

# ANNUAL REPORT

OF

MAJOR GENERAL CHARLES H. MUIR  
UNITED STATES ARMY

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COMMANDANT  
**THE GENERAL SERVICE SCHOOLS**  
FORT LEAVENWORTH, KANSAS

1920



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FORT LEAVENWORTH, KANSAS

*August 20, 1920.*

FROM: The Commandant.  
To: The Adjutant General of the Army, Washington,  
D. C.  
SUBJECT: Annual Report for 1920.

1. Suspended May 16, 1916, by exigency of service, the Schools resumed functioning for the years 1919-1920, under the general scheme for Military Education in the Army set forth in General Orders No. 112, War Department, 1919.

2. Under such order, the designations of Schools functioning at this Post were:

- (a) The School of the Line.
- (b) The General Staff School.
- (c) The Signal Corps School.

The Signal Corps School has now been moved to Camp Alfred Vail, Little Silver, New Jersey. While here during the school year, the Signal Corps School yet functioned as a Special Service School, thus being under the control in educational matters of the Chief Signal Officer of the Army.

3. The personnel of the faculty and instructors was:

*Commandant*

Major General Charles H. Muir

*Assistant Commandant*

Colonel LeRoy Eltinge, Cavalry

*Secretary*

Lieutenant Colonel A. M. Ferguson, U. S. Army, Retired

*Director School of the Line*

Lieutenant Colonel Hugh A. Drum, Infantry

*Director General Staff School*

Colonel William K. Naylor, Infantry

*Director Signal Corps School*

Lieutenant Colonel A. S. Cowan, Signal Corps

*Instructors*

Major Emmett Addis, Cavalry,  
Major Owen S. Albright, Infantry,  
Colonel Frank E. Bamford, Infantry, (a)  
Major Royden E. Beebe, Infantry,  
Major Fay W. Brabson, Infantry,  
Colonel Herbert J. Brees, Cavalry,  
Lieutenant Colonel Charles M. Bundel, Field Artillery,  
Captain Edward Canfield, Jr., Coast Artillery Corps, (b)  
Captain Thom Catron, Infantry,  
Captain Adna R. Chaffee, Cavalry, (c)  
Major Clyde L. Eastman, Infantry, (d)  
Captain Paul W. Evans, Coast Artillery Corps, (e)  
Major Pelham D. Glassford, Field Artillery,  
Lieutenant Colonel Laurence Halstead, Infantry, (f)  
Colonel Lucius R. Holbrook, Field Artillery,  
Lieutenant Colonel Willey Howell, Judge Advocate,  
Lieutenant Colonel Conrad H. Lanza, Field Artillery,  
Major Joseph A. McAndrew, Infantry,  
Colonel Robert McCleave, Infantry,  
Major Lesley J. McNair, Field Artillery,  
Lieutenant Colonel Duncan K. Major, Jr., Infantry,  
Major Troup Miller, Cavalry,  
Major William A. Mitchell, Engineers,  
Captain Earl L. Naiden, Air Service,  
Captain Xenophon H. Price, Engineers,  
Major Kerr T. Riggs, Cavalry,  
Major John W. N. Schulz, Engineers,  
Lieutenant Colonel M. A. W. Shockley, Medical Corps,  
Major Walter C. Short, Infantry,  
Colonel Robert O. Van Horn, Infantry,  
Captain Joseph W. Viner, Cavalry,  
Captain George K. Wilson, Infantry, (h)

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NOTE: (a) Relieved October 1, 1919.  
(b) Resigned November 10, 1919.  
(c) Relieved April 3, 1920.  
(d) Relieved August 31, 1920.  
(e) Relieved August 14, 1920.  
(f) Relieved July 29, 1920.  
(h) Died February 1, 1920.

4. To accommodate the greatly increased student personnel (1) the garrison of the post was reduced by a regiment of infantry (less one battalion), and (2) the infantry barracks were nearly all converted by temporary construction into officers' quarters—furnishing seventy-four sets. The temporary is to be converted into permanent construction and electrical kitchenettes are to be added. In addition, work is in progress to convert Building No. 102 into seven sets of quarters. It is further contemplated to increase the number of quarters by dividing five of the larger sets of quarters into two sets each,—making the necessary additions to the buildings.

Building No. 55, formerly used as a hospital barrack, but no longer needed for such purpose and now vacant, could

be easily and economically converted into about six sets of quarters. It is recommended such conversion be made.

It is to be noted that originally the proportion of bachelor officers among students was much larger than it is at present or will be in the future; this because the age of students is now, and will be in future much greater than formerly.

There are three halls—Root, Schofield and Otis, each containing twenty-four sets of bachelor quarters. Root and Otis halls could be easily and economically converted into married quarters, each having eight sets with servants' rooms on the third floor. Schofield Hall is not adapted to such change. It is recommended that both Root and Otis halls be converted into married quarters. Such change would result in a decrease of forty-eight sets of bachelor quarters and an increase of sixteen married quarters. Having in view the limited number of bachelor officers to be sent to these Schools in the future, the accommodations are really increased. And, further, the third floors of these halls have never been regarded as suitable for officers' quarters. This will apply still more forcibly to officers of the rank of those now detailed and to be detailed in the future.

5. Due principally to there being no kitchens in the quarters resulting from the conversion of the infantry barracks, it became necessary to establish a mess for officers and their families. Efforts were made to find a suitable officer to place in charge of such mess. Major Frank Monroe, Field Artillery (Temporary), was in charge from August 7, 1919, to December 18, 1919, when Major Loren C. Grieve, Infantry, was placed in charge. He remained in charge until August 1, 1920. The installation of the electrical kitchenettes will bring about a considerable decrease in the size of such mess. The difficulties in running a mess for so many families that would give satisfaction to all should thus be correspondingly decreased. In the hope of lessening the difficulties still further, arrangements have been made to have a caterer's mess for the coming school year.

6. Reopening after a suspension that had lasted during The World War, placed on a much higher plane than ever before occupied, instructor and student personnel not

only comprising many who held high command or performed important staff duty during The World War but also reverted to their regular rank, the year's session of these Schools has been highly successful.

Not only to the faculty and instructors, but to members of the student body great credit is due.

CHARLES H. MUIR,  
*Major General, U. S. Army.*

THE GENERAL SERVICE SCHOOLS  
FORT LEAVENWORTH, KANSAS

*August 19, 1920.*

FROM: The Assistant Commandant, The General Service Schools.

TO: The Commandant, The General Service Schools.

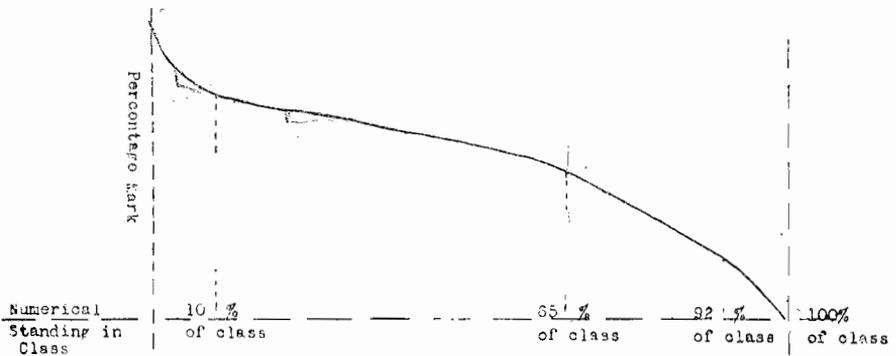
SUBJECT: Annual Report, 1919-1920.

