
GENERAL TACTICAL FUNCTIONS OF LARGER UNITS



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GENERAL
TACTICAL FUNCTIONS
OF
LARGER UNITS

PREPARED BY
THE SCHOOL OF THE LINE
THE GENERAL SERVICE SCHOOLS
FORT LEAVENWORTH, KANSAS

1922



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INTRODUCTION

The course of instruction in The School of the Line is based on the infantry division and the cavalry division, operating independently or as a part of a corps or an army. With the foregoing in view, the course of study set forth in this book is designed to give the student a picture of the general functions of an army and of a corps, and the relative functions therein of the infantry division and the cavalry division. Such perspective is essential to a correct appreciation of the tactical and supply principles applicable to the division.

The principles relating to larger units are touched upon in general terms only, while the statement of decisions and the technique of preparation of orders and the method of handling questions of logistics are covered more in detail. The contents of this book should be considered as introductory to the course in TACTICAL PRINCIPLES AND DECISIONS, published in two volumes by this School, in which the infantry and cavalry divisions are considered in many different tactical situations, and the details connected therewith are thoroughly discussed.

With the foregoing in view, a continuous army situation has been pictured, covering an advance of several days and culminating in an attack by the army. The first four chapters discuss the situation from the army and corps tactical and supply viewpoints, endeavoring to present a picture of the functions and teamplay of all larger units in the army. The fifth chapter takes up a different situation and deals with the interior management of a division as a part of a corps within an army, and discusses how the different arms, trains and services are knitted together to form the basic unit of our army—the infantry division.

It is assumed that the student of this book has already studied the separate arms and the organization of military forces. He is assumed to be familiar with the tactics and technique of infantry and its auxiliary weapons, cavalry, artillery, air service, tanks, engineers, signal troops as re-

gards the establishment and maintenance of signal communications, military police and the various trains, and is able to issue formal field orders for their tactical employment.

This book has been prepared by the instructors at The General Service Schools and is published as a text for The School of the Line. This revised edition has been prepared under the supervision of the Command Section (Colonel R. H. Allen, Infantry), G. S. S.

H. A. DRUM,
Colonel, Infantry (D.O.L.),
Assistant Commandant.

APPROVED:

H. E. ELY,
Brigadier General, U. S. Army,
Commandant.

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GENERAL TACTICAL FUNCTIONS
OF LARGER UNITS

The following Conventional Signs are used on maps in connection with the text in this book:

CONVENTIONAL SIGNS USED

	Infantry Division		Army Command Post
	Cavalry Division		Corps Command Post
	Cavalry Brigade		Army Engineer Depot
	Cavalry Regiment		Army Ordnance Depot
	GpA		Army Signal Depot
	Groupment Army Artillery		Army Quartermaster Depot
	Artillery Brigade		Army Motor Transport Depot
	75mm Field Gun		Army Gasoline Depot
	155 mm Howitzer		Army Medical Depot
	155 mm Gun		Army Evacuation Hospital
	Caliber not determined		Army Vel. Evacuation Hospital
	Caliber over 155 mm		Army Prisoner of war Enclosure
	Anti Aircraft		Army Ammunition Depot
	6" Trench Mortar		Army Air Service Depot
	Machine Gun		Army Balloon
	Groupment Command Post		Air Squadron
	Ammunition Depot		Landing Field
	Flash Ranging Obsn Sta		
	Observation Post		
	Railhead		
	Chemical Warfare Depot		

BOUNDARIES OF ACTION

Army	————	xxxx	————	xxxx	————
Corps	————	xxx	————	xxx	————
Division	————	xx	————	xx	————
Enemy front Line's						
Our front Line's						
Trenches						

ERRATA

The map referred to under (c) on a scale $1\frac{1}{2}$ in.=1 mi., is in map pocket for use where the larger scale map is not available.

CHAPTER I

An Army in an Advance

PROBLEM FOR DISCUSSION

- Maps: (a) General Map, Gettysburg-Antietam, 1"=10 miles.
(b) Geological Survey, 1:62500; Mount Airy, Ijamsville, Taneytown, Emmitsburg, Gettysburg, Fairfield Quadrangles.
(c) Topographical Map, Gettysburg-Antietam, 1:21120; twelve sheets centered about Gettysburg.

NOTE:—The maps referred to under (a) and (b) will be found in map pocket.

General Situation :

The Susquehanna River is the boundary between two hostile states, Red east and Blue west. The Blue inhabitants north of the Pennsylvania—Maryland state line have declared their independence and have formed an alliance with the Reds. War has just been declared.

Special Situation (Blue), Part I:

The Blue concentration is:

The First Army (three corps) on the front Frederick—Mt. Airy, to be completed on 23 November, 1919.

The Second Army (three corps) about Baltimore, to be completed by 24 November, 1919.

The Third Army (two corps) about Hagerstown, to be completed 24 November, 1919.

By 12:00 noon, 23 November, General A, commanding the First Army, received instructions from the Blue commander-in-chief as follows:

“Reliable information indicates that Reds have concentrated on the line Lancaster—Harrisburg and are advancing on Hanover and Gettysburg. Red cavalry and bands of secessionists were reported 23 November, at Hanover and Gettysburg. No Red aircraft has appeared south of Maryland—Pennsylvania state line. All railroads are reported intact.

“It is my purpose to force the Reds to accept a decisive battle near the Hanover—Gettysburg line, and then to destroy them by a strong attack against their right flank. With the foregoing in view, the following is ordered:

“(a) The First Army will advance without delay north to the line Hanover—Gettysburg and will prevent the Reds crossing

South Mountain via passes west of Arendtsville, Cashtown and Emmitsburg.

"Zone of action:

"East boundary—Parrs Ridge to Union Mills, to Hanover and to East Berlin, all inclusive.

"West boundary—Catoctin Mountains and South Mountains, all inclusive.

"Southern boundary—B. & O. R. R., exclusive.

"Supply—All railroads in zone of action; regulating station at Frederick Jc.

"(b) The Second Army will have its advance guards north of the state line north of Ebbvale—Parkton by evening of 26 November, and will be prepared to extend the First Army's line via Valley Jc. and Hanover Jc. This army's cavalry will reach the above line on 24 November.

* * * * *

"(c) The Third Army will advance via Greencastle, Chambersburg, and Shippensburg and be prepared to cross South Mountain north of Chambersburg on 28 November. This army's air service and cavalry have been reinforced to screen its movements. Its cavalry will reach Chambersburg on 25 November."

* * * * *

Required:

The formal field orders issued by General A, commanding the First Army, for the army's advance.

(A) THE FIELD ORDERS FOR THE ADVANCE

First Army,
FREDERICK, MD.,
23 Nov 19, 2:00 PM.

FIELD ORDERS }
No 20 }

Maps: General Map, Gettysburg-Antietam, 1"=10 miles. Geological Survey, 1:62500; Mt. Airy, Ijamsville and quadrangles to the north.

1. Reds have concentrated on the line LANCASTER—HARRISBURG and are advancing on HANOVER and GETTYSBURG. Red cavalry and bands of secessionists were reported this date at HANOVER and GETTYSBURG. Red aircraft has not appeared south of MARYLAND—PENNSYLVANIA state line. All railroads to the north are reported intact.
Our armies will advance north. The Second Army will have its advance guards north of the state line north of PARKTON—EBBVALE by evening 26 Nov, and its cavalry will reach above line on 24 Nov. The Third Army will advance via GREENCASTLE and SHIPPENSBURG; its cavalry should reach CHAMBERSBURG by 25 Nov.
2. This army will advance tomorrow towards the front HANOVER—GETTYSBURG (see Operation and Location Map and March Table attached).

3. (a) The Army Cavalry (less dets) will advance on GETTYSBURG early 24 Nov and determine without delay the hostile concentration reported on the line HANOVER—GETTYSBURG. Early information is desired concerning any hostile movement across SOUTH MOUNTAIN north of EMMITSBURG. Officers' patrols will be sent this date to learn of hostile movements from HARRISBURG and YORK. Connection will be maintained with cavalry of Second and Third Armies.
- (b) The Army Air Service will start its reconnaissance this date and determine without delay the hostile concentration reported on the line HANOVER—GETTYSBURG and any hostile movements across SOUTH MOUNTAIN. Special day and night reconnaissance will be made until further orders along the following roads and railroads:
- LITTLESTOWN—HANOVER—YORK.
 HANOVER—YORK SPRINGS.
 CASHTOWN—GETTYSBURG—NEW OXFORD—YORK.
 GETTYSBURG—DILLSBURG—HARRISBURG.
 GETTYSBURG—CARLISLE and YORK SPRINGS—CARLISLE.
 GETTYSBURG—SHIPPENSBURG.
 N. C. (Pa.) R. R.—W. M. R. R.—P. & R. R. R. leading to YORK and HARRISBURG.
- Dropping fields will be so arranged that close cooperation will be insured with the Army Cavalry.
- (c) The I Corps will advance as per march table attached. It will reconnoiter early the front EBBVALE—VALLEY JC.—HANOVER—LITTLESTOWN. It will cover the right of the army, maintaining contact with the left of the Second Army.
- (d) The II Corps will advance as per march table attached. It will reconnoiter early the front LITTLESTOWN—MARSH CREEK. At least two crossings (capacity all arms) over the MONOCACY RIVER, north of mouth of TOMS CREEK, will be made available by 5:00 PM 25 Nov.
- (e) The III Corps will advance as per march table attached. It will reconnoiter early the front MARSH CREEK—west of HIGHFIELD. It will cover the left of the army, maintaining contact with the right of the Third Army. Early information is desired of the roads and railroads in the area THURMONT—HIGHFIELD—FAIRFIELD—EMMITSBURG.
- (f) For army troops, see march table and special orders.
4. See Administrative Orders No 10.
5. (a) See plan of signal communications (omitted).
- (b) Axis of signal communications:
- First Army: FREDERICK—WOODSBORO—TANEYTOWN.
 I Corps: MT. AIRY—TAYLORSVILLE—NEW WINDSOR—UNION-TOWN—UNION MILLS.
 II Corps: LIBERTYTOWN—UNION BRIDGE—TANEYTOWN—LONGVILLE.
 III Corps: WALKERSVILLE—ROCKY RIDGE—EMMITSBURG.
- (c) Command posts, see march table.

By command of General A:

CS
 Chief of Staff.

Distribution:

ORGANIZATION AND MARCH TABLE—First Army, 23, 24 and 25 Nov. 19.

Organization	Present location 23 Nov 19	Zones of Action	Location by 24 Nov 19, 6:00 P.M.	Location by 25 Nov 19, 6:00 P.M.	Remarks
AHQ	FREDERICK	Army East Boundary: PARRS RIDGE—UNION MILLS—HANOVER— EAST BERLIN (all inclu- sive). Army West Boundary: CATOCTIN and SOUTH Mts. (both inclusive).		Forward echelon: WOODSBORO	
I Corps Corps Troops 1st, 2d, 3d and 4th Divs 5th Cav (less 2 trs), at- tached	Hq Mt. AIRY. Troops in area: MT. AIRY—WELDON— WINFIELD—LIS- BON. Supply: B. & O. R. R.	South Boundary: LIBERTY TURNPIKE (inclusive). East Boundary: same as army. West Boundary: UNIONVILLE—UNION BRIDGE—MARKERS MILL—PINEY CREEK (village)—St. LUKE'S CHURCH (all inclusive).	Advance guards to be north of UNIONTOWN ROAD. Two divisions in first line and one division in corps reserve. 4th Div becomes army re- serve and concentrates near TAYLORSVILLE. Supply: W. M. R. R. Hq no change.	Advance guards to be north of east and west line through LITTLES- TOWN. Same formation. 4th Div to WESTMINSTER via WARFIELDSBURG. Supply: W. M. R. R. Hq UNION MILLS.	Rhds, where not specifically desig- nated, to be re- commended by corps.
II Corps Corps Troops 5th, 6th, 7th and 8th Divs. 2 trs, 5th Cav, and 751st and 752d Br Tns (Hv) at- tached.	Hq LIBERTYTOWN. Troops in area: LIBERTYTOWN— UNIONVILLE—BAR- THOLOWS—NEW MARKET— MCKAIG. Supply: B. & O. R. R.	South Boundary: LIBERTY TURNPIKE. East Boundary: Same as I Corps. West Boundary: MONOCACY RIVER— TOMS CREEK—MIDDLE CREEK—EMMITSBURG ROAD—MARSH CREEK (all inclusive).	Advance guards to be north of BIG PIPE CREEK. Three divs in first line. 8th Div becomes army reserve and concentrates near LIBERTYTOWN. Supply: no change. Hq no change.	Advance guards to be north of east and west line through FAIRPLAY and Mt. JOY CHURCH. Same formation. 8th Div to BRUCEVILLE via JOHNSVILLE. Supply: TANEYTOWN and BRUCEVILLE. Hq TANEYTOWN.	Rhds, where not specifically desig- nated, to be re- commended by corps.
III Corps Corps Troops 9th, 10th, 11th and 12th Divs, 3d Cav Brig (less 1 regt) attached	Hq WALKERSVILLE. Troops in area: WALKERSVILLE— MT. PLEASANT— CERESVILLE— SHOOKSTOWN— YELLOW SPRINGS. Supply: N. C. (Pa.) R. R.	South Boundary: BIGGS FORD BRIDGE— YELLOW SPRINGS. East Boundary: Same as II Corps. West Boundary: Same as army.	Advance guards to be north of OWENS CREEK. One div in first line and one div in corps reserve. 11th Div, army reserve, no change. 12th Div, army reserve, to LEWISTOWN. Supply: no change. Hq no change.	Advance guards to be north of 740 paralel. Same formation. 11th Div to WOODSBORO. 12th Div to THURMONT. Supply: LEWISTON and THURMONT. Hq St. JOSEPH'S ACADEMY.	Rhds, where not specifically desig- nated, to be re- commended by corps.
Army Cav (less 3d Cav Brig) CG 1st Cav Div comdg.	New WOODSBORO. Supply: N. C. (Pa.) R. R.	Same as army.	Move on GETTYSBURG. Supply: N. C. R. R. TANEYTOWN.	do	

ORGANIZATION AND MARCH TABLE—First Army, 23, 24 and 25 Nov. 19—Continued.

Organization	Present location 23 Nov 19	Zones of Action	Location by 24 Nov 19, 6:00 P.M.	Location by 25 Nov 19, 6:00 P.M.	Remarks
Army Artillery (attached from GHQ Reserve) 701st Art } 702d Art } 6" gun 703d Art } 704th Art } 155-mm. gun 705th Art } 706th Art } 707th Art } 708th Art } 8" How 709th Art } 1st Army Art Am Tn	Hq Frederick. Troops near URBANA. Supply B. & O. R. R.		No Change. Organization: Groupment A and Groupment B.	Groupment A to UNION-TOWN via NEW MARKET Supply UNION BRIDGE. Groupment B to TANEYTOWN via LIBERTY-TOWN. Supply: TANEYTOWN.	Groupment A 701st Art. 702d Art. 703d Art. 909th Art. Groupment B: 704th Art. 705th Art. 706th Art. 707th Art. 708th Art.
Army Air Service 2 pur gps 2 obsn gps 1 bomb sq 1 bomb sq 1 atk sq 2 bln gps (1 of 4 cos, 1 of 5 cos)	Hq FREDERICK. Troops S & W of Frederick. Supply: B. & O. R. R.	Same as army.	No change.	Having landing fields north of BIG PIPE CREEK in readiness.	1 bln gp to Groupment A, AA. 1 bln gp to Groupment B, AA.
3 gen serv regts (enrgs)	East of FREDERICK. Supply: FREDERICK.				2 aux engr bns attached to each corps.
2 tel bns	FREDERICK.				Under Chief Signal Officer.
Army Train (25 MT cos)	Hq BARTONSVILLE. Located near BARTONSVILLE.		No change.	$\frac{1}{2}$ to KEYMAR. $\frac{1}{2}$ to LE GORE (N of WOODSBORO). Supply: N. C. R. R.	
Army MP (1 bn)	Hq FREDERICK. Troops, distributed.				Operate under Army PMG.

