind, he stated the plan. He said we would go to industry, to technical associations, and he named half a dozen reservoirs to get the people from. That is exactly the plan. When Civil Service falls down we will go to other places and get them - institutions like the American

Society of Mechanical Engineers, with which I am fairly closely associated. Their greatest contribution in war will be in making available and pointing out to the Government agencies technically trained engineers who are available and qualified to act as technicians, inspectors, and in other positions of responsibility. I think in training the personnel we must avoid going too much into detail. We must make our fundamentals sound and plan along general lines, and I believe we will be better off than if we plan to the detail of naming names. I said the same thing with reference to the War Resources Administration. I rather am averse to tying a civilian or Reserve Officer's name too tightly to any job and letting him know about it because we might want to untie him when the time comes, and probably would. Therefore, I think there is more likelihood of embarrassment with too much detailed planning in personnel than there is advantage.

Q. I have a question which I have already asked once and which I now request to have answered, and that is the question on the zone advisor. I have studied this matter a little bit since I asked that first question, and, of course, I realize how the zones were organized. The board in 1932 which studied this subject had a member on it from the Engineer Corps who recommended five zones. He said there should be a zone advisor who should have the full authority of The Assistant Secretary of War to coordinate procurement, power, labor, and transportation in his district. The board later on recommended that an advisor, with headquarters in each War Department procurement zone, would coordinate power, labor, transportation, and

other factors, and then the Adjutant General stated that "Each chief of supply arm or service will have complete authority over their own districts." Those are rather conflicting requirements. I believe the procurement districts do not coincide with the power districts at the present time, there being five instead of four, and there were eleven when we had fourteen procurement districts. I would like to know just what power the zone advisor is going to have?

Colonel Jordan: I will see that Captain Broberg is put on the committee which will investigate zone advisories, but I do not think that question should be answered now.

Q. In studying this problem of personnel for procurement, I have seen no reference anywhere to the contemplated use of retired Army officers on this work. It seems to me that there are probably some retired Army Officers with procurement training who could carry on, in spite of their physical insufficiency for strenuous duty, these duties, particularly here in Washington. Why is it that no consideration has been given to utilizing their services?

A. Well, we assume that if they are unfit for active duty in time of peace that they would be in time of war under most circumstances.

Q. Are you going to give physical examinations to those civilian employees whom you do not commission, such as the heads of districts, and if they are capable without physical examination why couldn't we use retired officers?

A. You will have to ask the Chief of Ordnance and the

Chief of Chemical Warfare Service about that. I cannot tell you.

Colonel Kelton: I think you will find that in the Mobilization Plan the retired officer use is contemplated in the Engineers. We have about two hundred eighty officers on river and harbor work. They will practically all be drawn off within three months anyway after M-Day and replaced by retired officers or by the principal Engineers of those various districts. I think the intention of the Engineers is to put retired officers on river and harbor work rather than on procurement duty.

Q. Your chart showing seven hundred Reserve Officers on hand and approximately thirteen hundred required for procurement duty in the Quartermaster Corps raised the question in my mind as to how this total requirement is reconciled with the total number of Quartermaster Corps Officers performing procurement duty during the World War? You stated that it was difficult to establish a full strength Reserve Organization because of expense, etc. I realize it is impracticable to determine in advance the exact number of officers that will be called to this type of duty during the next war. However, have you an opinion as to how the requirement of Quartermaster Corps Officers for procurement duty in the next war, under the present mobilization plan, may compare with the number of Quartermaster Corps Officers that performed similar duty in the last war?

A. I do not know about the last war - that is, for Reserve Officers. There are about one hundred Regulars and thirteen hundred seventy-four for the Quartermaster Corps. The figure was arrived at

this way: The Quartermaster Corps needs twice that number for procurement, storage, and issue under the Quartermaster General, and because it is very difficult to determine just where one function leaves off and the other begins when a man is doing both of them, they said. "The best we can do is say that about half of these people will be mixed up with procurement." Similarly as to Regular Officers - about half of them will have procurement responsibilities and half of them will not. Concerning the civilian employees, they listed about sixty thousand for the Quartermaster Corps in the zone of the interior, and there again they had to make a guess so they said: "Well, about half of that." That is the best they could do. It is awfully hard to separate a twilight zone that you cannot draw a sharp line through.

Q. One question has been recurring throughout the year in the classes and that is an apparent over emphasis of Ordnance. Your figures today show the tremendous number of components of Ordnance required. I think we would appreciate your giving us a little bit of information on that subject, sir.

A. Will you ask a specific question?

Q. Why are fifty-five hundred officers required for procurement purposes? - eight hundred, I think, was the figure in the Ordnance echelon.

A. Do you mean, why have they said that this is as many as they need?

Q. Why should the Ordnance show such a large number compared to the Quartermaster Corps?

A. I suppose because of the rate of volume of supplies to be procured, the great variety of them, and the great complexity of them. They are non-commercial. It isn't like going out and buying commercial stuff. Maybe that is too many, but if so I think you will agree that it would be better to enter a war with too many people than not enough. In the last war they kept on expanding and expanding and still did not have enough people until the end. It will be better to have too many than too few. I cannot give you any more on that. You would have to talk to Ordnance Personnel for Ordnance Procurement Planning.