1. The reopening of these Schools after The World War was accompanied by many difficulties, for none of the previous text-books could be used and new ones had to be written as they were required. This made an enormous amount of work for the instructors who were further handicapped by having to rely for assistance upon partly trained enlisted personnel, insufficient in numbers. That the year's work was successfully carried out is a tribute to the loyalty and untiring energy of directors and instructors.

2. Early in the year an instructor was given the special work of collecting, filing and indexing all papers, documents and texts that instructors would require for consultation in preparing their work, and a room was set aside for filing such papers. A large and valuable collection of such matter has been acquired which will be of the greatest value for many years to come.

3. A marking system, similar to that last used before these Schools were suspended in 1916, was adopted and, in its general outlines, proved satisfactory. As has always been the case, a marking system was found to be somewhat irritating to the members of the classes, though no one has ever been able to recommend a substitute that had the same elements of fairness to the officers concerned. New students and those who come out low in their class standing will always feel an irritation at a marking system, though the system employed at these Schools is universally admitted to be fair and to be equitably applied.

4. A study of marks awarded students for the past 14 years shows that the curve of standings always quite closely approximates the shape of the composite curve. This composite curve shows a considerable drop in mark between successive individuals of the first 10% of the class; then a much smaller and quite uniform drop between successive individuals for the next 55% of the class; then a larger and gradually increasing drop between successive individuals for the next 27%; and finally a large drop between successive individuals for the last 8%. While this curve of standings moves up and down in actual percentage mark awarded, depending on the policy adopted as to severity of the scale of cuts adopted for that particular year, the shape of this curve is constant and may be represented as follows:



5. The report of a Committee of the American Society of Civil Engineers which investigates all the institutions in the United States which give technical instruction in Engineering recommends a strict marking system based on their finding that in the average class there will be 25% of men of superior attainments, 50% mediocre and 25% inferior or rather deficient. Full report of this investigation will be found in "*A Study of Engineering Education by C. R. Mann—The Carnegie Foundation—1918.*" The classes to which this refers are composed of young men who are unproven and some of whom are indifferent to the results of their work. Combining the results of this investigation quoted above and the records at these Schools as shown by the composite curve of percentage standings it is evident that for this institution a scale of cuts which would result in not over 8%

to 10% of students of the average class being found deficient would not be excessively severe. A study of the records will show that every class has a small minority whose mark is clearly below a reasonable standard of proficiency as compared to the rest of the class and that the number of these seldom exceed 8% of the class. This elimination having taken place in The School of the Line, would not occur in The General Staff School composed of graduates of The School of the Line except in the case of an officer who deliberately showed indifference to his work after reaching The General Staff School.

6/ The policy of closing these Schools, adopted by the War Department in all national emergencies, is believed to be wrong. Here is a going concern capable of giving emergency instruction to a large number of officers. It seems improper to close it at just the time when it could perform the greatest service. / The Special Service Schools of the separate arms are better adapted to quickly instruct officers for line duty, and the technical schools of the various arms and services are better equipped to instruct specialists, but these Schools are the only ones equipped to give an emergency course to temporary and national guard officers in the duties of command and in staff duties. / The particular emergency would necessarily determine the character of the instruction to be given, for in such case no attempt should be made to give a "get rich quick" course in the whole art of war, but rather to quickly fit officers for their particular duties under existing circumstances. / The number of students, up to the capacity of the institution, which could accommodate and instruct 1,000 officers if the reservation were not encumbered with other activities, could also be determined only after the nature of the emergency was understood. To quickly develop so large an institution on a basis which would give satisfactory results the number of properly qualified instructors allowed should be at least 10% the number of students. / Good results could be attained by a three months' course but a four months' course would be better. /

7. It is not known whether the War Department contemplates summer courses for staff officers. If such is the case, properly selected business men, accustomed to dealing with large affairs, could be given a six weeks' course that would

partly qualify them to act as assistant general staff officers in special capacities. The difficulty of securing the attendance of the right class of men, and the futility of dealing with any except of such a class, makes it appear to me that the establishment of such a summer course of instruction is inadvisable. Organization and the details of staff duty are constantly changing so that a graduate of such a course would have lost most of the benefits of the course within two or three years' time. If, however, the War Department determines to hold such summer courses, they should be held at this institution which is properly equipped for such a purpose. To get the most benefit from such a course the particular staff position for which a man is to be partially fitted should be determined early in the course and all his study and work should be concentrated upon this one phase of staff duty with only enough other work to make clear the relation of the particular position for which he is being fitted to the whole organization of an army.

8. Annual reports of the Director, The School of the Line, the Director, The General Staff School and the Director, Signal Corps School, are inclosed herewith.

LEROY ELTINGE,  
*Colonel, Cavalry.*

THE GENERAL SERVICE SCHOOLS  
FORT LEAVENWORTH, KANSAS

*August 12, 1920.*

FROM: Colonel W. K. Naylor, Inf., Director, General Staff School.

TO: The Assistant Commandant, The General Service Schools.

SUBJECT: Annual Report of the Director of The General Staff School.

1. As Director of The General Staff School, I desire to submit the following report covering the operation of the School for the past academic year, and the prospective operations for the coming year.

2. The course started with a total of 49, of which the following were graduated:

Major Jos. S. Barnes, Field Artillery,  
Lieutenant Colonel Geo. C. Barnhardt, Cavalry,  
Colonel John B. Bennett, Infantry,  
Lieutenant Colonel Frank C. Bolles, Infantry,  
Major R. W. Briggs, Field Artillery,  
Major Jas. H. Bryson, Field Artillery,  
Major I. J. Carr, Signal Corps,  
Colonel Jos. C. Castner, Infantry,  
Lieutenant Colonel B. Frank Cheatham, Quartermaster Corps,  
Captain F. W. Clark, Coast Artillery Corps,  
Colonel W. F. Clark, Cavalry,  
Lieutenant Colonel F. S. Cocheu, Infantry,  
Colonel A. C. Dalton, Infantry,  
Lieutenant Colonel C. Deems, Jr., Field Artillery,  
Major W. P. Ennis, Field Artillery,  
Lieutenant Colonel Geo. H. Estes, Infantry,  
Lieutenant Colonel W. G. Glasgow, Cavalry,  
Major J. P. Hopkins, Coast Artillery Corps,  
Colonel H. P. Howard, Cavalry,  
Major R. E. Ingram, Infantry,  
Colonel Wm. P. Jackson, Infantry,  
Major F. C. Jewell, Coast Artillery Corps,  
Major James Justice, Infantry,  
Lieutenant Colonel F. L. Knudson, Infantry,  
Lieutenant Colonel J. R. Lindsey, Cavalry,  
Major R. E. Longan, Infantry,  
Major Jas. M. Love, Infantry,  
Lieutenant Colonel P. L. Miles, Infantry,  
Lieutenant Colonel J. M. Morgan, Cavalry,