NOTE:—Other army troops not mentioned.

FIELD ORDERS FOR THE ADVANCE

**(B) THE ADMINISTRATIVE ORDERS
FOR THE ADVANCE**

Situation First Blue Army as in "The Field Orders for the Advance" in Chapter I (A).

First Army,
FREDERICK, MD.,
23 Nov 19, 2:00 PM.

ADMINISTRATIVE ORDERS }
No 10. } To accompany FO No 20, First Army.

Maps: Geological Survey, 1:62500; six quadrangles in vicinity of Gettysburg.

I. SUPPLY.

A. Railheads:

On and after 26 Nov:

I Corps: WESTMINSTER—NEW WINDSOR—UNION BRIDGE.

II Corps: BRUCEVILLE—TANEYTOWN—CRABSTER.

III Corps: THURMONT—MOTTERS—LOYS.

11th Div: DETOUR.

A Cav: EMMITSBURG.

AA: MIDDLESBURG.

All other army troops: WALKERSVILLE.

Corps commanders will report assignment of railroads by 8:00 AM, 24 Nov.

B. Rations:

1. One day's field rations will be maintained at all railheads as a reserve.
2. All organizations will carry rations, forage, gasoline and oil in accordance with existing regulations.

C. Ammunition:

1. Art Am Dep No 1 LEGORE.
2. Inf (including pyrotechnics) Am Dep No 2 NEW MIDWAY.
3. See Plan of Am Sup Annex No 1.

D. Engineer:

1. All material and supplies; A Eng Dep No 1 FREDERICK.
2. See plan of Engr Supt (omitted)

E. Signal:

1. All material and supplies; A Sig Dep No 1 WALKERSVILLE.

F. Medical:

1. Supplies; A Med Dep No 1 FREDERICK.

G. Ordnance:

1. Artillery, tanks, spare parts therefor, fire control instruments, general supplies, personal and horse equipment; A Ord Dep No 1 FREDERICK.

2. SA Rep Center (Inf weapons, spare parts and repairs) After 27 Nov KEYMAR.
3. AA Ord Shops (pooled) After 27 Nov WOODSBORO.
4. See Plan of Ord Sup, Annex No 4.

H. *Quartermaster:*

1. F Rem Dep No 1 INDIAN SPRINGS.
2. Truck spare parts and repairs. A MT Dep No 1 FREDERICK.
3. Reserve gasoline and oil. A QM Dep No 3 KEYMAR.
4. Other supplies; A QM Dep No 2 FREDERICK.
5. See Plan QM Sup, Annex No 5† (omitted)

I. *Chemical Warfare Service:*

1. All supplies and materials; A CWS Dep No 1 REEDS MILL.
2. After 27 Nov A CWS Dep No 2 SHARRETTS.

J. *Air Service:*

1. All supplies and repairs; A AS Dep No 1 (after 27 Nov) HARMONY GROVE.
2. Minor repairs; A AS Pk HARMONY GROVE.

- X. Chiefs of supply branches will reconnoiter with a view to recommending sites for advance depots.

II. EVACUATION.

A. *Men:*

1. All army hospitals—FREDERICK.
2. Evacuation from divisions and corps by army.
3. See Plan of Evacuation, Hospitalization and Supply, Annex No 6† (omitted).

B. *Animals:*

1. A Vet Evac Hosp No 1—INDIAN SPRINGS.
2. Evacuations from divisions by army.

III. ROADS.

A. *Restrictions:*

- Army reserved road (motor traffic only):
FREDERICK—WOODSBORO—TANEYTOWN road, south of KEYMAR.

B. *Maintenance:*

1. Corps and divisions within respective areas; temporary repairs during the march.
2. By army in rear of corps rear boundaries.
3. All roads and headquarters will be posted with signs; the responsibility resting with respective area commanders.

IV. SALVAGE AND BURIAL.

A. *Salvage:*

1. Serviceable salvage to proper army depot, by Army.
2. Unserviceable salvage through railhead to Com Z.
3. Reports of all salvage to G4 A, direct.

B. *Burial:*

1. Burials during the march will be in cemeteries established by respective corps in concentration areas.
2. Reports through channels to G1.

V. BOUNDARIES.

Army: South—B & O RR (exclusive)

Western Maryland RR, WESTMINSTER—HIGHFIELD to army service area.

VI. MILITARY POLICE.

A. *Traffic Control:*

1. By corps and divisions within their respective areas.
2. By army in rear of corps rear boundaries.
3. The army provost marshal will take over all traffic control in the army service area as the corps moves forward.
- *4. Individual instruction of teamsters and chauffeurs must be sufficient to assure their appreciation of the necessity for maintaining proper road discipline and protection of transport from enemy observation. This instruction must be constant and will be assured by every officer and military policeman of this army, by correcting on the spot any infractions observed, and when deemed necessary, making report of specific instances so that proper disciplinary action can be taken.
- *5. Upon halting, all road columns will take advantage of existing cover to prevent enemy aerial observation.
6. In order to permit cross traffic, an interval corresponding to 10 minutes' marching time will be maintained clear of troops at the end of every section of the column corresponding to 40 minutes' marching time.
- *7. Trains and convoys will be provided with disks. The rear vehicle of a convoy or train will exhibit two disks visible from the rear and the rear vehicle of each section one disk in a similar manner.
- *8. Corps commanders will make necessary regulations concerning the use of lights within respective areas. At night all motor transport will use dimmed lights within the army service area.

B. *Stragglers:*

1. Corps and division commanders will issue the necessary regulations for the control of stragglers.
2. The army provost marshal will arrest all stragglers in rear of corps areas, reporting such arrests to G1 Army who will arrange for their return to organizations.

VII. PRISONERS OF WAR.

- A. A PWE No 1—WOODSBORO.
- B. Evacuation from corps and divisions by army.
- C. Prisoners of war will be properly equipped by divisions.
- D. Reports of captures will be made as of 12:00 noon daily, direct to G1 Army, by all divisions in contact with the enemy. Copy of report to corps concerned.

VIII. CAPTURED MATERIAL.

- A. Divisions in contact with the enemy will make daily reports as of 12:00 noon, direct to G1 Army (copy to corps concerned) covering the following:
 - Artillery, giving caliber.
 - Machine guns, giving make.
 - Transportation, other than wagons, giving description and location.
 - Other material of importance, giving description and location.

- B. 1. Serviceable captured material may be retained for service by divisions upon approval of the corps.
2. Other captured material will be taken over by the supply branch concerned and disposed of in accordance with paragraph IV A, above.

By command of Gen A:

CS
C of S

Official:

AC,
A C of S G4

Distribution:

Same as FO No 20.

NOTE:—Paragraphs marked thus (†) refer to omitted annexes. These would normally be issued with such an administrative order but are here omitted on account of bulk.

Paragraphs marked thus (*) normally become standing orders and would not be reiterated in subsequent orders, except when reports indicate that provisions prescribed were not being generally complied with. Such orders are generally given to meet special cases.

Plan of Ammunition Supply

ANNEX NO 1, TO ADMINISTRATIVE ORDERS NO 10, First Army

FREDERICK, MD.,
23 Nov 19, 2:00 PM.

ORDNANCE MEMORANDUM }
No 1. }

1. The supply of artillery ammunition is based upon maintaining three and one half days of fire per gun within this army, including amounts carried in combat and other trains. Normal proportions are as follows:

75 mm	{	70% shell	Larger calibers	{	90% shell
		20% shrapnel			10% smoke
		10% smoke			

2. One quarter of a day of fire of chemical ammunition will be maintained in the army depots in the following proportions:

55% Cg, 25% HS, 10% each of DA and BA.

3. Divisions will maintain a minimum of one and one half days of fire.

4. Corps will maintain in corps area a supply consisting of two days' fire per gun, including amounts in divisions and with the corps artillery units.

5. The army artillery regiments will maintain ammunition as follows: 6" and 155 mm guns, one and two-tenths and the 8" How four-tenths day of fire. The army ammunition train will carry ammunition as follows: for 6" and 155 mm guns three-tenths and for 8" How thirty-five-hundredths days' fire.

6. The balance of one and one-half days of fire for corps and divisions; two days for 155 mm and 6" guns and two and three-quarters days for 8" How will be maintained in the army ammunition depots.

7. Ammunition will be allotted by A O O to corps, A Art and A Cav in accordance with reports of expenditures.

8. Corps will allocate ammunition to corps artillery and divisions from credits in army depots, in accordance with reports of expenditures. Allocating from the reserve within the corps only in emergencies and when necessary to prevent deterioration of these reserves.

9. Infantry ammunition and pyrotechnics will be supplied on weekly reports of expenditures or emergency requisitions, so that combat and other trains will have on hand the prescribed amount in addition to that in the hands of troops.

10. (a) Reports of artillery expenditures will be rendered daily as of 9:00 AM, and will reach this office by 12:00 noon, commencing 26 Nov.

(b) The following method of rendering reports will be followed for artillery expenditures:

1. Division and corps artillery brigades to chief of artillery, corps; copy to respective G4s.

2. Cs of A of corps and commanders of AA regiments to C of A, Army; copy by C of A Army to G4 Army and A O O.

11. (a) Reports of infantry expenditures will be made weekly, commencing 26 Nov.

(b) The following method of rendering reports will be followed:

1. Div O O to corps O O, copy to G4 Div. (This includes artillery brigade expenditures of small arms ammunition.)

2. Corps reports to corps O O who will furnish a consolidated report to G4 Corps and to the A O O.

3. Army troops to A O O who will furnish a copy to G4 Army.

O,
C O O

Official

X,
A C of S G4.

Distribution:

Same as Adm O.

Plan of Ordnance Supply

ANNEX NO 4, TO ADMINISTRATIVE ORDERS NO 10, First Army

FREDERICK, MD.,
23 Nov 19, 3:00 PM.

ORDNANCE MEMORANDUM }
No 2. }

1. Tanks:

(a) Each tank unit will carry at all times the spare parts and accessories authorized by existing tables. The replacement of these supplies and the issue of other supplies not authorized by tables of allowances will be made direct from army ordnance depots on requisitions or emergency requests, approved by G4 Army.

(b) Only minor repairs will be made by tank units. Tanks requiring repairs which will require more than two days to make will be turned in to the corps ordnance shops for repairs or other disposition.

(c) Abandoned tanks and tanks that are disabled to such an extent that they cannot be handled by the units will be immediately reported, giving location and nature of damage.

(d) Tank armament will be repaired by the S A Rep Center.

2. *Other ordnance supplies:*

(a) Spare parts for machine guns, small arms and automatic weapons will be furnished from small arm repair centers, and ordnance general supplies from army depots on requests from division, corps and army troops, approved by G4 Army.

(b) Resupply of artillery pieces and carriages will be furnished from army depots upon recommendation of C of A Army, approved by G4.

(c) All requisitions will be forwarded by organizations in duplicate and must be approved by the A O O before issue is made thereon, except that stores on credit to any organization may be issued upon the approval of the ordnance officer of that organization.

(d) All Ord depots and shops will maintain one day's stocks of all supplies, spare parts and accessories.

O
A O O.

Official:

X,
A C of S G4.

Distribution:

Same as Adm O.

(C) THE ARMY CAVALRY IN THE ADVANCE

(See Field Orders No. 20, First Army)

Prior to the issuance of the above orders, the Army Commander held a conference with the commanders of the Corps, the Army Artillery, the Army Cavalry and the Army Air Service.

Note—Major General A, commanding 1st Cavalry Division, commands the Army Cavalry. The staff of the 1st Cavalry Division also acts as Army Cavalry staff.

Required :

The formal written field orders of the commander of the Army Cavalry for the move on 24 November, 1919.

A Solution

Army Cavalry, First Army,
WOODSBORO, MD.,
23 Nov 19, 6:00 PM.

FIELD ORDERS }
No 30. }

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Geological Survey, 1:62,500.

- (a) Reds have concentrated on the line HARRISBURG—LANCASTER and are now advancing on HANOVER and GETTYSBURG. Red Air Service has not appeared south of the MARYLAND—

PENNSYLVANIA state line. Red cavalry and bands of secessionists have been reported this date at HANOVER and GETTYSBURG.

- (b) Our Armies advance north.

Army Cavalry, Second Army, reaches the MARYLAND—PENNSYLVANIA state line, north of PARKTON—EBBVALE, 24 Nov; advance guards, Second Army reach that line by evening 26 Nov.

Third Army advances via GREENCASTLE and SHIPPENSBURG; its army cavalry reaches CHAMBERSBURG 25 Nov.

Our First Army, with corps abreast in order from east to west, I, II and III Corps, advances tomorrow, 24 Nov, toward the line HANOVER—GETTYSBURG. Zone of Action:

East boundary: PARRS RIDGE—UNION MILLS—HANOVER—EAST BERLIN (all inclusive).

West boundary: CACTOCTIN MOUNTAINS—SOUTH MOUNTAIN (both inclusive).

2. The army Cavalry (less dets), reinforced by the 701st and 702d Obsn Sqs, will advance on GETTYSBURG tomorrow, 24 Nov, covering the First Army.

Zone of Action:

Same as First Army.

3. (a) The 4th Cav Brig, reinforced by 1 btry 2d FA Bn (horse) and 1 co 2d Engr Bn, will march via TANEYTOWN—LITTLESTOWN, clearing WOODSBORO by 7:30 AM.

It will send one troop via LITTLESTOWN and one troop via TWO TAVERNS to gain early contact with the Reds and to reconnoiter the zone:

East boundary: Same as First Army.

West boundary: MONOCACY RIVER—ROCK CREEK (both inclusive).

Officers' patrols will be sent, without delay, to observe and report enemy movements from HARRISBURG and YORK.

Contact will be gained with the Army Cavalry, Second Army.

- (b) The 1st Cav Brig, reinforced by the 1st FA Bn (horse) will march via CREAGERSTOWN and EMMITSBURG, clearing WOODSBORO by 7:30 AM. It will send one troop via EMMITSBURG on GETTYSBURG and one troop via CREAGERSTOWN, THURMONT and BLUE RIDGE SUMMIT to gain early contact with the Reds and to reconnoiter the zone:

East boundary: MONOCACY RIVER—ROCK CREEK (both exclusive).

West boundary: Same as First Army.

Officers' patrols will be sent at once to observe and report enemy movements from HARRISBURG and CARLISLE.

Contact will be gained with the Army Cavalry, Third Army.

- (c) *Reserve*: 1st and 2d Cav Divs (less dets) constituting the reserve, Major General B commanding, will march at 8:00 AM to EMMITSBURG via LEGORE BRIDGE—ROCKY RIDGE. WOODSBORO will be cleared by 9:00 AM.

- (d) *Air Service*: The 701st and 702d Obsn Sqs will begin intensive reconnaissance at daylight tomorrow, 24 Nov.

Information is especially desired of:

Enemy dispositions on the line HANOVER—GETTYSBURG, and possible enemy movements across SOUTH MOUNTAIN, especially via passes west of CASHTOWN and ARENDTSVILLE.

Progress of the 1st and 4th Cav Brigs will be reported every two hours beginning at 9:00 AM.