Major E. Van D. Murphy, Infantry,  
Major E. A. Myer, Infantry,  
Captain J. C. Ohnstad, Coast Artillery Corps,  
Major C. R. Pettis, Engineers,  
Major J. R. Proctor, Coast Artillery Corps,  
Major Wm. H. Raymond, Coast Artillery Corps,  
Lieutenant Colonel J. H. Reeves, Cavalry,  
Lieutenant Colonel S. J. B. Schindel, Infantry,  
Lieutenant Colonel G. H. Shelton, Infantry,  
Lieutenant Colonel B. T. Simmons, Infantry,  
Lieutenant Colonel W. R. Smedberg, Jr., Cavalry,  
Lieutenant Colonel W. Smith, Field Artillery,  
Major A. H. Sunderland, Coast Artillery Corps,  
Major I. C. Welborn, Infantry,  
Lieutenant Colonel P. Whitworth, Infantry,  
Lieutenant Colonel J. E. Woodward, Infantry.

The following were detailed to take the course, but failed to do so or to complete the course for the reasons stated opposite their respective names :

Caldwell, Vernon A., Colonel, Infantry—Retired October 3.  
Fiske, H. C., Major, Engineers—Relieved September 17, by orders from the War Department.  
Johnson, Jacob C., Lieutenant Colonel, Coast Artillery Corps—Relieved October 31, on account of ill health.  
Smith, Wright, Colonel, Field Artillery—Relieved June 14, 1920, on account of ill health.

Colonel Howard was retired before graduation but, inasmuch as he had completed sufficient of the course to entitle him to a diploma, he was graduated notwithstanding his retirement.

3. I was detailed as Director of The General Staff School on March 1, 1920, pursuant to General Orders No. 2, The General Service Schools, dated March 1, 1920, succeeding the Assistant Commandant, who had been acting in that capacity. Not having finished my work with The School of the Line, I did not actually begin to function as Director of The General Staff School until about the middle of the month, so that anything that I have to say in this report with reference to what occurred before I began to function as Director is merely the result of my general observation while I was an instructor and what I have gathered from conversations with other instructors and students.

A great deal of difficulty was encountered at the beginning of the course in outlining a schedule. The officers who attended the School had been detailed by the War Department from the service at large, and there was a great dissimilarity in their qualifications for pursuing the course.

Some were graduates of The School of the Line; some were graduates of the School at Langres; some had exercised high command and had had a great deal of experience in actual combat in France; some qualified under all these headings, and some under a part, or none. To have framed the curriculum to meet the standard set by the best qualified officer would have been manifestly unjust to those officers not so fortunately favored and whose opportunities may or may not have been the same. As a result the course was drawn up so as to give those who were not familiar with the latest tactical doctrines an opportunity to familiarize themselves therewith, which resulted in a great deal of The School of the Line work being given to the Staff Class also, to the annoyance of some of the members of the class who had already taken it. In the interest of fairness nothing else could have been done. As a result, the course in certain places was rather more academic than was desired, but it is hard to see how it could have been prevented.

Comment has been made upon the youth of some of the instructors. It is my opinion, after several years' connection with these Schools, that the question of age has very little to do with an officer's suitability as an instructor. There are two indispensable qualities that an instructor should possess before he is considered at all as such. The first is a knowledge of his subject, and the second, personality. Without these no instructor can succeed, and it will be noted that these two qualities are only remotely affected by a man's age. The next qualification in order of importance is experience in the field, the next rank, and the last years.

4. In an administrative way scarcely any avoidable difficulties have been encountered. Our force of stenographers, however, has not been adequate nor the force on duty in the library. The library contains a great deal of valuable data which only needs to be thoroughly carded to become available. The clerical force appears to be so limited that this cannot be successfully done. This observation must not be taken as a reflection upon the work of the present force, for it has functioned well when we consider its paucity of numbers.

5. In a school of this kind, little should be left to the imagination in demonstrations and solutions of practical problems. Aircraft, balloons, tanks, and all signal communications should be so well equipped that they can function ideally. These units should be models so that officers, upon leaving the School, can say that at least for once they have seen how it should be done, even if they are never to be so fortunate again.

6. The General Terrain Exercise, generally known as the Staff Ride, conducted during the past year, was one of the most successful which I have ever participated or have ever attended, and will serve as a model for future classes. It more nearly approached reality than any work of its kind that I have ever seen.

#### COURSE FOR THE COMING YEAR

7. Before finally deciding upon the schedule of instruction for the ensuing year, in accordance with precedent, I called upon the members of the Staff Class for comments on the last year's course, and criticisms and suggestions on a tentative schedule prepared for the next year's course.

An endeavor was made to incorporate as many of these suggestions as were sound and practicable in the new schedule. Before starting on this schedule the following decisions were made:

That The General Staff School should be considered as a progression from The School of the Line—in other words, a post graduate course.

That we should assume that all the students entering The Gen-Staff School should have either been through The School of the Line or were the equal in military knowledge of those who had taken that course.

That nothing should appear in The General Staff School course that pertains to the division except wherein such was necessary for the solution of problems of the corps and army.

That The General Staff School should be considered a corps and army school in contradistinction to The School of the Line in a division school.

8. Consequently, the course will commence with lectures, conferences, and outside work on organization, troop leading, tactics and technique of the corps and Army, and of all the auxiliary arms thereof in order that the student may become familiar with the powers and limitations of the agencies with which he will have to deal.

Upon the conclusion of this part of the course, the duties of the General Staff and problems involving command and general staff duties of the corps and army will be taken up. Upon completion of this work we hope to find that the student either knows, or that we have just reason to assume that he knows, all about the troops with which he must deal with in the corps and army; all about organization; all about general staff duties and all about command. He then is ready to function as a commander or as a staff officer in combined problems.

We will then take up our combined problems wherein each officer, in rotation, as far as possible, will perform the duties of commander and general staff officer, corps and army.

This duty will be performed in connection with serial problems at the desk, staff rides, terrain exercises and maneuvers in the field, and an expeditionary force solved at the desk. All the out-of-door work in the fall will be of a technical and tactical nature and in the spring of a command and general staff nature.

9. In the course for the next year several innovations have been introduced. A course in Logic will be conducted and a course in Psychology and Leadership.

In addition, officers will be required to prepare projects of operations and military monographs such as they will be expected to be able to prepare in The General Staff College and actually in the service.

The applicatory method, so long in vogue in these Schools, will be continued and expanded in the coming year and officers will be from time to time impressed with the importance of this method of instruction. The question of command will be emphasized as much as, if not more so than, that of general staff, and it might not be improper at this point to suggest that the name of The General Staff School be changed to that of "School of Command and General Staff, Corps and Army."

It will be my endeavor to make the course highly instructive and eliminate such things as cutting officers for minor errors and other irritating details.

A study of the military geography of the United States, particularly its borders, will be pursued, together with a

strategical and tactical war game essentially of *command* involving a defense of the Pacific Coast.

The Department of Staff Supply, originated by the undersigned in 1916, will be revived and made part of the school course under charge of Lieutenant Colonel Duncan K. Major. This course covers all the activities of the G1 and G4.

It is thought that the course in Military History (Historical Research) has been so arranged as to reduce any unfavorable comment of it to a minimum.

Being influenced by the social and economic unrest apparently existing throughout the world, it was decided to develop a course of instruction under the name of "Communist Warfare" touching upon problems and solutions arising out of internal strife and domestic disorders.

All work such as map problems, terrain exercises, monographs, etc., on which students are to be graded will be given a valuation commensurate with their relative importance, the students being informed beforehand of this rating.

10. Taking it as a whole, when we consider the difficulty under which the School was conducted last year, I believe a great deal of benefit has been derived and that the course was in general quite successful. At least, I have been so informed by many of the graduate officers who had taken the course themselves.

11. The co-operation among the Academic Staff has been typical of the high standard in that regard established in the past in these Schools.

W. K. NAYLOR.  
*Colonel, Infantry.*

THE SCHOOL OF THE LINE  
FORT LEAVENWORTH, KANSAS

*July 29, 1920.*

FROM: Lt. Col. H. A. Drum, Director, The School of  
the Line.

TO: Assistant Commandant, The General Service  
Schools.

SUBJECT: Annual Report, 1919-1920.

1. The School of the Line reopened September 1, 1919, for its first course following The World War. The School had been closed since the 1915-1916 course. The undersigned was designated as Director, The School of the Line on August 1, 1919, per Par. 2, S. O. 32, The Army Service Schools, dated August 1, 1919. The School course for 1919-1920 was completed successfully without any special incident.

2. THE SCHOOL OF THE LINE COURSE:

The experiences of The World War, especially our own, demonstrated the necessity for some changes in the course and methods of instruction heretofore employed. These changes related primarily to a broadening of professional views and scope of instruction, and resulted naturally from our experience with a large army. At the same time, there was a tendency to have the peculiarities of the stabilized warfare of the Western Front predominate in professional views. The School course was drawn up with the foregoing in mind. While broader professional views were introduced and full benefits of our war experience were utilized, the course was based primarily on the recognized principles of open warfare which are accepted as the soundest preparation for war. However, the new weapons and methods developed in The World War were not neglected; rather, their employment under the open warfare conditions were studied and in such situations sound solutions reached.

The following extracts from Memoranda issued to the class of 1919-1920 set forth the course:

### Summary of Line School Course

SUBJECT	Conferences	Lectures	Map Problems	Terrain Exercises	Tactical Rides	Map Maneuvers of Demonstrations	Total Half Days
1. Military Organization -----	17	5	1				18
2. Tactics and Technique of Separate Arms:							
(a) Infantry -----	12	8	2	3	5		22
(b) Field Artillery -----	10	6	2	2	3		17
(c) Cavalry -----	4	2	1	1	2		8
(d) Tanks -----	1	1	1				2
(e) Air Service -----	3	3					3
(f) Signal Troops -----	2	2	1			2	5
(g) Engineers -----	3	3					3
(h) Sanitary Troops -----	3	3					3
(i) Chemical Warfare -----	1	1					1
(j) Coast Artillery -----	2	2					2
	41	31	7		10	2	66
3. General Tactical Functions of Larger Units -----	8	8	2				10
4. Plans and Orders, etc. -----	5	2	2				7
5. Tactical Principles and Decisions -----	53	20	25				78
6. Solution and Discussion of Problems -----	2	4					2
7. Logistics -----	8	4	2				10
8. Preparations of Problems -----	2	6	2				4
9. Conduct of War and Strategy -----	6	10	1				7
10. Military History -----	8	50	2				10
11. Field Engineering -----	20	8	2	8			30
12. Supply Course -----	18	4	4				22
13. Care of Troops -----	2	8	1				5
14. Care of Animals and Transportation -----		6					
15. Military Intelligence -----	10	4	2				12
16. Duties of Division Commander and Staff and Organization of Division Headquarters -----	20		2				22
17. Troop Leading -----	40		20				60
18. Psychology -----	1	2					1
19. Laws of War and Military Government -----	2	10	1				3
20. Discussion of Various Problems -----		6					
21. General Terrain Exercises -----				20			20
22. General Map Maneuvers -----						20	20
23. Equitation* -----							
<b>TOTAL</b> -----	<b>263</b>	<b>188</b>	<b>76</b>	<b>34</b>	<b>10</b>	<b>22</b>	<b>405</b>

\*57 Practical Exercises between November 1st and April 30.

*Uniform Tactical Doctrine:* In view of our recent experiences with French, British, Italian and our own armies there will be a tendency to a diversified instead of a uniform tactical doctrine. The avoidance of such an undesirable condition is of primary importance and calls for energetic personal action by each instructor and student. Satisfactory results cannot be secured if the student body of this School receives instruction which is based on several different tactical doctrines, such as part French, part Brit-

ish, part German, etc. Our experiences in the European War have been sufficient and the results so creditable that we have little or no need to borrow tactical doctrines from a foreign country. The tactical principles and doctrines heretofore recognized and taught at the Leavenworth Schools have been tested in the European War and have been found to be as sound today as heretofore.

The tactical doctrine to be imparted in this School will be the American Doctrine as illustrated by our own teachings and experiences. Therefore, there will be no need to quote as authority for teaching French, British, or other foreign manuals and pamphlets. While there is no objection to utilizing incidents of the British, French, etc., campaigns as examples, the tactical doctrine deduced therefrom must be along the tactical lines taught by the A.E.F. and at the Leavenworth Schools.

*Tactical Policies:* From the viewpoint of tactical and staff principles and doctrines, the previous training of the first class of students at this School will not be uniform. Some will have the A.E.F. training, others will have been associated with French or British instructors, and others, due to the exigencies of the service, will have had little tactical training. Due to a lack of broad military training, there will probably be a general tendency to base all opinions and conclusions on the experience gained in the European War. Such a policy would be a mistake as there are many features of the European War which are peculiar to special situations in that war which have no broad application. Inconsistencies and one-sidedness of the above nature are to be avoided.

In connection with the foregoing, the following policies are announced and all instructors will be guided thereby:

(a) No classification of warfare. The terminology "open," "position," "stabilized," and "trench" warfare will not be recognized or employed. There is no tactical distinction warranting such a classification of warfare. The same tactical principles apply to all of these so-called classes of warfare. The difference exists only in the utilization of new weapons which have forced the adoption of new methods and new ways of executing the same tactical principles. In the final analysis, the terminology given above simply indicates different situations, and not distinct and special classes of warfare. Therefore, in so far as tactical principles, tactical command and tactical communications are concerned, there will be no such class distinction as "open," "position," etc., warfare.

(b) While some situations representing the peculiarities of the so-called stabilized and trench warfare are desirable, the main part of the course will be based on the so-called open and position warfare situations. The inculcation of an offensive spirit, which must be the primary object of the course, is best obtained by the study of open warfare offensive situations.