4. (a) Amb Co No 1 and Vet Co No 1 will cover collection tomorrow, 24 Nov.
- (b) F Tns accompany their respective brigs.
- (c) Further administrative details later.
5. (a) Ax of Sig Com:
 - Army Cavalry: WOODSBORO—ROCKY RIDGE—EMMITSBURG.
 - 4th Cav Brig: WOODSBORO—TANEYTOWN—LITTLESTOWN.
 - 1st Cav Brig: CREAGERSTOWN—EMMITSBURG—LIBERTY HALL SCHOOL—FAIRFIELD.
 - Reserve: Same as Army Cavalry.
- (b) CPs:
 - Army Cavalry: Closes at WOODSBORO at 8:00 AM, 24 Nov and opens at ST. JOSEPH'S ACADEMY same date and hour.
 - 4th Cav Brig: En route.
 - 1st Cav Brig: En route.
 - Reserve: En route.

A,
Major General

Distribution:

1st Cavalry Division
 2d Cavalry Division
 I Corps.
 II Corps.
 III Corps.
 First Army.

In the zone of the 4th Cavalry Brigade, two troops started at an early hour, one via Littlestown and the other via Two Taverns, with the object of gaining contact with the enemy. No opposition was developed by either of these troops until after crossing the state line when Red cavalry patrols were encountered. These patrols gradually withdrew to the north.

The brigade advanced via the Taneytown—Littlestown road furnishing its own local protection, the troops so disposed in the march column that the brigade was prepared to fight any enemy force that it might encounter.

Reports received during the afternoon tended to show that infantry, in considerable numbers, had arrived on the Hanover—Gettysburg line, and that intrenchments were being organized along that line.

This was confirmed by reports from the observation squadron and by the officers' patrols sent out on the night of 23 November.

At 5:00 PM the brigade was located as follows:

Troop A, 7th Cavalry: near Lefevre, with patrols on the roads to the northward, from Bonneauville—Littlestown road to the eastern limit of the brigade zone of action.

Troop B, 7th Cavalry: near crossroads 549 (1 mile south of Two Taverns), with patrols on the roads to the northward, from western limit of brigade zone of action to Bonneauville—Littlestown road.

Remainder of the 4th Cavalry Brigade south of Kingsdale.

In the zone of the 1st Cavalry Brigade the two troops sent out to gain contact also encountered cavalry and secessionist opposition north of the state line.

The troop sent via Thurmont and Blue Ridge Summit met Red cavalry patrols on the roads through the mountains, these patrols withdrawing towards the northeast.

The troop sent via Emmitsburg met with increasing opposition as it advanced north of the state line.

Reports indicated that a strong force of infantry was in and about Gettysburg, with a cavalry force of considerable strength in the area between Gettysburg and South Mountain. The presence of infantry at Gettysburg and of the cavalry force between Gettysburg and the mountains was confirmed by the reports of the observation squadron. This squadron also reported hostile columns marching southward from Harrisburg and Carlisle.

The officers' patrols sent out on the night of 23 November, reported Reds intrenching along the north bank of Conewago Creek.

The Third Army reported that its cavalry had been stopped by hostile cavalry at Chambersburg.

By 5:00 PM the 1st Cavalry Brigade was located as follows:

Troop A, 1st Cavalry: At Fairplay, with patrols on the roads toward Gettysburg, McCleary School and Fairfield.

Troop B, 1st Cavalry: At Blue Ridge Summit, with patrols on the roads to the eastward and northward.

Remainder of brigade, near Emmitsburg.

Forward echelon, Army Cavalry, at St. Joseph's Academy.

Rear echelon, Army Cavalry, at Motter's.

Reserve, vicinity of Motter's.

Service trains, parked in vicinity of reserve.

At 5:00 PM the commanding general, 1st Cavalry Brigade, was directed to halt for the night, Troops A and B, 1st Cavalry, to continue patrolling during the night. Officers' patrols to be sent out at once towards Gettysburg,

Knoxlyn and Fairfield to ascertain the strength and dispositions of the Red cavalry reported in the area between Gettysburg and the mountains.

At the same time a message was sent to the commanding general, 4th Cavalry Brigade, to maintain contact with the enemy and locate his intrenchments, but to make no further advance, and warning him to be prepared to move west of the Monocacy next day.

(Information received indicated that the advance guards of the I, II, and III Corps would reach their designated locations for the night, as laid down in the Organization and March Table.)

By 10:00 PM sufficient information had come in to indicate that the cavalry that had been reported between Gettysburg and South Mountain was a reconnoitering force, and that the bulk of the Red Cavalry, estimated as a division, was camped for the night in the vicinity of Mummasburg.

Required :

- (a) General A's plan for the next day.
- (b) The field orders to carry that plan into effect.

A Solution

(a)

1. To concentrate his command by drawing in the 4th Cavalry Brigade as soon as it can be relieved the next morning by the corps cavalry. (This matter would be taken up with the army so that the corps could be instructed accordingly.)

2. To move the 1st Cavalry Brigade northward toward the hill mass (Carr and Wilson hills) as the first measure toward controlling the area on the flank of the advancing Blue army. This would give a good position for acting against the flank of the Red line, from which troops might be launched against the Red cavalry reported in the vicinity of Mummasburg.

3. To follow with the Reserve well in hand.

General A believes it extremely likely that his contemplated movement will be opposed by the full strength of the Red cavalry.

(b)

Army Cavalry, First Army,
St. JOSEPH'S ACADEMY, MD.,
24 Nov 19, 10:30 PM.

FIELD ORDERS }
No 31. }

Map: Geological Survey, 1:62500.

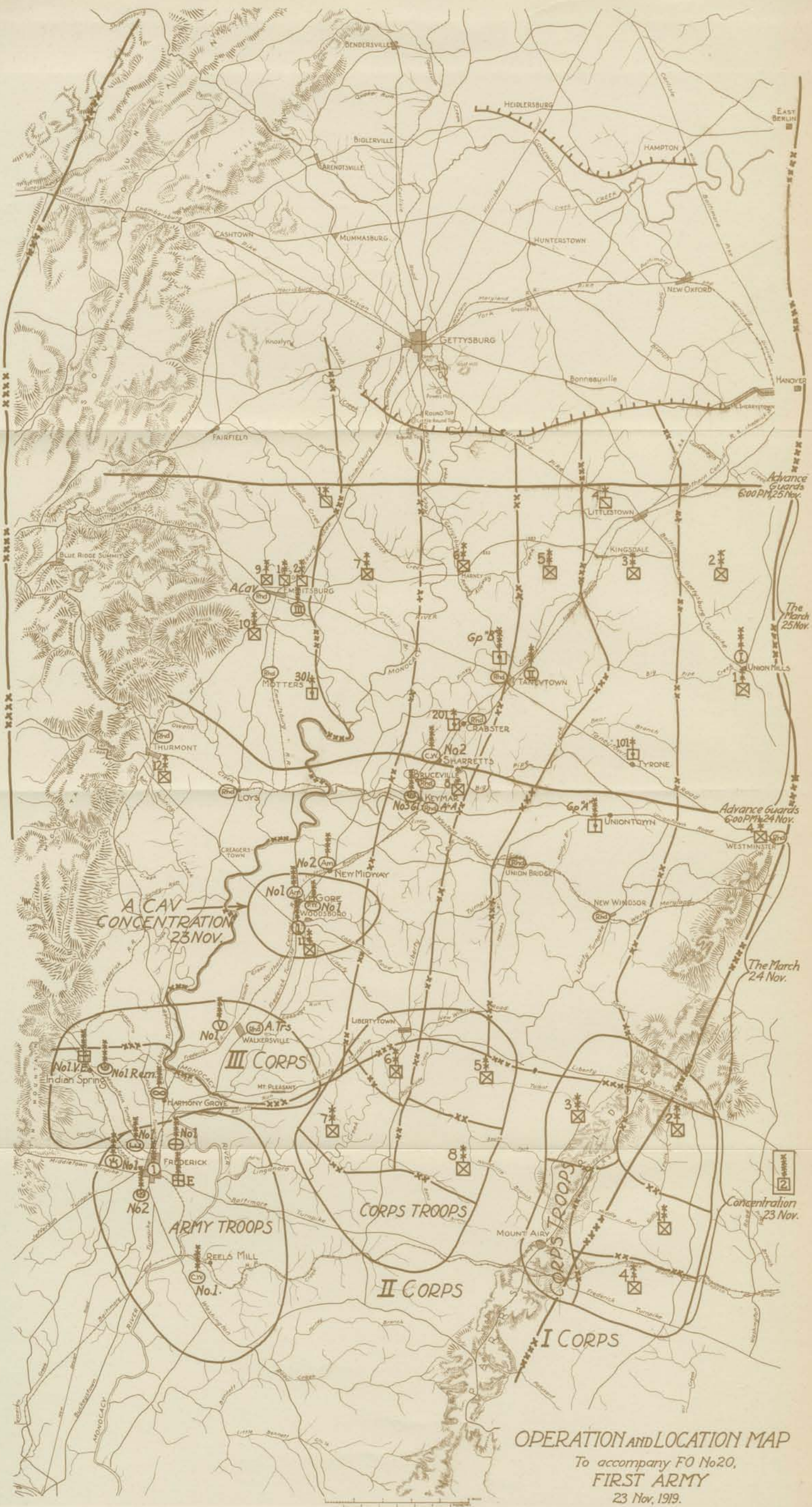
1. Enemy infantry in strength has been developed between HANOVER and GETTYSBURG. Reports indicate that he is intrenching this line. Red cavalry, estimated at a division, is operating on the Red right. Its advance elements have been opposing our advance north of the state line. The bulk of the Red cavalry is camped tonight near MUMMASBURG.

Cavalry of our I and II Corps reached the state line this evening. The infantry advance guards of our First Army have reached the line WESTMINSTER—UNIONTOWN—BRUCEVILLE—OWEN'S CREEK.

2. The Army Cavalry will move north tomorrow and draw the enemy away from CARR HILL. It will also screen the movements of the III Corps on 26 Nov.
3. (a) The 1st Cavalry Brigade, with 1st Field Artillery Battalion (horse) attached, will march in two columns, the advance guards clearing the road junction 479—road junction 544 road at 6:30 AM. Left (west) column via road junction 496—road junction 544—road junction 587—FAIRFIELD—crossroads 630 road; Right (east) column via road junction 479—LIBERTY HALL SCHOOL—crossroads 613 road.
 - (b) The 4th Cavalry Brigade, as soon as relieved by the cavalry of the I and II Corps, will move via HARNEY on EMMITSBURG.
 - (c) The reserve (see FO 30 Army Cavalry) will march via EMMITSBURG and follow the left column of the 1st Cavalry Brigade. Its leading elements will reach crossroads 453 (about 1 mile south of EMMITSBURG) at 8:00 AM.
 - (d) The 701st and 702d Observation Squadrons, starting at daylight, will maintain constant observation of enemy movements. Special observation will be maintained of the roads leading from CHAMBERSBURG and SHIPPENSBURG, and of the movements of the Red Cavalry in the area between GETTYSBURG and SOUTH MOUNTAIN. Reports will be made every two hours beginning at 8:00 AM.
4. Field trains (except 4th Cavalry Brigade) will be assembled at EMMITSBURG and await orders.

Service trains will remain parked in the vicinity of MOTTER'S and await further orders.
Collections and evacuations: no change.
Railhead: No change.
5. (a) Axes of Signal Communications:

Army Cavalry: St. JOSEPH'S ACADEMY—EMMITSBURG—LIBERTY HALL SCHOOL—FAIRFIELD.
1st Cavalry Brigade: Same as Army Cavalry.
Reserve: Same as Army Cavalry.
4th Cavalry Brigade: EMMITSBURG—HARNEY—KINGSDALE.



OPERATION and LOCATION MAP
 To accompany FO No 20,
 FIRST ARMY
 23 Nov. 1919.

ARMY CAVALRY IN THE ADVANCE

17

(b) Command Posts:

Army Cavalry: Closes at St. JOSEPH'S ACADEMY at 11:00 AM, 25 Nov.

Opens at FAIRFIELD same hour.

1st Cavalry Brigade: Enroute.

4th Cavalry Brigade: KINGSDALE (any change to be reported).

Reserve: Enroute.

A,
Major General.

Distribution:

1st Cavalry Division

2d Cavalry Division

I Corps

II Corps

III Corps

First Army

CHAPTER II

The Corps in an Advance

(A) GENERAL DISCUSSION OF THE CORPS

The studies made in the preceding chapter are continued in this chapter by taking up the advance of one of the corps of the First Army. Before proceeding to this specific situation, however, it is desired to consider the subject of the army corps from a broader viewpoint.

The basic large unit of organization is generally accepted as being the maximum number of troops capable of making a day's march on a single road and closing up on the head of the column for camp or billet, or, if necessary, deploying for action before dark. In our service this basic unit is the division; in European armies, it is the corps.

In continental armies the corps is the largest permanent unit in time of peace, and is the unit of recruitment and mobilization. It has a definite area from which it draws its men, horses, and provisions. It has a permanent commander and staff, who, organizing and training the corps in time of peace with the expectation of leading it in battle, give the organization a distinctive character and soul.

The proper strength of a corps, in the continental conception, is considered to be from 30,000 to 35,000 combatants. Little variation occurs from these figures, except for corps charged with certain missions in special theaters of operations, as in the mountains, on coasts, or in fortified places.

In the days of Napoleon, corps were smaller, averaging in strength from 20,000 to 30,000. In modern times, however, due to the modern necessities of life and the modern means of combat, the peace-time tendency in Europe is for the size of the corps—the largest permanent unit—to be increased. But the augmented, peace-time corps is too unwieldy for war, and upon mobilization, the corps is again re-

duced to normal by transferring to the army the extra means and services that have temporarily been added to the corps during peace.

The army, in Europe, on the other hand, is a group which comes into being only upon mobilization; its composition is kept secret until then.

The strength of a European army varies greatly, depending on the mission assigned it. In the course of the campaign of 1870-71, the Second German Army had successively: five corps and two divisions of cavalry, in July; then seven corps and four divisions of cavalry, in August; then four corps; and, finally, in November, three corps.

In Europe the staffs and services of armies are built to take care of such fluctuations; those of corps are not. The army, among the great units, is preeminently the one which is fully organized and equipped to play an independent role. This is not true of the corps. If a corps is assigned an independent mission, its staff and services must be largely increased, and additional facilities must be provided for it. Ordinarily, in war, the corps can neither live nor fight without the help of the army, which controls the supply and evacuation through railheads and army establishments, and which assists the corps greatly at times in the matter of transportation.

From the operations viewpoint, the army is the unit of direction; the corps, the unit of execution and maneuver.

Composition of the Corps

The European corps, before the World War, was normally composed of a fixed number of divisions, from two to three, permanently assigned to the corps. But on the Western front, during the war, adherence to this rigid system of organization was found to be generally impracticable. The reasons lay in the great wastage suffered by the divisions in the line; the necessity of withdrawing them for rest; and the necessity, on account of the magnitude of the battle front, of utilizing them, while resting, in remote and quiet sectors. A division, often, could not remain in the same army, much less in the same corps.

The corps, therefore, became a flexible unit, consisting of a headquarters, a certain group of corps troops, and a variable number of ever changing divisions. The divisions lost heavily, were withdrawn, replaced, recuperated and brought back for a fresh assault. Only infrequently did a division serve twice in succession in the same corps. The corps, on the other hand, remained almost continuously engaged—a territorial unit of the battle line, always in touch with the tactical problem; the great unit, as stated before, charged with the execution of the plan that the army directed.

This view of the corps was the one forced on the American Expeditionary Forces, and it is now the accepted view of the organization and functioning of the corps.

In the plan of organization of the American Expeditionary Forces, it was originally contemplated to form a corps headquarters and a group of corps troops for every six divisions (four combat divisions, one replacement division, and one depot division). But this scheme of organization and assignment was never carried out, as circumstances were such as to demand fluctuations in the size of the corps, and the constant alternating in-and-out-of-the-line of our divisions. The I Corps, at St. Mihiel, had four divisions in line and one in reserve; the IV Corps had three divisions in line and one in reserve; the V Corps had the same, including one French division. On the 26th of September, the I, III, and V Corps each had three divisions in line and one in reserve.