(c) At the same time, the policy announced in the preceding sub-paragraphs must not lead to a neglect of the new weapons and the development of new methods. The foregoing refers especially to the infantry weapons, such as the 37 mm., the automatic rifle and machine gun and the infantry lines of information and the class of artillery fire employed in both stabilized and open warfare situations.

### SUCCINCT STATEMENT OF THE LINE SCHOOL COURSE

Primarily the course is based on: 1st, organization, 2d, tactics, technique and capabilities of the different arms, separate and in combination; 3d, tactical principles, decisions, plans and orders and their application; 4th, supply principles and their application to the division; 5th, the duties and functions of the commander and the general staff of a division; 6th, details of troop leading within the division.

The basic unit for instruction will be the division. All instruction will be based thereon. However, in the troop leading course, smaller units will be handled, but always as part of a division. In that part of the course titled "Tactical Principles and Decisions," the division will always be employed as the basic unit.

Terrain exercises, that is, problems on the ground, will be utilized to the greatest possible extent. In determining the student's standing, that is, marking value, the greatest weight will be given to solutions of problems on the ground.

In the supply course, all phases of division supply will be taught.

### THE COURSE EXPLAINED

(a) *Military Organization*: The object of this course is to acquaint the student with the principles of organization and all details of the organization of all arms, the division, the corps, the army, etc.

(b) *Tactics and Technique of Separate Arms*: The object of this course is to cover what will eventually be taught at the Special Service Schools. The desire is to give the student a sound and basic tactical ground work in each arm and service before he considers them in combination.

(c) *General Tactical Functions of Larger Units*: The object of this course is to acquaint the student with the relation between the various arms and services and how they are combined into one smooth running machine. The interior organizations, the relation between infantry and artillery and how they are combined for action, etc., should be thoroughly covered. The composition and relation of corps and army troops to the division and the question of supply and traffic control should be gone into thoroughly.

(d) *Plans and Orders, etc.*: Self-explanatory. The form prescribed in our F. S. R. will be followed. Considerable confusion has existed concerning this subject, due primarily to a failure to make a proper distinction between "plans" and "field orders" and also between initial field orders for an operation and the subsequent field orders issued in the same operation. In most cases the instruction heretofore imparted has been based on the initiation of an operation. The result has been to give the impression of great length of field orders. Plans, which are embodied in the initial field orders of an operation, are necessarily lengthy, but subsequent field orders should have the characteristic brevity required by F. S. R.

(e) *Tactical Principles and Decisions*: This course is intended to teach the tactical principles and methods enunciated in our F. S. R., D. R., Griepenkerl, Buddecke, von Alten, and Seventy Problems and by our experience in the European War, and, also, the habit of making tactical decisions and imparting them to troops by means of field orders. The methods of teaching heretofore employed at the School will be followed. The various instructors will be assigned subjects such as "halt and security on the march; march outpost," and others as indicated in the course sheet. Each instructor will prepare the data for his conferences, for the student's study before the conference and for problems. The data for study and conferences will always be presented in the form of a map problem with a solution and pertinent comments. The comments in the solution should explain briefly the principles, etc., to be illustrated, while the conference should elaborate the explanation thereof.

(f) *Solution and Discussion of Problems*: This course will be given early in the year and is intended to assist the student in solving the problems given later in the course.

(g) *Logistics*: This is self-explanatory. In railroad movements the standard American car will be used.

(h) *Preparation of Problems*: The object of this course is to train the student to impart to his command the instruction received at these Schools. While the actual preparation of a problem, a field exercise, etc., is an essential part of the course, the main object is to outline to the student how to employ practically the applicatory method of instruction.

(i and j) *Conduct of War and Military History*: Self-explanatory, and to be taught as in the past.

(k) *Field Engineering*: The basis of this course will be field fortifications. All other subjects touched upon in the course except military maps should have the foregoing in mind. While map reading and sketching will be taught in conjunction with each other, these two subjects will be closely allied with field fortifications. The four terrain exercises in sketching will be based on field fortification problems. The field fortification course will include study of the following systems of defense, i. e., hasty intrenchments, a prepared position and a defensive zone, and all accessories thereto.

The course on Military Maps should include the various processes of reproducing maps in the field.

(1) *Supply Course*: Heretofore sufficient instruction has not been given at these Schools in this subject. It is so closely allied with tactics that an officer cannot be considered tactically trained until he has a comprehensive knowledge of supply and how it influences tactical dispositions. At the same time, it must be remembered that The School of the Line is primarily a tactical school.

The basis of the course is to teach completely and in all details the method, routine and mechanism of supply of an infantry division. In order to give a comprehensive view of the divisional supply system, it will be necessary to cover rather generally the whole supply system of an army. In connection with the foregoing, the A.E.F. supply system will be employed as an illustration. It should be kept in mind that the former varies in some details from the system prescribed in our F. S. R. However, the basic principles are the same in all sound systems. The tendency to base

all instruction on the system used in stabilized warfare situations should be guarded against. It is more important to teach thoroughly the system to be employed in a campaign of considerable movement with few railroads and few good roads. The system of echeloning trains, march tables for trains, etc., is not out of date.

The supply course will include all supplies, and evacuations and salvage. The supply of ammunition will be thoroughly covered in all its phases.

(m) *Care of Troops*: This will include the subject of "Welfare of Troops" as practiced in the A.E.F., especially after the armistice.

(n) *Care of Animals and Transportation*: The primary object of this course is to show the necessity for the care of animals and transportation, how this duty should be performed and how to instruct subordinates in the premises.

(o) *Military Intelligence and Maps*: The course is explained in the Summary of the Line School Course.

(p) *Duties of Division Commander, Division General Staff, etc.*: The object of this course is to give a clear and complete view of the workings of division headquarters: 1st, the function and duties of the division commander; 2d, that of each staff officer within his own sphere of action; and 3d, how the entire staff is combined into a smooth working team.

(q) *Troop Leading*: As indicated hereinbefore the Troop Leading course is intended to teach in all details the execution, of the tactical principles applicable to a given situation and the necessity and means of securing tactical teamwork. In addition, the tactics and technique of each arm should be illustrated.

(r) *Psychology, Laws of War, etc.*: Self-explanatory.

*Map Maneuvers*: The object of the Map Maneuver course is to teach decision, issuance of field orders, especially verbal, and the details of troop leading. Map maneuvers lose this value very easily if permitted to take the form of "Councils of War." The Director will insist that each participant take upon himself his full responsibility alone and unaided except by authorized assistance and that in each case proper field orders are issued. "Plans" or

“schemes” are not field orders and will not be accepted as substitutes therefor. The remarks under Map Problems relating to tactical lessons apply to map maneuvers.

#### GRADUATES

3. The following officers were graduated on June 28, 1920:

#### HONOR GRADUATES

Allen, Robert H., Lieutenant Colonel, Infantry,  
Burton, Frank H., Major, Infantry,  
Castle, Charles W., Lieutenant Colonel, Infantry,  
Conrad, Casper H., Jr., Lieutenant Colonel, Cavalry,  
Crosby, Herbert B., Lieutenant Colonel, Cavalry,  
Howland, Charles R., Lieutenant Colonel, Infantry,  
McCornack, Condon C., Major, Medical Corps,  
Miller, Claude H., Major, Infantry,  
Weeks, George McD., Lieutenant Colonel, Infantry.

#### DISTINGUISHED GRADUATES

Arnold, Frederick T., Major Cavalry,  
Burt, William H., Major, Field Artillery,  
Cooper, A. J., Captain, Coast Artillery Corps,  
Hanson, James, Major, Infantry,  
Hughes, John H., Major, Infantry,  
Miller, Howard S., Captain, Coast Artillery Corps,  
Moore, Richard C., Major, Engineers,  
Peace, Willis G., Captain, Coast Artillery Corps,  
Phalen, James M., Lieutenant Colonel, Medical Corps,  
Preston, John F., Lieutenant Colonel, Infantry,  
Rehkopf, Ned B., Major, Field Artillery,  
Simonds, Lawrence B., Lieutenant Colonel, Infantry,  
Taylor, James D., Major, Infantry.

#### GRADUATES

Andruss, Malcolm P., Captain, C. A. C.,  
Adams, Sterling P., Lieutenant Colonel, Cavalry,  
Bash, Louis H., Lieutenant Colonel, Infantry,  
Bell, Ola W., Lieutenant Colonel, Cavalry,  
Berkeley, Hugh D., Lieutenant Colonel, Cavalry,  
Brooke, Mark, Major, Engineers,  
Caffey, Lochlin W., Major, Infantry,  
Charles, Oscar J., Lieutenant Colonel, Infantry,  
Clapp, Leander A., Major, U. S. Marine Corps,  
Cooper, Harry L., Major, Infantry,  
Corey, John B. W., Major, Quartermaster Corps,  
Croft, Edward, Major, Infantry,  
Dallam, Samuel F., Major, Cavalry,  
Darrah, Thomas W., Lieutenant Colonel, Infantry,  
Dwyer, Thomas E., Lieutenant Colonel, Coast Artillery Corps,  
Ely, Frank D., Lieutenant Colonel, Infantry,  
Forsyth, William D., Major, Cavalry,  
Gatewood, Charles B., Major, Ordnance Department,  
Ham, Samuel V., Lieutenant Colonel, Infantry,  
Hase, William F., Major, Coast Artillery Corps,

Hopkins, Frank E., Lieutenant Colonel, Field Artillery,  
Hyer, Benjamin B., Lieutenant Colonel, Cavalry,  
Jones, William F., Major, Quartermaster Corps,  
Jordan, Lambert W., Major, Infantry,  
Jordan, William H., Jr., Major, Infantry,  
Kilbourne, Henry S., Major, Field Artillery,  
Kinnison, Henry L., Lieutenant Colonel, Infantry,  
Kirkpatrick, George W., Lieutenant Colonel, Cavalry,  
Knabenshue, Fred G., Major, Infantry,  
Lambdin, William McK., Lieutenant Colonel, Cavalry,  
Lee, Fitzhugh, Major, Cavalry,  
Menges, William H., Captain, Coast Artillery Corps,  
Merrill, Thomas E., Colonel, Field Artillery,  
Miller, Charles J., Major, U. S. Marine Corps,  
Munro, James N., Major, Cavalry,  
Munson, Fred L., Major, Infantry,  
McArthur, John C., Lieutenant Colonel, Infantry,  
Newell, Isaac, Lieutenant Colonel, Infantry,  
Nissen, August C., Lieutenant Colonel, Cavalry,  
Paine, Charles H., Lieutenant Colonel, Infantry,  
Payne, Brooke, Colonel, Field Artillery,  
Pearce, Thomas A., Lieutenant Colonel, Infantry,  
Pierson, Robert M., Lieutenant Colonel, Medical Corps,  
Pickering, James N., Lieutenant Colonel, Infantry,  
Platt, William P., Captain, Coast Artillery Corps,  
Porter, Ralph S., Lieutenant Colonel, Medical Corps,  
Powers, Edward, Major, Coast Artillery Corps,  
Pratt, Raymond S., Major, Field Artillery,  
Price, Frederick S. L., Major, Infantry,  
Price, Harrison J., Colonel, Infantry,  
Reeder, Russell P., Major, Coast Artillery Corps,  
Roberts, Thomas A., Major, Cavalry,  
Rutherford, Samuel McP., Lieutenant Colonel, Cavalry,  
Scott, John, Captain, Signal Corps,  
Ryther, Dwight W., Lieutenant Colonel, Infantry,  
Seaman, Claudius M., Captain, Coast Artillery Corps,  
Shaffer, Pearl M., Major, Infantry,  
Short, Walter C., Lieutenant Colonel, Cavalry,  
Smith, Charles C., Lieutenant Colonel, Infantry,  
Smith, Perrin L., Major, Infantry,  
Stokes, Marcus B., Lieutenant Colonel, Infantry,  
Stritzinger, Frederick G., Lieutenant Colonel, Infantry,  
Sturtevant, Girard, Lieutenant Colonel, Infantry,  
Taylor, James B., Captain, Coast Artillery Corps,  
Ward, Philip R., Lieutenant Colonel, Coast Artillery Corps,  
Watson, James D., Captain, Coast Artillery Corps,  
Weisel, Edmund T., Captain, Coast Artillery Corps,  
Wolfe, Orrin R., Lieutenant Colonel, Infantry,  
Wood, William S., Major, Field Artillery.

#### OFFICERS WHO DID NOT COMPLETE THE FULL COURSE

Babcock, Conrad S., Major, Cavalry—Never Joined.  
Carey, Edward C., Lieutenant Colonel, Infantry—Retired  
April 30.  
Cheatham, B. Frank, Lieutenant Colonel, Quartermaster—  
Transferred to Staff Class.  
Keesling, Arthur L., Captain, Coast Artillery Corps—Re-  
signed October 9th.  
Pattison, Harry H., Lieutenant Colonel, Cavalry—Retired  
October 10.

Smith, Cornelius C., Lieutenant Colonel, Cavalry—Retired  
April 9th.  
Stone, Charles B., Jr., Major, Infantry—Relieved August  
25th, 1919, on account of ill health.  
Wetherill, Alexander M., Major, Infantry—Resigned  
December 9th.

#### 4. INSTRUCTORS:

Attention is invited to the work of the instructors during the school year. When the School reopened no text-books were available. All conferences, lectures and problems had to be prepared in advance. A number of the instructors were not graduates of the Schools. The situation indicated was met by the instructors with exceptional efficiency and energy. I desire to express my sincere appreciation for their loyal support and to commend them for their exceptionally fine work under difficult conditions.

#### 5. TEXT-BOOKS:

As a result of last year's course, the School has prepared the following text-books which will be published to the service in the near future:

Combat Orders,  
General Tactical Functions of Larger Units,  
Tactical Principles and Decisions,  
Topography,  
Field Fortifications,  
Tactics and Technique of Tanks,  
Signal Communication for All Arms,  
The Technique of Musketry.  
Troop Leading:  
    An Infantry Division in the Offensive.  
Troop Leading:  
    An Infantry Division in the Defensive,  
The duties of the Division Commander and his staff,  
Divisional Logistics,  
Principles of Strategy.