A Corps on the March

An American four-division corps of the World War, such as the III Corps in its attack of 26 September, 1918, amounted at full strength to 133,000 officers and men.

One infantry division occupied 29.4 miles, with all elements marching on the same road. Of this distance, the troops and horse-drawn vehicles occupied 20 miles, the motorized elements, 9.4 miles. Running alone, at their own speed, the motorized elements would have expanded to 23.6 miles.

Corps troops, including horse-drawn elements, occupied 8.4 miles. The motorized units required 15.8 miles, closed

up and taking the rate of the foot troops; running free, they would have occupied 45 miles of road space.

For the corps of four divisions, the total was therefore 88.4 miles for troops and horse-drawn vehicles; or, including the motorized units, 141.8 miles. The motor elements, if free to run at their own speed, would alone have formed a single column 139 miles long. Such a corps is evidently not a unit that can deploy from a single road in one day.

There was no example, in the American Expeditionary Forces, of a march being made by a four-division corps. The Third Army, in its 300-kilometer march from the Meuse to the Rhine, consisted of three corps; two leading corps, of three divisions each, followed by a third corps of two divisions.

The III Corps marched the greatest distance. The corps artillery and ponton train did not accompany it on the march, and the corps had no anti-aircraft machine gun battalion, no cavalry, and no troop transportation train. The divisions ranged from 22,000 to 25,000 men. Thus constituted, this corps required an actual road space of approximately 100 miles. Had the corps consisted of its full complement of troops and transportation, at full strength, it would have numbered 103,000 officers and men, and would have required 112.4 miles of road, marching in a single column.

The advance of the III Corps was made in four major columns, with two leading divisions abreast. In the Eiffel region, west of the Rhine, the available good roads dwindled to two. It was necessary to halt the northern division and to echelon it back a day's march.

The first requirement for a corps on the march is roads. On a march, not in the presence of the enemy, the principal function of the corps operations staff is the selection and allotment of roads. The corps itself is assigned, as a rule, a certain section of country in which it has full control of all roads, and it is also given certain objectives which must be attained on fixed dates by the heads of its columns.

Each division requires, if possible, at least two good roads. The march can then be made in columns short enough to make certain that field trains can reach the troops at night. The maximum length column that permits this is about fifteen miles. When contact becomes imminent, how-

ever, the division frontage is normally not over two miles, and the division cannot depend on having the use of more than one main road. Additional minor routes can generally be found which can be utilized by foot troops without trains.

Although billeting, in detail, is a G1 function, the G3 section, in arranging the size of columns and length of marches, gives consideration to the amount and location of the available billeting facilities. If troops have to march considerable distances from their billets to initial points on the main roads, and again march off the main roads to billets at the end of the march, progress is materially lessened. Billeting or bivouacking in depth on main roads enables long marches to be made, and consequently permits rapid progress.

The varying speeds of different columns are considered when planning the march. Foot troops march about $2\frac{1}{2}$ miles per hour, including halts; cavalry, from three to six miles; horse-drawn artillery can in general conform to the rate of either. But motor columns cannot be mixed with mounted or foot troops without disadvantage to both troops and motor units. The tendency, therefore, is for each division to leave its varied assortment of motor transport behind until its marching columns have nearly completed the day's journey, and then bring the motor elements forward by a single bound. However, if another division is following immediately in rear this cannot be done, as the second division would find its billets still occupied and its columns blocked by the trucks of the division ahead. If conveniences of marching take precedence over tactical and other requirements, the remedy is to leave sufficient space, a day's march if possible, between the tail of the division in front and the heads of columns of the one following. The corps regulates this in its march orders, by designating a forward objective and rear limit for each of its divisions.

In a concentration march, when there are three divisions in the corps, it is advantageous to march two divisions abreast in the lead, with the third division following in rear of one of them. This allows the space in rear of the other leading division to be allotted to the corps troops, which require roughly the same road and billeting space as a divi-

sion. In the march of the III Corps to the Rhine, a commanding officer of corps troops was appointed for the march, and the combined units were dealt with much the same as a division.

The corps endeavors to assign to each division exclusive use of certain roads. Where this is not possible and mixed traffic of two divisions must follow a certain road, the corps regulates traffic by specifying the hours for each division, or the precedence of columns entering from one direction over those from another direction, or by limiting the length of column of one division that can enter on the road when there is a column of the other waiting. In any case, the presence of corps military police and a corps staff officer on the governing road junctions or crossroads is essential. Frequently it happens that trains of one division must pass through the area of another to reach their railhead; the duty of coordinating such movements devolves upon the corps.

The command post of a corps on the march is located near the center of the corps. The commander is in no sense tied down to the command post, however, as he has at his disposal rapid means of transportation which enable him to go quickly to any part of the command. In a continuous march, a corps usually moves its command post at least every two days and requires division command posts to be moved every day. Unless this is done, inspection and supervision of the march by the staffs concerned is difficult, and march discipline suffers. The movement of corps and division command posts on the march is executed by echelons, as in other operations. The forward echelon is open and in communication, before the rear one closes.

The corps requires prompt and continuous information of the progress of all its elements, and of the condition in which they reach their halting places. Situation and intelligence reports must be promptly received, and orders, summaries and maps promptly distributed, in order that the march may continue in good order.

The air service renders important assistance during the march by observation of the various columns. In order to identify columns and places accurately, and to report on

the progress of the march, the planes fly low. In emergency they are used to carry orders.

The corps engineers, under the direction of the assistant chief of staff, G4, execute special road reconnaissance and maintain the road system in rear of the division engineers until relieved by army troops.

The assistant chief of staff, G4, recommends to the army changes of railheads or refilling points, for both divisions and corps troops, in accordance with the scheme of advance. While the mechanics of supply of divisions are handled directly between divisions and the army, the G4 section of the corps closely supervises the results and aids in every way that the facilities of the corps permit. Lack of forage, lack of shoes, lack of rations, all affect vitally the efficiency of the corps as a marching or fighting unit, and the corps commander is quite as seriously interested as a division commander in remedying any shortage or defect.

Some of the matters that a corps on the march orders, delegates, or assigns to its subordinate units, and the manner in which it directs the execution of a movement, have been covered. But merely to order a thing done is not sufficient. Some one must make certain that orders issued are actually carried out. This is one of the principal duties of the corps staff, as is the case with the staffs of all other units. If heads of columns of a division are ordered to be at a certain place at a certain time, a corps staff officer should be there, functioning as the eyes of the corps commander, to observe and check up the actual execution of the movement. When this staff work is done properly and tactfully, subordinate units have no cause for resentment. All must appreciate that the purpose is to accomplish the assigned mission with the minimum of fatigue and hardship for the troops of the command as a whole.

An Advance Against the Enemy

In a march against the enemy, the formation of a corps undergoes important changes. Columns march prepared for battle. Frontages are reduced so that units are within supporting distance. Security must be provided. Information must be obtained. Combat necessities take precedence over

all others in the composition of columns and the positions of trains.

The frontage covered by a corps in a march, as well as the formation taken up, depends largely upon the road system. With two divisions abreast, the advance can be made on a front of about 12 miles. This is reduced to approximately four to six miles when contact becomes imminent. At least four good roads are required, running in the direction of the advance.

Various march formations that may be taken up are indicated in Plates A, B, and C. In these plates road spaces are approximate only. Divisions are in brigade columns, the leading ones with advance guards thrown out. Cavalry covers the advance. Horse-drawn trains are with or in rear of columns, without distance.

Plate A illustrates a type formation for a four-division corps disposed with two divisions, abreast, in the lead. The corps is as well closed up as is possible on four roads, and occupies a space of 12 by 60 miles.

Should the cavalry develop hostile resistance on the line of its front elements, the leading elements of infantry can reach this line in a day's march. Another day will be required for the rear of the first-line divisions to deploy. If it is necessary to hurry forward one of the rear divisions, a third day will be required before this division can reach its place and deploy abreast of those in the lead. The corps artillery is located even farther back, but it is motorized and can move forward quickly whenever the roads are free.

The type formation shown in Plate B requires the same roads and frontage as in Plate A. The depth, however, is greater, and the total area occupied by the corps is roughly 12 by 75 miles. The advantages of this system of march (Plate B) are:

(a) It is more flexible; it lends itself to changes of direction, even very abrupt ones.

(b) Less than half of the corps is involved before the commander has time to decide upon a definite plan, thus conserving a greater maneuvering mass.

(c) Three divisions can deploy abreast in two days' march.

The second-line divisions have an excellent opportunity to hurry their marches when the need arises, as each has a

THE CORPS IN AN ADVANCE

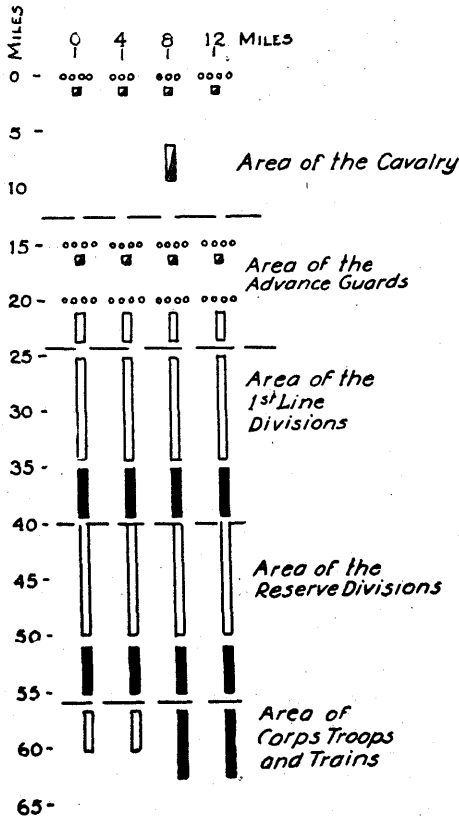


Plate A

LEGEND

-  *Cavalry*
-  *Foot and Horse Drawn Troops and Trains*
-  *Motor Elements*

Note: Two Cavalry Regiments attached to Corps

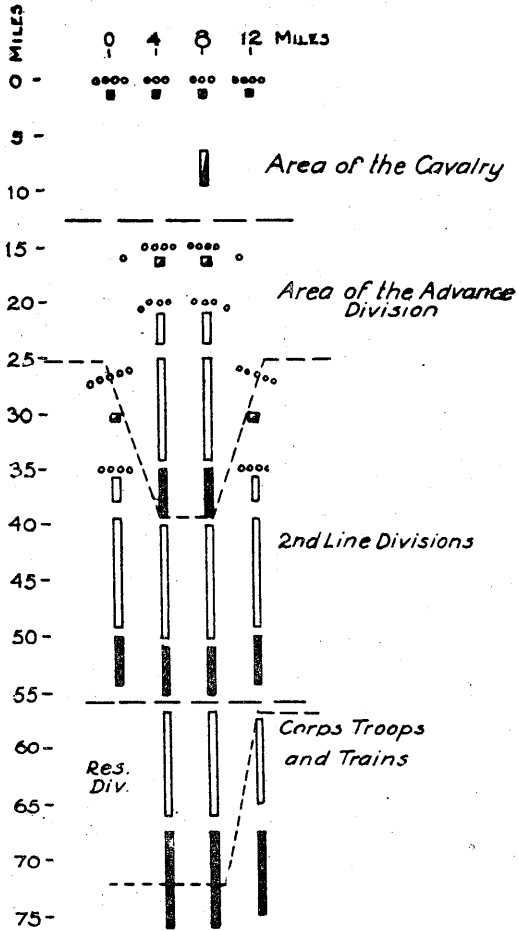





Plate B

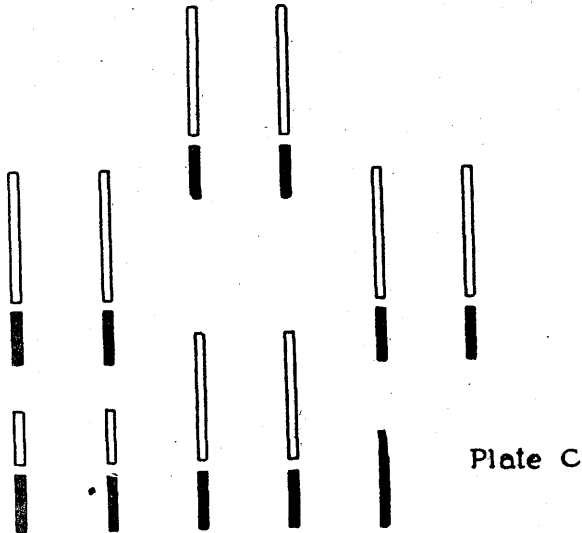
LEGEND

-  Cavalry
-  Foot and Horse Drawn Troops and Trains
-  Motor Elements

Note: Two Cavalry Regiments assigned to Corps

free road for one of its main columns. The corps artillery is still within a day's march at any time that a road can be opened for it.

If more roads are available an even more flexible formation can be secured, as shown in Plate C. The corps in this case marches on a broader front. Changes of direction are much simplified. Divisions have more room for maneuvering their trains. Security detachments, however, must operate on a broader front, and more troops are required for this purpose. Whatever formation is adopted, the cavalry is in the lead. With a cavalry division operating in



front of an army, a corps is usually provided, at most, with only a regiment of cavalry, attached, probably, from the organic cavalry of the army. From this regiment, one troop is in general furnished to each division for use as divisional cavalry. The corps cavalry proper engages in tactical reconnaissance, screening, and, in the case of a flank corps, in covering the exposed flank.

Two regiments of cavalry constitute a suitable cavalry force for a corps operating independently. This is sufficient to permit strategical reconnaissance or screening to be carried out effectively on the frontage required. Reconnoiter-

ing elements are pushed well to the front to gain information of the enemy, but the main body of cavalry is, in general, held within the zone of the cavalry as shown on the accompanying plates. As in the case of a corps within an army, one troop is normally attached for use with each division.

Information from the cavalry reconnoitering elements, sent back by wireless (the radius of cavalry pack wireless is 60 to 100 miles), should reach the corps commander and the cavalry main body simultaneously. If not sent by wireless, tactical information passes through channels; strategical information, to the higher commander by the most direct route available.

Until contact is gained by the corps, the bulk of its information comes from the higher unit—the army. The reconnaissance of the corps air service, however, is pushed well ahead; deeper, usually, than when a full development of the situation has taken place. The air service is active in selecting new airdrome locations as the corps advances. If good airdromes are not available every two or three days' march, auxiliary landing grounds must be selected where planes can come down without danger of crashing.

The G2 section has another source of information, a trained force of observers. These are furnished with motorcycles and motorcycle messengers, and during the march supplement the reconnaissances and reports of the advance guards. When contact is gained and the advance guard situation begins to develop, they are in their proper forward locations and their usual communication by wire is established.

Development of Contact

In the development of contact the corps endeavors to insure the action's developing in accordance with the necessities of its mission. If the forward march of the corps were governed by march orders alone, the necessity might occur for a division, or other subordinate commander, to arrive at an independent decision. Even with the modern rapid means of communication, the corps commander would probably not learn of such a decision until after it had begun to be put into effect. The task of the corps would then be

to exploit, minimize, or nullify the results of this decision. But in order to avoid such a contingency, the corps issues general instructions in advance, usually in the form of "letters of instruction," in which the immediate subordinate commanders are informed of the mission and of the general plans of the corps commander for its execution. These letters look far enough into the probabilities of the future to enable division commanders to make their decisions, in the absence of immediate orders, so as to favor a development of the situation on the lines desired by the corps commander.

As contact with the enemy develops, the general staff sections bend every effort to assure contact with neighboring corps; to keep roads open for bringing up fighting elements; to establish good communications; and to foresee the development of the situation so that troops and means in rear may be available where and when needed.

The task of the G4 section is much the same as when marching, except that ammunition, hospitalization, and certain supplies, such as engineer supplies, signal supplies, etc., begin to take precedence. The location and establishment of parks must receive consideration. Corps troops and trains, which previously have been held together for marching purposes, now begin to function under their respective chiefs of services. Road traffic becomes more or less continuous and must be controlled.

The Corps in Defense

The mission of the corps and the development of the situation may result in either an offensive or defensive action. Should it be necessary to assume the defensive, the general policy of defense and the positions to be defended are prescribed by the army. The corps issues the detailed instructions, determines more definitely the position or positions to be defended, and supervises the execution of the work of the divisions and corps troops.

The corps coordinates the efforts of the divisions so as to secure an effective defense of the command as a whole. It assigns sectors to the divisions, and assures proper continuity of the defense and the coordination of artillery fire.

The corps designates the command posts of its divisions and directs their movement when necessary.

The corps signal battalion maintains signal communication with the divisions and with the corps troops and other corps agencies.

The corps engineers are used for road and bridge work in rear of the division engineers, and in the construction of rear positions.

The corps air service reconnoiters to a distance behind the enemy lines corresponding roughly to the range of the corps guns, usually about five miles. The corps coordinates the efforts of the corps and divisional air services, particularly in the matter of photography. For example, it would clearly be wasteful to send both a division plane and a corps plane to photograph the same spot at the same time. Applications for photographs are made to the assistant chief of staff, G2, of the corps, who assigns the mission to the air service. As to observation, particularly for the adjustment of artillery fire, there is a general rule which must be considered by staffs; do not send a plane if a balloon can accomplish the work, and do not send up the balloon if ground observation will do.

The subject of the corps artillery is covered in a separate chapter, and is therefore omitted here.

The corps anti-aircraft regiment is used to augment the anti-aircraft defense of divisions, and to provide anti-aircraft defense for establishments, bridges, etc., in the corps area.

There is little use in a defensive situation for cavalry. The cavalry attached to the corps is therefore usually withdrawn and sent to rejoin the cavalry division to which it belongs. In the case of a flank corps, however, corps cavalry may be needed to maintain connection with the army cavalry, should the latter be operating on that flank, or to protect the flank independently of the army cavalry.

The corps military police controls all traffic in rear of divisions and in front of the corps rear boundary. It has charge of the corps prisoner of war cage. When necessary, the corps provost marshal coordinates the work of the military police of the divisions.

The medical formations of the corps, consisting of one medical regiment, care for corps troops and when necessary supplement the facilities of the divisions. At times they are employed in an evacuation capacity, when true evacuation formations are lacking. At times they are used to accommodate special classes of casualties, such as gas cases, or severely wounded that will not bear shipment.

The corps train provides for the transportation of rations and supplies for corps troops. It does not ordinarily form a link in the divisional supply. It carries, however, a reserve of one day's rations and forage for all divisions, as well as a reserve of infantry and artillery ammunition. It may be used as a troop transport train.

The zone of a corps extends five miles or more in advance of its front line, and in rear of it to a distance of six to ten miles; the breadth is from three to ten miles. The depth of the corps zone varies according to the number of divisions, the degree of aggressiveness of the mission, and with the amount and character of accommodations for troops in the immediate rear areas.

In stabilized situations, such as obtained in the World War, the divisions of a corps are frequently relieved, necessitating troop movements in and out of the line. Artillery units, also, are continually coming and going. To take care of these conditions, the corps arranges a staging area, in rear of its zone of fighting, for temporarily sheltering these troops in passing. The extent of the organization of this area depends upon the time the sector is occupied. When possible it is well organized, with recreation huts, amusements, bathing and delousing facilities, and temporary barracks to increase the billeting. The location of a staging area within sound of the guns is not disadvantageous, but it should be located beyond reach of all but exceptional shelling.

When the relief of a division of the corps occurs, the corps headquarters orders and supervises the movement of the relieving division through the corps area to a staging area, generally in rear of the division to be relieved. This staging area should be so located that the relieving infantry units will be within six miles' marching distance of

the centers of resistance of the first position. For the movement through the corps area, the corps prescribes routes, billeting or bivouac areas, and locations of the division command post; and announces the division railhead as designated by the army. The corps exercises the usual traffic control, supplemented by measures to preserve the secrecy of the movement. The corps order for the relief is largely directive in character, specifying the sector to be taken over; whether or not movements are to be made other than at night; the general character of the dispositions to be adopted, if differing radically from those that already obtain; routes other than those in the division sector that are available for the relief; the time by which the relief will be completed; the time at which command of the divisional sector will pass; and the destination and movement of the outgoing division after relief.

The corps may institute in its rear area a training ground where instruction may be had by large units in reserve. Particular training may be needed in the proper cooperation between tanks and infantry, and in cooperation between the air service and ground troops. The British forces in France organized an extensive system of corps schools in the corps areas. In the American Expeditionary Forces, however, the corps schools were such in name only, as they were located well in rear and functioned under the direct supervision of the training section of general headquarters.

The Corps in An Attack

When an attack is to be made, the corps commander and chief of staff go over the plan personally. If possible this is done in conference with the army commander, to insure that the mission, the broad features of the plan, and the means at the disposal of the corps are known. Personal reconnaissances are made by the commander and the staff. The work of the second section is very much intensified. Having his mission, the information of the enemy, a knowledge of the terrain, gained by air and ground reconnaissance and by map study, and knowing the means and the troops at his disposal, the corps commander makes his broad plan. The duty of the staff is to assist the commander in

reaching his decision and to fill in and supervise the execution of the details so as to assure a smooth and coordinated working out, by all units and services of the corps, of the general plan decided upon.

To prepare for the attack, the assistant chief of staff, G4, must know the tactical plan. The decision to pass to the offensive makes it necessary, in general, to push forward all installations. The plan of circulation is altered and the new plan extended to reach far into enemy territory, being based on the anticipation that divisions will make the full penetrations required of them.

The corps G1 section makes provision for establishing lines of straggler posts in rear of those of the divisions, and for reinforcing division straggler lines. The corps line is moved forward as the attack progresses, thus relieving the military police of the divisions. The corps prisoner of war cage is so located as to avoid the need of divisional guarding parties being sent to conduct prisoners far to the rear. The G1 section makes arrangements to secure promptly, from all units in the corps, reports of casualties, prisoners and captured materials.

The assistant chief of staff, G3, is charged with the direction of the assembly of the troops allotted for the attack. The artillery of the sector may be greatly reinforced, in which case the artillery is turned over by the army, usually near the rear of the corps area. Arrangements are made to move it forward to assembly positions from which it can make its reconnaissances and move gradually into position without attracting enemy notice. Additional technical troops and usually fresh divisions must also be brought forward. Divisions in line may be relieved, or their fronts contracted. The corps as a whole is usually contracted to two or three divisions occupying an attack frontage of three to six miles, if part of an army, or about six miles if alone. New corps may come in on the flank. In modern war, to avoid enemy observation, practically all of these movements must be made at night. The corps troop movement subsection is a busy establishment, for it must not only order, but also reconnoiter and supervise.

The assistant chief of staff, G3, also drafts the orders for the attack, in accordance with the plan of the corps com-

mander. The order must present the mission of the corps, its boundaries, objectives, etc., in so graphic a manner as to give to the division commanders a striking picture of the maneuver of the mass as a whole. The information of the enemy, as given in the first paragraph of the field order, is sometimes supplemented by special studies issued to the division commanders. The third paragraph of the order must give a clear idea of the maneuvers expected from each of the divisions, and how their maneuvers fit into the corps maneuver. The functions, missions, and allotments of the special arms must be shown in the clearest form, as well as the coordination of fire and movement along corps and division boundaries.

When the attack begins, the various large units may be likened to an old fashioned carriage. The divisions are the horses, pulling, digging their toes in, putting their weight in the collar, sweating and getting tired. The corps is the driver, guiding them, looking out for them, urging them on, sometimes with a whip, sometimes with the voice. The army is the owner, who sits in the back seat, pays the bills, feeds the whole outfit, and says where he wants to go and when he wants to get there.

(B) THE FIELD ORDERS FOR THE ADVANCE OF THE II CORPS

For general and special situations see Chapter I (A), Field Orders No. 20, and Administrative Orders No. 10, First Army.

The II Corps, on 23 November, is in the area Libertytown—Unionville—Bartholows—New Market—McKaig, and is disposed as follows:

5th Division:

Libertytown (exclusive)—Unionville (inclusive)—Linganore (exclusive)—Junction of Dollyhyde and Linganore Creeks (exclusive).

Command post: Unionville.

6th Division:

Libertytown—Junction of Dollyhyde and Linganore Creeks—T in Turnpike (all inclusive).

Command Post: Libertytown.

7th Division:

T in Turnpike (exclusive)—New London—Bens Branch—
McKaig (all inclusive);
Command Post: New London.

8th Division:

Junction of Dollyhyde and Linganore Creeks (exclusive)—
Linganore (inclusive)—Bens Branch (inclusive)—New
London (exclusive).

Command Post: Linganore.

Corps Troops:

Corps headquarters, Libertytown.
Corps cavalry, near Libertytown.
Signal battalion, Libertytown.
Air service, near Frederick.
Artillery brigade, near New Market.
Anti-aircraft regiment, near New Market.
Medical regiment, near New Market.
Auxiliary engineer battalions (corps), near Bartholows.
Engineer regiment, near Bartholows.
Corps train, near New Market.
Field remount depot, near Bartholows.
Military police battalion, distributed.
Auxiliary engineer battalions (714th and 715th), attached,
near Frederick.
Bridge trains (751st and 752d), attached, near Frederick.

Required:

The field orders of the corps commander for the march
on 24-25 November.

A Solution

II Corps,
LIBERTYTOWN, Md.,
23 Nov 19, 6:00 PM.

FIELD ORDERS }
No. 1. }

Map: Geological Survey, 1:62500; Fairfield, Gettysburg, Emmitsburg, Taneytown,
Ijamsville and Mount Airy Quadrangles.

1. Reds have concentrated on the line LANCASTER—HARRISBURG and
are advancing on HANOVER and GETTYSBURG. Red cavalry and
bands of secessionists were reported this date at HANOVER and
GETTYSBURG. Red aircraft has not appeared south of the MARY-
LAND—PENNSYLVANIA state line. All railroads to the north are
reported intact.

The First Army advances tomorrow towards the HANOVER—
GETTYSBURG line, covered by the Army Cavalry. Order of battle
from east to west: I Corps, II Corps, III Corps.

2. This corps will advance with the 5th, 6th, and 7th Divisions in line
from east to west, the 8th Division in reserve.

Zone of Advance:

East Boundary: UNIONVILLE—UNION BRIDGE—MARKERS MILL
—PINEY CREEK (village)—ST. LUKE'S CHURCH (all ex-
clusive).

West Boundary: MONOCACY RIVER—TOMS' CREEK—MIDDLE
CREEK—EMMITSBURG ROAD—MARSH CREEK (all inclu-
sive).

3. (a) The Corps Cavalry (2 troops 5th Cavalry) will move at 7:00 AM, reconnoitering the corps front. It will select two crossings (capacity all arms) over the MONOCACY RIVER north of TOMS CREEK and report the same by 5:00 PM.
- (b) The 5th, 6th, and 7th Divisions will advance, each in its zone of advance, in not less than two main columns, maintaining connection with the divisions on their right and left. Heads of advance guards will cross the line WALKERSVILLE—LIBERTYTOWN—OLDFIELD at 7:30 AM.

Zones of Advance:

5th Division:

East Boundary: East boundary of I Corps.

West Boundary: LIBERTYTOWN—MIDDLEBURG (both exclusive)—eastern half of TANeyTOWN—Two TAV-ERNS (both inclusive).

6th Division:

East Boundary: West boundary of 5th Division.

West Boundary: CENTERVILLE (inclusive)—LADIESBURG—NAILORS MILL (both exclusive)—BRIDGEPORT—TANeyTOWN ROAD (both inclusive).

7th Division:

East Boundary: West boundary of 6th Division.

West Boundary: West boundary of I Corps.

The advance guards and rear elements of each division will reach the lines designated on the dates specified below:

24 November:

Advance Guards: North of BIG PIPE CREEK by 6:00 PM.

Rear Elements: North of the LIBERTY TURNPIKE and NEW WINDSOR ROAD by 2:30 PM, and north of an east and west line, through PRIESTLAND SCHOOL—THE HILL SCHOOL by 6:00 PM.

25 November:

Advance Guards: North of an east and west line through LITTLESTOWN—FAIRPLAY by 6:00 PM.

Rear Elements: North of an east and west line through GALT KUMP P. O.—ST. JOSEPHS ACADEMY by 6:00 PM.

The UNIONVILLE—CLEMSONVILLE—UNION BRIDGE—BARK HILL—FAIRVIEW SCHOOL—TANeyTOWN road is assigned to the 5th Division until 6:00 PM, 25 November. The roads east of APPOLDS (inclusive)—MOTTERS—ST. JOSEPHS ACADEMY—EMMITSBURG—McCLEARY'S SCHOOL (all exclusive) are assigned to the 7th Division until 6:00 PM, 25 November.

- (c) The 8th Division will move on 24 November to the area OLDFIELD—LIBERTYTOWN—UNIONVILLE. Heads of its columns will remain south of LINGANORE CREEK until 1:30 PM, after which hour all roads east of the LIBERTYTOWN—NEW LONDON road (exclusive) will be available for its movement. On 25 November it will move to the area SHARRETTS—BRUCEVILLE—KEYMAR—MIDDLEBURG following in the zone of the 5th Division. The 8th Division passes to Army Reserve on 24 November.
- (d) The Corps Air Service will commence its reconnaissance at daybreak tomorrow and will maintain constant observation of the enemy movement on the corps front south of the YORK PIKE. It will observe and report upon the corps advance each day at 8:00 AM, 12:00 noon and 5:00 PM. It will select a landing field near TANeyTOWN and be prepared to move there-to on 25 November.
- (e) For other Corps Troops see March Table, attached.

- (x) Division Commanders, in their zones of advance, are charged with taking all necessary means of security, both on the march and while halted.
4. For administrative details see Administrative Orders No 5.
5. (a) Plan of Signal Communications: See Annex No 1 (omitted).
 (b) Axes of Signal Communications:
 II Corps and 6th and 8th Divisions: LIBERTYTOWN—JOHNSVILLE—MIDDLEBURG—BRUCEVILLE—TANEYTOWN — HARNEY—LOW DUTCH ROAD.
 5th Division: UNIONVILLE—road junction 560—BETHEL CHURCH—OTTERDALE MILL—TANEYTOWN—road junction 528—crossroads 568—TWO TAVERNS—BONNEAUVILLE.
 7th Division: MCKAIG—Mt. PLEASANT—WALKERSVILLE—FREDERICK TURNPIKE—NEW MIDWAY—KEYESVILLE—FAIRPLAY—EMMITSBURG ROAD to GETTYSBURG.
- (c) Command Posts:
 II Corps: Closes at LIBERTYTOWN at 4:00 PM, 25 Nov. and opens at TANEYTOWN at same hour and date.
 5th Division: UNION BRIDGE (after 4:00 PM, 24 November). WASHINGTON SCHOOL (after 4:00 PM, 25 November).
 6th Division: MIDDLEBURG (after 4:00 PM, 24 November). HARNEY (after 4:00 PM, 25 November).
 7th Division: NEW MIDWAY (after 4:00 PM, 24 November). BOLLINGER SCHOOL (after 4:00 PM, 25 November).
 8th Division: LIBERTYTOWN (after 4:00 PM, 24 November). BRUCEVILLE (after 4:00 PM, 25 November).