H. A. DRUM,  
*Lieutenant Colonel, Infantry.*

THE GENERAL SERVICE SCHOOLS  
FORT LEAVENWORTH, KANSAS

*June 23, 1920.*

FROM: The Director, Signal Corps School.  
TO: The Assistant Commandant, General Service  
Schools.  
SUBJECT: Report of Signal Corps School for 1919-1920.

1. The Army Signal School was closed in 1916 and remained closed during The World War. It was reopened on September 1, 1919, under the name of The Signal Corps School.

PERSONNEL

2. The following officers were assigned to duty with the School during the year:

Lieutenant Colonel Arthur S. Cowan, Signal Corps, reported for duty as Director, August 3, 1919; Captain Karl Truesdell, Infantry, reported for duty as Instructor, October 11, 1919; Captain Clyde L. Eastman, Signal Corps, reported for duty as instructor, September 1, 1919; Captain Paul W. Evans, Signal Corps, reported for duty as instructor, September 1, 1919; Captain Edward A. Allen, Infantry, reported for duty as instructor, September 4, 1919; he was relieved from duty January 6, 1920, as his services were no longer required.

At the opening of the School on September 1st, there were ten (10) student officers present. Four (4) additional students reported between September 1 and October 8. Thirteen (13) students completed the course and were graduated. One (1) student failed to make a satisfactory grade and was not graduated. The student class consisted of four (4) captains, seven (7) first lieutenants and three (3) second lieutenants. The length of commissioned service of these officers varied from eighteen (18) years to one and one-half ( $1\frac{1}{2}$ ) years. None of the student officers

had had a technical education and none of them had had service with a Signal Corps organization.

### OBJECT OF THE SCHOOL

3. The object of the Signal Corps School, as stated in instructions from the War Department, dated August 12, 1919, is "to prepare officers for duty as commanders of Signal Corps battalions and as signal officers of divisions, army corps and armies and to co-operate with The General Service Schools in all matters involving the tactical functioning of signal troops." The instructions above referred to further state "it is desired that the course at the School shall be largely tactical and for the reason the students should take much of the Military Art course of The School of the Line."

### COURSE OF STUDY

4. In accordance with these instructions, the following course of study was prepared and submitted to the War Department for approval. The course is divided into two parts: One, Military Art; Two, Signal Communications. The Military Art course is arranged with a view to providing adequate instruction in so much of the Military Art course of The School of the Line as will be of direct value to commanders of Signal Corps battalions and to division, corps and army signal officers.

The Signal Communications course provides both technical and tactical instruction. The technical instruction covers the elements of telephone, telegraph and radio engineering, and the care, operation and maintenance of Signal Corps technical equipment. The tactical instruction covers approved methods for using Signal Corps personnel and equipment in providing signal communications for the elements of a division for divisions, corps and armies.

Under the heading of "Miscellaneous" instruction is provided in the various auxiliary methods of signaling and in certain other subjects of importance in the general training of all signal officers. The twenty general terrain exercises are scheduled to take place towards the end of the school year and afford the means of testing the efficiency of the students in the work previously covered.

Equitation is included in the course as a means of providing necessary physical exercise as well as essential instruction for all signal officers.

A summary of the course of study follows:

### MILITARY ART

(See Note 1).

- (a) *Military Organization*;  
Conferences 17; Lectures 5; Total Half Days 17.
  - (b) *Tactics and Technique of Separate Arms*;  
Conferences 38; Lectures 28; Total Half Days 38.
  - (c) *General Tactical Functions of Larger Units*;  
Conferences 8; Lectures 8; Total Half Days 8.
  - (d) *Plans and Orders, etc.*;  
Conferences 5; Lectures 2; Total Half Days 5.
  - (e) *Tactical Principles and Decisions*;  
Conferences 53; Lectures 20; Total Half Days 53.
  - (f) *Solution and Discussion of Problems*;  
Conferences 2; Lectures 4; Total Half Days 2.
  - (g) *Duties of Division Commander and Staff and Organization of Division Headquarters*;  
Conferences 20; Total Half Days 20.
  - (h) *Care of Animals and Transportation*;  
Lectures 6.
  - (i) *Military Sketching and Map Reading*;  
Conferences 15; Lectures 1; Problems 15; Total Half Days 30.
  - (j) *Care of Troops*;  
Lectures 10.
- Total for Military Art Course:  
Conferences 158; Lectures 84; Problems 15; Total Half Days 173.

### SIGNAL COMMUNICATIONS

- (a) *Principles Underlying Wire and Radio Communication*.  
Signal Corps Equipment.  
Conferences 60; Lectures 10; Problems 30; Total Half Days 90.
- (b) *Wire Communication for Elements of a Division, a Division, a Corps, and an Army*.  
Conferences 20; Lectures 5; Problems 20; Total Half Days 40.
- (c) *Radio Communication for Elements of a Division, a Division, a Corps, and an Army*.  
Conferences 15; Lectures 2; Problems 10; Total Half Days 25.
- (d) *Miscellaneous*:
  - (1) *Codes and Ciphers*: Conferences 4; Lectures 2; Problems 15; Total Half Days 19.
  - (2) *Visual Signaling*: Conferences 6; Lectures 2; Problems 5; Total Half Days 11.
  - (3) *Panels and Pyrotechnics*: Conferences 4; Lectures 1; Total Half Days 4.
  - (4) *Message Centers*: Conferences 2; Lectures 1; Total Half Days 2.
  - (5) *Pigeons*: Conferences 2; Lectures 2; Total Half Days 2.

- (6) *Supply*: Conferences 8; Lectures 1; Total Half Days 8.
- (7) *Photography*: Lectures 2.
- (8) *Gasoline Engines*: Conferences 8; Lectures 2; Problems 5; Total Half Days 13.
- (9) *Telegraphy*: (See Note 2.)
- (10) *Training of Signal Corps Personnel*: Conferences 6; Lectures 2; Total Half Days 6.
- (e) *General Terrain Exercises*.  
Terrain exercises 20; Total Half Days 20.
- (f) *Equitation*. (See Note 3.)  
Total for Signal Communication Course: Conferences 135; Lectures 32; Problems 85; Terrain Exercises 20; Total Half Days 240.  
Grand total for entire course: Conferences 293; Lectures 116; Problems 100; Terrain Exercises 20; Total Half Days 413.

NOTE 1: The students of the Signal Corps School will attend the following courses of The School of the Line:

- (a) *Military Organization*.
- (b) *Tactics and Technique of the Separate Arms*, except the Chemical Warfare Service and the Coast Artillery.
- (c) *General Tactical Functions of Larger Units*.
- (d) *Plans and Orders*.
- (e) *Tactical Principles and Decisions*.
- (f) *Solution of Problems*.
- (g) *Duties of Division Commander and Staff and Organization of Division Headquarters*.
- (h) *Care of Animals and Transportation*.