By Command of Major General F:

X

Chief of Staff.

Distribution:
 (omitted.)

MARCH TABLE

To accompany Field Orders No 1, II Corps

Map: Geological Survey, Gettysburg-Antietam 1:62500.

Serial No.	Date Nov	Org and Comdr	From	To	Route	Remarks
1	24	Col A 201st Engrs 211th Aux Engr Bn	Present location	Along BEAVER DAM CREEK east of JOHNSVILLE	NEW MARKET NEW LONDON LIBERTYTOWN NEW WINDSOR ROAD—RJ 458—RJ 555	To start at 10:30 AM
2	24	Col C 201st Med Regt	Present location	JOHNSVILLE	NEW MARKET MCKAIG LIBERTYTOWN JOHNSVILLE	To start at 1:30 PM Not to reach the LIBERTY TURNPIKE before 2:30 PM
3	24	Brig Gen B 201st FA Brig A-A Regt	Present location	JOHNSVILLE	NEW MARKET MCKAIG LIBERTY TURNPIKE LIBERTYTOWN JOHNSVILLE	To start at 2:30 PM following Serial No 2
4	24	Lt Col T Corps Tn	Present location	LIBERTYTOWN	Same as Serial No 1	To start at 4:00 PM
5	24	Capt E 201st F Rmt Dep	Present location	LIBERTYTOWN		To start at 12:30 PM following Serial No 1
6	24	Maj S 201st Sig Bn				As directed by Chief Signal Officer
7	24	Maj F 212th Aux Engr Bn 213th Aux Engr Bn 714th Aux Engr Bn 715th Aux Engr Bn 751st Bridge Tn 752d Bridge Tn	Present location FREDER- ICK	LEGORE	FREDERICK TURNPIKE	Head of column will not pass north of WALKERSVILLE before 2:30 PM. (Aux Engr bns from BARTHOLOWS move via NEW MARKET—MCKAIG—CR 532—RJ 368 to join Serial No 7)

Movement for November 25, 1919, will be communicated later.

THE CORPS IN AN ADVANCE

II Corps,
LIBERTYTOWN, MD.,
24 Nov 19, 12:00 noon.

MOVEMENT ORDER No 1.

The following movement of Corps Troops is ordered for 25 Nov.

Serial No.	Org & Comdr	From	To	Route	Remarks
1	Brig Gen B 201st FA Brig A-A Regt	JOHNSVILLE	Region of CRABSTER	Via MIDDLE- BURG and BRUCE- VILLE	To start at 4:00 PM, following columns of the 6th Div.
2	Col A 201st Engrs 211th Aux Engr Bn	East of JOHNSVILLE	One mile north of OTTERDALE MILL	Via BETHEL CHURCH	To start at 3:30 PM, following columns of the 5th Div.
3	Maj F 212th Aux Engr Bn 213th Aux Engr Bn 751st Bridge Tn 752d Bridge Tn 714th Aux Engr Bn 715th Aux Engr Bn	LEGORE	KEYSVILLE	FREDERICK TURNPIKE	Head of column not to pass NEW MIDWAY before 3:30 PM.
4	Lt Col T Corps Tn	As directed by G4			
5	All other troops	No change			

By command of Maj Gen A:

X
Chief of Staff.

CHAPTER III

The Army in Attack

(A) THE FIELD ORDERS FOR THE ARMY ATTACK

Special Situation (Blue), Part II:

Continuation of Part I, (A), "The Field Orders for the Advance."

During 24-25 November, 1919, the information received at army headquarters indicated the following situation on the First Army front by the evening of 25 November:

A Red force, estimated to be two corps (of three or four divisions each) and one cavalry division, had arrived by 24 November from Harrisburg and Lancaster on the general front Hanover—Gettysburg. On 25 November the Blue advance guards drove in the hostile covering detachments and by evening of that day definitely learned of the construction of intrenchments on the general line: south of Midway—Whitehall—north of Two Taverns—Round Top—Pitzer School. The Red cavalry, withdrawing to Knoxlyn, has succeeded in preventing the First Army Cavalry from advancing north of the Hagerstown Road in that vicinity.

Red working parties have been observed intrenching along the north bank of Conewago Creek and hostile columns have been located on 25 November marching south from Harrisburg via Dillsburg and from Carlisle via Mt. Holly Springs. An increased movement of trains on the P. & R.R.R. has been observed.

The Second Army reports few Reds seen west or south of York. The Third Army reports that its cavalry has been stopped by hostile cavalry at Chambersburg, but that its air service has not seen any hostile columns between Carlisle and Shippensburg. The roads from Thurmont to Highfield and the Waynesboro Turnpike are reported practicable.

for all arms and trucks. Neither side has air superiority. Both sides succeed in observing the other's rear areas.

At 5:00 PM, 25 November, the First Army is located as follows:

Army cavalry: In vicinity of Wilson Hill in contact with hostile cavalry which is holding Carr Hill south of Knoxlyn.

I Corps: The advance guards of the two first line divisions are on the general line: Mt. Pleasant—road junction 613 (northeast of Germantown). The main bodies of these divisions are making camp on the general line of the state boundary. The corps reserve division is making camp just north of Union Mills. The corps cavalry is east of Littlestown on the Union Mills—Hanover road in contact with cavalry of the Second Army. Corps headquarters and corps troops are at Union Mills.

II Corps: The advance guards of the three first line divisions are on the general line: road junction 613—Two Taverns—Willow Grove School—Greenmount. The main bodies of these divisions are making camp on the general line of the state boundary. Corps headquarters and corps troops are in and about Taneytown.

III Corps: The first line division has its advance guard north of Plum Run and holds the McCleary School ridge. The main body is camping on Flat Run, three miles north of Emmitsburg. The corps reserve division is camping on Toms Creek, west of St. Joseph's Academy. The corps cavalry has reached Highfield and is in contact with the right of the Third Army. Corps headquarters and corps troops are in the vicinity of St. Joseph's Academy.

Army reserve divisions: 4th Division at Westminster, 8th Division at Bruceville, 11th Division at Woodsboro and 12th Division at Thurmont.

All other army units are located as given in the march table for Special Situation, Part I (A).

Required:

- (1) General A's decision.
- (2) The formal field orders for attack issued by the First Army, assuming no change in the situation.

A Solution

1. *Decision.*

General A decides to attack the enemy at daylight on the morning of 27 November, 1919. While the whole hostile front will be attacked, the main attack will be driven against the hostile right, i.e., on the front Taneytown Road—Hagerstown Road.

The corps will be rearranged as follows: The I Corps, no change; the II Corps, two divisions in front line on the same front, but limited to Taneytown Road, inclusive, and one division in reserve; the III Corps to have four divisions in line from Taneytown Road, exclusive, to Hagerstown Road, inclusive, and one division in reserve.

By maneuver to the west on 26 November, the Army Cavalry will draw the hostile cavalry from Carr Hill. If this does not succeed, then the Army Cavalry must join in the attack of the III Corps and drive the hostile cavalry from Carr Hill.

The attack, i.e., the main blow, will be made as a surprise.

2. *The Formal Field Orders.*

Note. Prior to issuance of this order, General A would have held a conference with his subordinate commanders during the night of 25-26 November. Preliminary arrangements would have been well under way before the hour of issue of the order, as an army warning order was issued at 11:00 PM, 25 November.

First Army,
WOODSBORO, MD.,
26 Nov 19, 8:00 AM.

FIELD ORDERS }
No 23. }

Map: Geological Survey, 1:62500; six quadrangles vicinity of Gettysburg.

1. Advance Red forces, estimated two corps (6 to 8 divisions and one cavalry division), are intrenching on the general line: south of MIDWAY—WHITEHALL—north of TWO TAVERNS—ROUND TOP—PITZER SCHOOL. The Red cavalry division was last night in the vicinity of CARR HILL. Other Red forces are approaching and intrenching the north bank of CONEWAGO CREEK. See Summary of Intelligence of 25 Nov (omitted).

Our Second Army has met only a few Reds south of YORK. Our Third Army is advancing, opposed only by cavalry. Our Army Cavalry last night was near WILSON HILL in contact with the hostile cavalry. Our advance guards, having driven in the

THE ARMY IN ATTACK

hostile covering detachments, are now in contact with the enemy's main forces in our front and hold the general line: MT. PLEASANT—CR 613—TWO TAVERNS—WILLOW GROVE SCHOOL—GREENMOUNT—MCCLEARY SCHOOL.

2. This army will attack at 7:00 AM tomorrow, enveloping the hostile right. The enemy will be driven north of CONEWAGO CREEK. (See Operations and Location Map attached.)
3. (a) Groupment "A," Army Artillery, will support the I and II Corps from the general vicinity of OAK GROVE SCHOOL west of LITTLESTOWN.
Groupment "B," Army Artillery, will support the III Corps from the general vicinity of FAIRPLAY.
The artillery preparation will commence at 3:00 AM.
For details, see Annex No 1, Artillery.
- (b) The I Corps will attack on the front MIDWAY—WHITEHALL, making its main effort in the direction of FELTY SCHOOL—CEDAR RIDGE. It will protect the army's right flank and maintain contact with the Second Army.
Zone of action (extended).
East boundary: Same as army.
West boundary: WHITEHALL—MORITZ SCHOOL—PINE CHURCH—OAK GROVE SCHOOL (all inclusive).
- (c) The II Corps will attack on the front WHITEHALL (exclusive)—TANEYTOWN ROAD (inclusive), making its main effort in the direction of TWO TAVERNS—GRANITE HILL.
Zone of action (extended).
East boundary: Same as west boundary I Corps.
West boundary: TANEYTOWN ROAD—HARRISBURG ROAD (both inclusive).
The 4th Div, reaching TANEYTOWN during the night of 26-27 Nov, passes to the II Corps as corps reserve.
The 7th Div passes to the III Corps at 2:00 PM, this date.
- (d) The III Corps will attack on the front TANEYTOWN ROAD (exclusive)—HAGERSTOWN ROAD (inclusive) and envelop the hostile right. Attack direction, MCCLEARY SCHOOL—TABLE ROCK. The attack will be made with 7th, 9th, 10th and 12th Divisions. The 8th Division will be corps reserve and will be held near EMMITSBURG. The III Corps will continue to cover the army's left, maintaining contact with the Third Army and reconnoitering SOUTH MOUNTAIN as far north as the CHAMBERSBURG ROAD.
Zone of action (extended).
East boundary: Same as west boundary II Corps.
West boundary: Same as army.
The following divisions pass to the III Corps at hours designated:
7th Division, at 2:00 PM today.
8th Division, at 4:00 PM today.
12th Division, at once. Army trucks will reach THURMONT at 7:30 PM today for movement of this division.
- (e) The 11th Division, Army reserve, will move during the night of 26-27 Nov to BRUCEVILLE, marching via LADIESBURG—KEYMAR.
- (f) The Army Cavalry is this date moving around the right flank of the hostile cavalry. It will screen and protect the movements of the III Corps and will observe the passes of SOUTH MOUNTAIN north of ORRTANNA.

- (g) The Army Air Service will continue its present mission. The attack squadron will support the attack of the III Corps by attacking hostile batteries and ground troops on that front. The bombardment squadron will delay movement of Red reserves to the west flank of the battle line. For details see Annex No 2, Air Service (omitted).
- (x) 1. All divisional troop movements in preparation for the attack will be made between 5:45 PM and 6:30 AM. Special effort must be made to keep the enemy in ignorance as to all movements.
- 2. Rate of advance will be regulated by corps. ROUND TOP, LITTLE ROUND TOP, POWERS HILL, WOLF HILL and ST. LUKE'S CHURCH will be neutralized by gas and smoke under corps direction. Gas may be employed on other parts of the front by corps orders.
- 3. During the night 26-27 Nov, advance infantry lines will push up close to the enemy's lines.
- 4. See Administrative Orders No 11. The army train will reach TANEYTOWN not later than noon 27 Nov where it will await orders from these headquarters.
The LITTLESTOWN—TANEYTOWN, TANEYTOWN—EMMITSBURG and EMMITSBURG—ZORA—HIGHFIELD roads will be kept sufficiently clear of traffic to permit rapid movements of troops by trucks after 12:00 noon 27 Nov.
- 5. Axes of signal communications:
 - (a) Army: Extended to GETTYSBURG via HARNEY and BARLOW.
 - I Corps: Extended to NEW OXFORD via LITTLESTOWN and IRISHTOWN.
 - II Corps: Extended to HUNTERSTOWN via TWO TAVERNS and BONNEAUVILLE.
 - III Corps: Extended to GOLDENVILLE via GETTYSBURG.
 - (b) Command posts, no change.

By command of General A:
CS,
Chief of Staff.

Distribution:

**(B) THE ADMINISTRATIVE ORDERS
FOR THE ATTACK**

First Army,
WOODSBORO, MD.,
26 Nov 19, 8:30 AM.

ADMINISTRATIVE ORDERS } To accompany FO 23, First Army.
No 11.

Maps: Geological Survey, 1:62500; six quadrangles in vicinity of Gettysburg.

I. SUPPLY.

A. Railheads:

Commencing on 27 Nov.

I Corps:

WESTMINSTER
KINGSDALE
PINEY CREEK

THE ARMY IN ATTACK

II Corps:

GALT
TANEYTOWN
CRABSTER

III Corps:

EMMITSBURG
MOTTERS
LONGS
JACKS MOUNTAIN
MONTEREY

11 Div:

DETOUR

A Cav:

IRON SPRINGS

AA Gp A:

No change

Gp B:

EMMITSBURG

All other army troops: KEYMAR.

Corps commanders will report assignments by 4:00 PM today.

B. Ammunition:

I Corps and Gp A AA:	A Am Dep No 3:	AVONDALE
II Corps:	A Am Dep No 4:	SHARRETTS
III Corps, A Cav and Gp B AA:	A Am Dep No 5:	THURMONT

C. Engineer:

Supplies and material.

I Corps:	A Engr Dep No 2	SPRING MILLS
II Corps:	A Engr Dep No 3:	KEYMAR
III Corps and A Cav:	A Engr Dep No 4	CATOCTIN

D. Other supplies, no change.

II. EVACUATION.

By Army.

A. Men:

Evacuation Points:

I Corps:	NEW WINDSOR
II Corps:	UNION BRIDGE
III Corps:	GRACEHAM
A Cav:	GRACEHAM

B. Animals:

Evacuation Points:

I Corps } -----	LINWOOD
II Corps } -----	
III Corps } -----	LOYS
A Cav } -----	
All others -----	No change

III. ROADS.

A. *Restrictions:*

Army reserved roads (motor traffic only): FREDERICK—WOODSBORO—TANEYTOWN—LITTLESTOWN, TANEYTOWN—EMMITSBURG—ZORA—HIGHFIELD.

B. *Maintenance:*

1. By corps and divisions within respective areas north of WESTMINSTER—TANEYTOWN—EMMITSBURG—HIGHFIELD road.

2. By the army south of this road (inclusive).

3. The EO of the army will effect the relief of all corps and division troops on road work south of the above road by 6:00 PM, 26 Nov.

4. The EO of the army will arrange with G4, 11th Div, for assignment of road work to that division.

C. *Circulation:*

North of WESTMINSTER—TANEYTOWN—EMMITSBURG—HIGHFIELD road at discretion of corps.

IV. SALVAGE AND BURIAL.

Burial:

1. Army cemeteries will be established:

No 5: NEW WINDSOR

No 6: BRUCEVILLE

No 7: LOYS

2. Division cemeteries will be established by all front line divisions.

3. Corps will use the most convenient cemeteries.

4. When possible all burials will be made in cemeteries.

V. BOUNDARIES.

A. The north boundary of the army service area west of the MONOCACY RIVER is limited to SANDY RUN, inclusive.

B. Other boundaries, no change.

VI. MILITARY POLICE.

A. *Traffic Control:*

1. By the army after 6:00 PM, 26 Nov, in area south of the WESTMINSTER—EMMITSBURG—HIGHFIELD road (inclusive).

2. By corps in their respective areas north of this road and at all railheads assigned to corps.

3. The A PM will arrange with G4 of corps concerned for relief of corps military police, in the area controlled by army, prior to 6:00 PM, 26 Nov.

4. Army reserved roads will be kept sufficiently clear of traffic to permit the rapid movement of troops by trucks after noon 27 Nov.

B. *Stragglers:*

1. Army and corps PMs will institute frequent searches in back areas for stragglers and will make proper disposition of those apprehended.

2. Corps and divisions will establish straggler lines.

VII. PRISONERS OF WAR.

A. *Army Enclosures:*

I Corps	No 2, LINWOOD
III Corps	No 3, LOYS
Others	No change

B. *Railheads:*

No 1:	WOODSBORO
No 2:	LINWOOD
No 3:	LOYS

C. Prisoners of war captured by the A Cav will be turned over to the most convenient infantry organizations or to A Cav rhd. The army will evacuate from the latter place and from corps and divisions.

VIII. MISCELLANEOUS.

Other administrative matters, no change. (See Adm O No 10, these headquarters.)

By command of Gen A:

C S
C of S

Official:

A C
A C of S
G4

Distribution:

Same as FO 23.

(C) THE ARMY ARTILLERY IN THE ATTACK

Artillery coordination by the larger units.

The following discussion involves the employment of the artillery of the First Army in the attack of 27 November.

It is assumed that the army chief of artillery is thoroughly conversant with the plans of General A, that he has attended all conferences at army headquarters and that he has been consulted in all matters concerning the employment of the artillery of the command.

It is also assumed that the army chief of artillery is thoroughly conversant with the ammunition supply available; that he and his staff are in close touch with the army G3 and G4 and that he has actively employed the army artillery information service and the artillery information service of the corps for the purpose of obtaining all possible information that will assist the artillery in the attack.

When General A commences to prepare the field order, to be issued at 8:00 AM, 26 November, the army chief of artillery has already framed his artillery annex and has a skeleton prepared, so that all that is necessary is to fill in the details.

Required:

The artillery annex to Field Orders No. 23, First Army, 26 November, 1919.

A Solution

ANNEX NO 1 TO FIELD ORDERS NO 23, FIRST ARMY

ARTILLERY

First Army,
WOODSBORO, MD.,
26 Nov 19, 8:00 AM.

Maps: Geological Survey, 1:62500; six quadrangles vicinity of Gettysburg.

1. (a) Advance Red forces, estimated as two corps (6 to 8 divisions and one cavalry division) are intrenching on the general line: south of MIDWAY—WHITEHALL—north of TWO TAVERNS—ROUND TOP—FITZER SCHOOL. The Red cavalry division was last night in the vicinity of CARR HILL. Other Red forces are approaching and intrenching the north bank of CONEWAGO CREEK.
- (b) Our Second Army has met only a few Reds south of YORK. Our Third Army is advancing opposed only by cavalry. Our Army Cavalry last night held WILSON HILL, in contact with the hostile cavalry. Our advance guards, having driven in the hostile covering detachments, are now in contact with the enemy's main forces in our front and hold the general line MT. PLEASANT—CR 613—TWO TAVERNS—WILLOW GROVE SCHOOL—GREENMOUNT—MCCLEARY SCHOOL.
- (c) The First Army will attack at 7:00 AM tomorrow, enveloping the hostile right. The enemy will be driven north CONEWAGO CREEK.
- (d) Corps missions and zones of action.
 - (1) The I Corps attacks on the front MIDWAY—WHITEHALL, making its main effort in the direction FELTY SCHOOL—CEDAR RIDGE.

Zone of action (extended):
East boundary: Same as the First Army.
West boundary: WHITEHALL—MORITZ SCHOOL—PINE CHURCH—OAK GROVE SCHOOL (all inclusive).
 - (2) The II Corps attacks on the front WHITEHALL (exclusive)—TANEYTOWN ROAD (inclusive), making its main effort in the direction of TWO TAVERNS—GRANITE HILL.

Zone of action (extended):
East boundary: Same as the west boundary of the I Corps.
West boundary: TANEYTOWN ROAD—HARRISBURG ROAD (both inclusive).

THE ARMY IN ATTACK

- (3) The III Corps attacks on the front TANEYTOWN ROAD (exclusive)—HAGERSTOWN ROAD (inclusive) and envelops the hostile right. Direction of attack: MCCLEARY SCHOOL—TABLE ROCK.

Zone of action (extended):

East boundary: Same as the west boundary of the II Corps.

West boundary: Same as the First Army.

2. The artillery will support the attack, which will be preceded by a preparation participated in by all of the artillery of the army.
3. (a) Division Artillery.
- (1) Between 6:50 AM and 7:00 AM rates of fire will be so increased as to effect a heavy bombardment on advanced elements of the hostile positions.
 - (2) Smoke: ROUND TOP, LITTLE ROUND TOP, POWERS HILL and WOLF HILL will be enveloped in smoke between 6:50 AM and 10:00 AM.
- (b) Corps Artillery.
- (1) The corps artilleries will execute normal missions within corps lateral boundaries and south of coordinate 755.*
Contingent zones will include, laterally, one-half of the normal zones of corps artillery of adjacent corps and, in depth, areas within range limits of the guns.
 - (2) All guns not required for the execution of other missions will be used to assist in supporting the infantry advance by firing on successive objectives in coordination with the division artilleries.
 - (3) A neutralization by moderately persistent gas will be placed on ROUND TOP, LITTLE ROUND TOP, POWERS HILL and WOLF HILL from 3:00 AM to 6:30 AM. Non-persistent gas will be used on ST. LUKES' CHURCH. These fires will be cancelled by corps commanders concerned if weather conditions are unfavorable.
 - (4) Flash ranging service by corps observation battalions will be coordinated by corps commanders.
- (c) Army Artillery.
- (1) Groupment A will support the I and II Corps from the general vicinity of OAK GROVE SCHOOL, west of LITTLES-TOWN.
 - (2) Groupment B will support the III Corps from the general vicinity of FAIRPLAY.
 - (3) During the artillery preparation special attention will be paid to the GETTYSBURG—HARRISBURG R.R. and the WESTERN MARYLAND R.R.
 - (4) The army artillery will assist in counter-battery work on call.
 - (5) Balloon companies Nos 1 to 9 (inclusive) are attached to army artillery units as shown in Table I (appended).
(For organization of the army artillery see Table I appended).
(For partial assignment of objectives to army artillery see Table II and map, appended).
- (x) (1) Artillery preparation will commence at 3:00 AM. Prior to that hour fires will be reduced to the most urgent requirements.
- (2) Advanced and exposed positions will not be occupied until the night of 26-27 November. Reconnaissance

*It would be better to designate limiting line by terrain features. In this instance suitable ones at proper range from enemy front line do not appear on the map.

- will be reduced to a minimum in personnel and will avoid exposure to enemy observation.
- (3) Intense fire will be concentrated upon the lines along which main efforts of the attacks are to be made.
 - (4) Care will be taken not to destroy, by artillery fire, roads and bridges that will be used by our troops in the advance.
 - (5) All fire on the town of GETTYSBURG during the artillery preparation will be executed by the army artillery.
 - (6) The advance will be aggressively followed by the successive forward displacement of battalions, commencing with the division artilleries.
 - (7) The rate of fire will be the maximum hourly rate for all guns.
 - (8) Corps commanders are authorized to employ gas within their respective zones of action.
 - (9) Corps commanders will arrange for coordination and concerted action between adjacent corps and divisions.
 - (10) Distribution of artillery information service map of artillery objectives will be completed by 9:00 PM, this date.
4. (a) See Administrative Orders No 11.
 - (b) Combat trains will be kept filled for forward movements.
 - (c) The amount of ammunition placed in any battery position will not exceed two days of fire.
 5. (a) Axes of Signal Communications, army artillery:
 Groupment A: OAK GROVE SCHOOL—SQUARE CORNER—CEDAR RIDGE—BRUSH RUN.
 Groupment B: FAIRPLAY—GETTYSBURG—GOLDENVILLE.
 - (b) Command Posts, for army artillery units: see Table I, appended.

By command of General A

X
Chief of Staff.

Official

M
Chief of Artillery

Distribution:
Same as Field Order.

TABLE I.

(Appendix to Artillery Annex, First Army.)

1. Organization of the Army Artillery.

Groupment A: Col X.		CP OAK GROVE SCHOOL
701st Art	Lt Col K	24-6" Guns-----CP, point 354.0—739.0
702d Art	Col L	24-6" Guns-----CP, MT. PLEASANT SCHOOL
703d Art	Col M	24-6" Guns-----CP, OAK GROVE SCHOOL
709th Art	Col N	24-8" How-----CP, point 359.0—740.0
Groupment B: Col Z.		CP, FAIRPLAY
704th Art	Lt Col O	24-155 mm Guns CP, CENTENNIAL HALL SCHOOL
705th Art	Col P	24-155 mm Guns CP, point 342.0—740.0
706th Art	Col Q	24-155 mm Guns CP, point 341.0—742.0
707th Art	Col R	24-8" How CP, point 346.0—738.0
708th Art	Col S	24-8" How CP, point 340.0—744.0

2. Balloon companies are attached to army artillery as follows:

Groupment A

Bln Co No 1, with 702d Art at CHESTNUT HILL SCHOOL.
 Bln Co No 2, with 703d Art at OAK GROVE SCHOOL.
 Bln Co No 3, with 709th Art at point 358.0—379.0.
 Bln Co No 4, with 701st Art at EDGE GROVE SCHOOL.

Groupment B

Bln Co No 5, with 704th Art at CENTENNIAL HALL SCHOOL.
 Bln Co No 6, with 707th Art at FAIRPLAY.
 Bln Co No 7, with 705th Art at point 343.0—741.0.
 Bln Co No 8, with 706th Art at point 342.0—741.5.
 Bln Co No 9, with 708th Art at point 339.0—745.0.

TABLE II.

(Appendix to Artillery Annex, First Army.)

See Map. Army Artillery Objectives (partial assignment), herewith.

PARTIAL ASSIGNMENT OF OBJECTIVES TO ARMY ARTILLERY

Assignments will be completed by groupment commanders so as to utilize the full power of all guns in accordance with par 3 (c) Artillery Annex.

Groupment A (Col X—CP, Oak Grove School)

Unit	No of guns	Period of fire	General location of objectives
702 Art	-----All assignments by groupment CO		
703 Art	8	H—4 hr to H hr	2. MIDWAY and railroads beyond.
	4	H—3 hr to H hr	3. NEW OXFORD and points on W.M. R.R. in vicinity.
	2	H—3 hr to H hr	4. BERLIN JUNCTION.
709 Art	4	H—1 hr to H hr	15. Hill 523 (352.7—746.3).
	4	H—4 hr to H+½ hr	17. MT. VERNON SCHOOL and SW.
	4	H—4 hr to H hr	21. Three-fourths mile N of TWO TAVERNS.
	4	H—4 hr to H hr	22. Vicinity of point 353.7—745.5.
701 Art	2	H—4 hr to H+2 hr	6. GETTYSBURG.
	2	H—4 hr to H+2 hr	7. GETTYSBURG—BIGLERVILLE road.
	2	H—3 hr to H hr	8. PITZER SCHOOL and NW.
	4	H—4 hr to H+3 hr	9. GRANITE HILL.
	4	H+3 hr to H+4 hr	10. Lift to HUNTERSTOWN.
	2	H—4 hr to H+3 hr	11. Road NE ROCKY GROVE SCHOOL.
	4	H—4 hr to H+1 hr	26. Railroad SE of SEVEN STARS.

Groupment B (Col Z K—CP, Fairplay)

Unit	No of guns	Period of fire	General location of objectives
704 Art	2	H—4 hr to H+2 hr	12. ROCKY GROVE SCHOOL ridge.
	2	H—4 hr to H+2½ hr	13. GETTYSBURG—TABLE ROCK road.
	2	H—4 hr to H+2 hr	14. OAK RIDGE.
	2	H—4 hr to H+1 hr	27. KATALYSINE SPR.
707 Art	4	H—4 hr to H+1 hr	16. CEMETERY HILL and S thereof.
	4	H—3 hr to H hr	5. Enemy line NW of ROUND TOP (hill).
	4	H—4 hr to H—1 hr	1. { ROUND TOP (hill).
	2	H—4 hr to H—1 hr	{ LITTLE ROUND TOP.
	2	H—4 hr to H—1 hr	{ ROUND TOP (village).

705 Art	2	H-4 hr to H+3 hr	18. HARRISBURG ROAD.
	2	H-4 hr to H+2 hr	19. On the CR 577—CR 585—RJ 628 road at CR 585 and to N and S.
	2	H-4 hr to H+½ hr	28. FAIRPLAY SCHOOL.
706 Art	2	H-3 hr to H+3 hr	20. MUMMASBURG.
	2	H-4 hr to H+2 hr	23. W.M.R.R.—NE of GETTYSBURG.
	2	H-4 hr to H+3 hr	24. Railroad S of GOLDENVILLE.
708 Art	2	H-4 hr to H hr	25. Vicinity of point 352.0—745.5
	8	H-4 hr to H-1 hr	1. (See 1 above.)
	2	H-4 hr to H+1 hr	16. (See 16 above.)
	2	H-4 hr to H+2 hr	6. (See 6 above.)

DISCUSSION OF THE ARTILLERY ANNEX OF THE ARMY

ORGANIZATION AND MISSIONS.

As this is a newly mobilized army, the organization of the army artillery, all of which except the army artillery headquarters and the army artillery ammunition train is attached from GHQ reserve, is given in detail.

The regiments attached consist of three of 6-inch guns, three of 155-mm. guns, and three of 8-inch howitzers. This illustrates a departure from organizational pro rata such as, because of the tactical situation, the materiel and trained personnel immediately available and other similar causes, may often occur when allotments of GHQ reserve artillery to armies are made. All of these guns are retained as army artillery. For convenience in administration and employment the regiments are assembled in two groupments. In many situations a proportion, or all of them, would be turned over to the control of corps commanders. This would be a particularly appropriate manner of utilizing the 8-inch howitzers whose mission should be to assist the corps artilleries in counter-battery and other work requiring heavy howitzers. They are not long range guns.

In this situation, in order to maintain the mobility of the corps artillery as such, and to retain in the hands of the army commander maximum facilities for concentrating the fire of his heavy artillery on desired objectives, it is thought best to retain all of the assigned GHQ reserve regiments as army artillery.

While the operation of the flash ranging units is under direction of the corps commanders the results obtained are a matter of concern, and a direct source of information, to

the artillery information service of the army. Mention of the flash ranging service is therefore properly made in the artillery annex of the army.

Army artillery missions are given in considerable detail in order that information as to the part to be played by the army artillery may be available to lower units as a basis for coordination. It is important that corps commanders and chiefs of artillery should also know the locations of army artillery units as these may often have a considerable bearing upon emergency assistance that may be requested and expected, as well as upon locations and routes of advance that may be available for corps artillery units. The sectors of fire of army artillery units should also be known.