For these courses the students of the Signal Corps School will attend all conferences, lectures, demonstrations and map maneuvers, but will not participate in map problems, terrain exercises, or tactical rides.

NOTE 2: Practice in telegraphy will be required daily (Saturdays, Sundays, and Holidays excepted) until the student is able to send and receive at the rate of fifteen words per minute.

NOTE 3: Instruction in Equitation will be given daily (Saturdays, Sundays and Holidays excepted) between November 1st and April 30th.

This course of study was approved by the War Department under date of September 23, 1919. While it was found necessary to make certain minor changes in the course during the year, it was followed as closely as possible in all its essential details.

### GENERAL REMARKS

5. In the reopening of the Service Schools after a war and before the Army had time to adjust itself to new conditions, a certain amount of confusion is almost unavoidable. The conditions that existed throughout the Army undoubtedly accounted, at least in part, for some of the difficulties that the Service Schools have had to contend with during the past year. Undoubtedly, also, the officers on duty in the War Department, charged with the conduct of these Schools, appreciate these difficulties and have taken steps to eliminate them next year. However, it may be useful to call attention to some of the more serious difficulties in order to insure that the mistakes of the past year be not repeated in the future.

In the first place, the delay in deciding upon the location and character of the School and in selecting and detailing the instructor personnel made it impossible to prepare a carefully thought out course of study prior to the opening of the School. As a result much of the instruction matter had to be prepared during the progress of the school work. Such a proceeding is extremely unsatisfactory. It is a severe strain on the instructors and the work itself is seldom up to the proper standard. Conferences and problems must be prepared with the greatest care. Even with plenty of time this is by no means a simple task. When it is done hurriedly and under pressure satisfactory results cannot be expected.

The student officers had neither the military experience nor the technical qualifications necessary to pursue successfully a course of study designed to carry out the object of the School. Lieutenants and junior captains should not be considered as candidates for training as commanders of Signal Corps Battalions, Division, Army Corps and Army Signal Officers. Any attempt to train officers for duty as field officers before they are thoroughly familiar with their duties as company officers is certain to produce unsatisfactory results.

In preparing a course of study for any school, there are three things that must be known. They are:

- (1) The object of the school;
- (2) The length of time available for instruction;
- (3) The qualifications of the students.

In the case of the Signal Corps School the first two factors were known, but the third, that is, the qualifications of the students, had to be assumed. After a careful consideration of all the conditions, it seemed reasonable to assume that the students selected would be officers who had served with Signal Corps organizations and who had had a sound technical education. When the students reported, however, it was found that our assumption as to their qualifications was entirely incorrect. Under our instructions we were confronted with the problem of training lieutenants of less than two years' commissioned service for duty as Division, Army Corps and Army Signal Officers. It is hardly necessary to state that no satisfactory solution of this problem was obtained. It is believed, however, that we did succeed to a reasonable degree in qualifying these young officers for duty as Regimental and Brigade Signal Officers.

In selecting the student personnel for future classes it is urged that those charged with this duty give careful consideration to:

- (a) The object of the School;
- (b) The time available for instruction.

With these two factors known the third essential factor, that is, the qualifications necessary for the students to possess, can be determined very easily.

The arrangement whereby the students of the Signal Corps School have taken part of the Military Art course of The School of the Line has not proved satisfactory. It is very probable that when this arrangement was made, its author had in mind the old School of the Line, in which the Military Art course was only one of several courses taught at the School. Today there is but one course in The School of the Line, and that is the Military Art course. This course is built up and the various subjects covered in the course fit together to make a complete whole. Under these conditions it is impossible to get satisfactory results by taking any part of this course. Full value can be obtained only by taking the course in its entirety.

In the reorganization of the Army that is now going on a tremendous change will be made in the commissioned per-

sonnel of the Signal Corps. A considerable number of officers above the grade of captain will become permanent members of the Corps. Very few of these officers will have had a thorough course of training in the duties they will be called upon to perform. A large number of officers below the grade of major will have to be detailed in the Corps. Very few of these officers will have had any Signal Corps training whatever. It seems obvious, therefore, that, regardless of the ultimate object and character of our Signal Corps Schools, for the present every effort will have to be devoted to the training of the new personnel and that this special situation will call for special methods. The correct solution of this problem lies in considering carefully the qualifications of each individual officer and then sending him to the school that will give him the training he lacks. This will result in field officers attending basic schools, or in their taking elementary courses in other schools. In view of these conditions it seems inadvisable at this time to attempt any recommendations regarding the course of study or the student personnel for this School for the coming year.

It may prove useful, however, to mention in this report a few points concerning the training of Division Signal Officers. Division Signal Officers alone are considered because the training of Corps and Army Signal Officers should be a continuation and development of the training of Division Signal Officers. In order to function at a maximum efficiency a Division Signal Officer should have a general knowledge of the duties of the various staff officers with whom he has to co-operate and of the tactics of the various elements of a Division. It is of particular importance that he be familiar with the duties of the Assistant Chief of Staff for Operations. Beyond any question, the best place for a Signal Officer to obtain this training in time of peace is at The School of the Line. But he should attend that School as a bona fide student and as a competitor for advancement to The General Staff School where he will receive the training necessary to qualify him for duty as a Corps Signal Officer. If this plan is followed the Signal Officer will "speak the same language" as those officers with whom he is so closely associated. He will be qualified to discuss intelligently with other members

of the Division Staff all questions in which Signal Communications are involved. In the recent war there were many cases where the Chief of Staff, or G3, did not understand the powers and limitations of his Signal Communications and where the Signal Officer had very little conception of what the Chief of Staff, or G3, was trying to do. There was no common ground where they could meet and discuss these matters; they did not speak the same language. The only sure way of avoiding this situation in the future is to train Signal Officers along the same lines that are followed in the training of other staff officers. Whatever Signal Corps tactical instruction is necessary to complete the training of these officers after their graduation from The School of the Line or from both The School of the Line and The General Staff School, can be given at the Signal Corps School in a few months.

6. In closing this report I wish to express my appreciation of the excellent work of the instructors, Captains Karl Truesdell, Clyde L. Eastman and Paul W. Evans. Whatever success the School has achieved has been due almost entirely to the efficiency of these officers.

A. S. COWAN,  
*Lieutenant Colonel, Signal Corps.*

THE GENERAL SERVICE SCHOOLS  
FORT LEAVENWORTH, KANSAS

*June 30, 1920.*

FROM: The Secretary, General Service Schools.  
To: The Commandant, General Service Schools.  
SUBJECT: Annual Report.

1. The following report is submitted for the year 1919-1920. The annual allotment of \$19,200 has been disbursed as follows:

Pay of translator, at \$100 per month-----	\$ 1,200.00
Purchase of office furniture, stationery, apparatus and various supplies for blueprinting, photographic, and labor- atory purposes; purchase and repair of instruments; office, library and lecture room equipment; printing- shop equipment, and other miscel- laneous supplies-----	17,397.57
Purchase of books and periodicals-----	602.43
	<hr/>
	\$19,200.00

A. M. FERGUSON,  
*Lieut. Colonel, U. S. A., Retired.*