The expression "assigned to the support of (or will support)," when it refers to proposed employment of army artillery to assist the advance of a corps, has a less restricted meaning than when it refers to support to be rendered by division artillery. In the latter case it is intended that close and continuing support be provided; that only for the attack of objectives more important to the operation as a whole will the fire of the supporting artillery be diverted from those directly affecting the unit supported. When used to designate missions for regiments, or groupments, of army artillery, however, the expression implies rather that when a corps needs additional assistance call will be made upon the unit of army artillery assigned to its support; also that in locating units and designating their fields of fire care will be taken to see that apportionment of batteries *available to fire* within the zone of action of a particular corps does not vary materially in number and type from that indicated in the assignment of regiments or groupments to the support of corps. The additional assistance referred to may be either that arranged for in advance to assist corps artillery in executing foreseen missions or it may be that needed to meet an emergency. Suitable communications must be established.

Having been thus prepared to render special assistance in areas where it will be most needed, the army artillery as a whole is so employed as to secure maximum results for the success of the entire operation. It is especially

not intended to limit the authority of the army artillery commander to arrange coordination and mutual support between his units. Possibilities of fire, effectiveness of fire, and economical employment (especially along boundaries) often dictate that some batteries fire in zones of action of corps other than those to whose support their regiments have been assigned.

After the heavy guns here employed have been employed, changing their fields of fire involves considerable delay and labor. Hence the sectors which they are to cover must be designated in advance.

For an offensive in which more time for elaborate preparation is available, corps and division artillery missions might be given in greater detail than is done in this case. This would be exceptional however. It would depend upon the nature of the operation. The purpose of the artillery annex of the army is to assure, between all units of the artillery of the army and in accordance with the demands of the situation to be met, coordination of employment and maximum results. It centralizes control only insofar as is necessary to accomplish these ends.

Artillery employment in a large operation is like a big picture puzzle, with numerous parts to be carefully fitted together. If the parts of the picture puzzle do not fit closely together, or if there are parts missing, a complete picture is not produced. In like manner, the fire of army artillery and that of the artillery of corps and divisions must fit closely together. Otherwise there will be weak points at the boundaries between zones of action, and there may be insufficient provision for mutual artillery support and for bringing heavy fire to bear on the critical points developed during the operation.

The areas occupied by the army artillery regiments, as shown by the organization table and the map of army artillery objectives are, for the most part, farther to the rear than is desirable. This is due to the fact that unusually heavy demands are being made upon the road system in order to prepare all units concerned for the attack. The army commander has found it necessary to authorize daylight movement of all units except divisions. The movement of

army artillery and its ammunition into the more forward areas would seriously handicap that of other absolutely necessary traffic. A compromise must therefore be made. The discussion of munitions given below indicates the tax that ammunition movement alone will place upon road facilities.

FORM OF THE ANNEX

The annex might be materially shortened by entering some of the data included in its various paragraphs on maps or tracings. Examples of such data are: corps boundaries; directions in which strongest blows are to be made; areas to be smoked or gassed. All of the data included in Tables I and II could also be noted on maps if desired. For the artilleryman it is generally more convenient to have as much information as practicable on the map. For others who have to refer to the annex it is often more convenient to have the data in written form. This accounts for the entry of some data both in the annex and appended tables and on the map of objectives.

MUNITIONS

The fact that a four-hour preparation has been ordered, with all guns firing at their maximum hourly rates, is evidence of the fact that the Blue army has a large supply of ammunition and that the conditions of transportation are favorable for placing a considerable supply at the battery positions before H hour.

The intense employment of artillery is made to demoralize the enemy at the very beginning of hostilities and to weaken his morale by a great show of strength. It will also tend to increase the morale of our troops.

To place the large amount of ammunition required for the attack in the battery positions is a difficult undertaking, and was probably started on the night of November 25-26 before the army attack order was issued.

Assuming it has been decided that it is necessary to dump in advance within artillery regimental areas sufficient ammunition for six hours of fire by all guns, the following table is an estimate of the amount to be brought up.



ARMY ARTY OBJECTIVES
 (PARTIAL ASSIGNMENT)
 See Table II, ARTILLERY ANNEX
 to Field Orders No. 23, First Blue Army
 26 Nov, 19.

- Army Balloons
- Groupment Command Post
- Flash Ranging Obsn. Post
- ENEMY ORGANIZATION**
- Hostile Batteries**
- Caliber not determined
- 75mm Field Gun
- 155mm Howitzer
- 155mm Gun
- Calibers over 155mm
- Anti Aircraft
- 6" Trench Mortar
- Machine Gun
- Observation Post
- Ammunition Dump
- Landing Field
- Air Squadron
- Balloon

(NOTE: (a) With a view to reducing necessary overprint to a minimum, several departures from prescribed conventional signs are made.

(b) Groupment commander will assign objectives for 702 Artillery. Limits of the sector in which it is desired that the guns be able to fire are indicated to guide him in directing their emplacement. Similar limits (in addition to actual partial assignment of objectives) are required for other regiments. They are omitted here in order to lessen the amount of detail appearing on the map.)

5000 0 5000 10000 YARDS

(NOTE:—The artillery of the army reserve division is not considered. It is assumed that three-fourths of the guns will be constantly employed.)

Cal.	Number of guns	Approximate rounds per gun per hour fired	Total rounds 6 hours	Approximate total weight, in tons
75-mm. Gun	528	90	285,120	2,850
155-mm. How.	216	25	32,400	1,620
155-mm. Gun and 6" Gun.	216	25	32,400	1,620
8" How.	72	25	10,800	1,080
			360,720	7,170

This is nearly 3600 truck loads of ammunition. It is evident that it is a difficult task to get all this ammunition up into the positions before 3:00 AM, November 27. Judging from experience in France, three-fourths of this amount will be sufficient, or about 2700 truck loads.

Estimate of special shell is considered in the discussion of the corps artillery annex.

(D) THE ARMY CAVALRY IN THE ATTACK

On the morning of 25 November the Army Cavalry, First Army, moved forward in compliance with Field Orders No. 31. The advance met with increasing resistance, the Red cavalry evidently fighting to delay the northward movement of the Blue cavalry.

By 5:00 PM, 25 November, the situation is as follows:

The Blue cavalry has driven the Red cavalry north of the hills lying between McCleary School and Fairfield. Reports indicate that there is a strong force of Red cavalry on Carr Hill.

The 4th Cavalry Brigade joined during the afternoon via Harney and Fairplay, its field train having been sent to Emmitsburg. It is now (5:00 PM) at the road junction $\frac{1}{2}$ mile south of road junction 705. Command post at same location.

The 1st Cavalry Brigade is north of the Hagerstown Road near Sugarloaf Mountain engaged in local actions against Red cavalry. Command post, at crossroads 613.

2d Cavalry Brigade near Marshall; command post, Marshall.

Forward Echelon, Army Cavalry, in Fairfield.

Field trains near Liberty Mills guarded by 1st Engineer Battalion (mounted).

Service trains and 2d Engineer Battalion (mounted) northwest of Emmitsburg.

Artillery supporting the advance of the troops to which it had been attached.

Observation squadrons continued their reconnaissance throughout the day, giving special attention to the Red cavalry movements.

The III Corps holds McCleary School ridge. The III Corps cavalry has reached Highfield and is in connection with the right of the Third Army.

At 6:00 PM the Army Cavalry commander receives a message from Army Headquarters directing him to attend a conference at 8:00 PM. At this conference the following decision of the Army Commander was communicated:

1. The Red army has been definitely ascertained to consist of two corps, of three or four divisions each, and a cavalry division. It is holding the general line Midway—Whitehall—north of Two Taverns—Round Top—Pitzer School. Other Red forces are intrenching along the north bank of Conewago Creek and hostile columns are marching south from Harrisburg and Carlisle. No hostile columns have been seen between Carlisle and Shippensburg. The Army Cavalry, Third Army, has been stopped by Red cavalry at Chambersburg.

2. The First Army will attack the enemy at daybreak 27 November. While the whole hostile front will be attacked, the main Blue attack will be driven against the hostile right, on the front Taneytown Road (exclusive)—Hagerstown Road (inclusive.)

3. The First Army will be reorganized as follows:

- I Corps: No change.

- II Corps: Two divisions in the front line; left limit Taneytown Road, inclusive.

- III Corps: Four divisions in line from Taneytown Road, exclusive, to Hagerstown Road, inclusive.

4. The Army Cavalry will maneuver to the west and north on 26 November and draw the hostile cavalry away from Carr Hill. It will also screen and protect the movement of the infantry of the III Corps on the same date, and observe the passes of South Mountain north of Orrtanna.

5. If the plan to draw the Red cavalry off does not succeed, then the Army Cavalry will join in the attack of the III Corps on 27 November and drive the Red cavalry off Carr Hill.

6. Railhead for Army Cavalry after 6:00 AM, 26 November, Iron Springs.

At 10:00 PM, 25 November, after returning from the conference, the Army Cavalry Commander assembled his division, brigade, artillery, and air service commanders and

his signal officer and acquainted them with the general situation and the plans of the Army Commander as far as it concerned them. At this conference he decided to continue at daybreak, 26 November, on the general lines laid down in Field Orders No. 31, as follows:

1st Cavalry Brigade, with 1st Field Artillery Battalion (horse), to continue its action against the Red cavalry on Wilson hill.

2d Cavalry Brigade, with one battery, 2d Field Artillery (horse), to move to Orrtanna before daylight with ultimate object of maneuvering around to attack the Red cavalry on its right and rear.

4th Cavalry Brigade and 2d Field Artillery Battalion (horse) (less one battery) to remain concealed in its present position, with reconnaissance towards Gettysburg and Knoxlyn. The artillery to assist with its fire the attack of the 1st Cavalry Brigade on Wilson Hill.

Signal troops to lay wire connection to command post of 1st Cavalry Brigade, and to arrange for communication with the 2d Cavalry Brigade on its arrival at Orrtanna.

Air service to continue observation, paying special attention to the movements of the Red cavalry.

By 10:00 A.M., 26 November, the situation as known to the Army Cavalry commander is as follows:

1st Cavalry Brigade has taken Wilson Hill, the 1st Cavalry and machine guns holding the crest, with one troop, mounted, guarding the right flank of the brigade line. One squadron 2d Cavalry extends the line northward and guards the left flank of the line; one squadron of the 2d Cavalry is in reserve.

4th Cavalry Brigade is in concealment near road junction 705, with patrols reconnoitering towards Gettysburg and Knoxlyn. Its artillery is assisting the attack of the 1st Cavalry Brigade from positions in the vicinity of road junction 705.

Observation squadrons are engaged in close and in battle reconnaissance, and in spotting targets for the artillery.

Reds have fallen back from Wilson Hill to Carr Hill and are offering stronger opposition to the further advance of the 1st Cavalry Brigade.

Red artillery, location not determined, is supporting the troops on Carr Hill.

A Red cavalry force, estimated at a regiment, was reported at 9:00 AM as being located about one mile north of Knoxlyn.

Required :

Orders of the Army Cavalry Commander, as issued.

A Solution

At his command post, in Fairfield, Chief of Staff and G3 being present.

To the Chief of Staff: "Send these orders:"

"Commanding General, 2d Brigade.

10:03 AM

"1st Brigade has driven the enemy from Wilson Hill and is attacking Carr Hill. 4th Brigade will assist by attacking Carr Hill from the south.

"Move rapidly via Tillie and attack Red right and rear."

"Commanding General, 1st Brigade.

10:05 AM

"2d Brigade is moving via Tillie to attack enemy right and rear.

"4th Brigade will attack Carr Hill from the south with one squadron.

"Press your attack."

"Commanding General, 4th Brigade.

10:07 AM

"2d Brigade is moving via Tillie to attack the Red right and rear.

"1st Brigade continues its attack towards Carr Hill.

"You will at once attack Carr Hill from the south with one squadron, holding the remainder of your troops in readiness for immediate movement."

"Acquaint all units concerned with the progress of the action and with the movements ordered."

Comment

The Army Cavalry Field Orders No. 31 was issued under circumstances that indicated that the Red cavalry would seriously oppose the advance of the Blue cavalry—at least this could reasonably be expected as it appeared that the proper move for the Reds was to cover the right flank

of their army by seizing the important hill mass which dominated the area between the right of the Red line and the mountains.

The Red opposition developed into a series of delaying actions, which were dealt with as the circumstances of each particular case required. This continued throughout the day, the messages and orders being in fragmentary form and issued as the necessities of the situation required or demanded.

At the conference with his commanders (10:00 PM night of 25 November), the Army Cavalry Commander went over the situation and discussed the next day's work for each brigade as far as it could be foreseen and forecast. Should no serious changes occur during the night, the next day's activities would really be a continuation of the work of the previous day, and no new field order would be necessary.

By 10:00 AM 26 November, the situation was such that the Army Cavalry Commander believed that his opportunity had arrived. A vigorous continuation of the attack by the 1st Cavalry Brigade, in connection with a feint or threat by the 4th Cavalry Brigade, should hold the Reds to Carr Hill and probably require the use of their reserves. The movement of the Blue maneuver mass (2d Cavalry Brigade) against the Red right and rear should insure the defeat of the Red cavalry or its withdrawal from the strong position on Carr Hill. The orders were issued accordingly.

The movements discussed herein—covering the advance of the army—the withdrawal to an exposed flank—screening the concentration for the main blow of the Army—the main attack on the enemy cavalry—are intended to illustrate some of the means by which the Army Cavalry functions as an integral part of a Larger Unit.

CHAPTER IV

The Corps in Attack

(A) THE FIELD ORDERS II CORPS, IN THE ATTACK

The II Corps received the following warning order for the attack at 11:45 PM, 25 November:

First Army,
WOODSBORO, MD.,
25 Nov 19, 11:00 PM.

To Commanders:

I Corps.
II Corps.
III Corps.

This army will attack morning of 27 Nov, enveloping hostile right. The field order for attack will be issued at 8:00 AM 26 Nov.

I Corps attacks in its present zone of action; main effort direction FELTY SCHOOL—CEDAR RIDGE; 4th Division to II Corps.

II Corps attacks on front WHITEHALL (exclusive)—TANEYTOWN ROAD (inclusive); main effort direction TWO TAVERNS—GRANITE HILL; 7th Division to III Corps.

III Corps attacks with 7th, 9th, 10th and 12th Divisions on the front TANEYTOWN ROAD (exclusive)—HAGERSTOWN ROAD (inclusive) enveloping hostile right; 8th Division near EMMITSBURG corps reserve; 11th Division to army reserve.

X
Chief of Staff.

The corps immediately transmitted the information to the divisions.

F.O. No. 23, First Army, was received by the corps at 8:30 AM, 26 November.

II Corps,
TANEYTOWN, MD.,
26 Nov 19, 11:00 AM.

FIELD ORDERS }
No 3. }

Maps: Geological Survey, 1:62500; Gettysburg, Taneytown, Emmitsburg and Fairfield Quadrangles.

1. Red forces, estimated at two corps (6 to 8 divisions), are entrenching on the general line MIDWAY—WHITEHALL—north of TWO TAVERNS—ROUND TOP—PITZER SCHOOL. A Red cavalry division was last night in the vicinity of CARR HILL. Other Red

forces are approaching and entrenching on the north bank of CONEWAGO CREEK.

The armies to the east and west of the First Army have met but little resistance to their advance.

This corps has today driven in the hostile covering detachments on its front and is now holding the line: CR 613 (NE of GERMANTOWN)—TWO TAVERNS—WILLOW GROVE SCHOOL—GREENMOUNT and is in contact with the enemy's main forces.

The I Corps on our right holds the line: MOUNT PLEASANT—CR 613.

The III Corps on our left holds the line: GREENMOUNT—north of PLUM RUN—MCCLEARY SCHOOL.

The First Army attacks tomorrow, enveloping the hostile right, driving the enemy north of the CONEWAGO. The I Corps drives towards FELTY SCHOOL—CEDAR RIDGE; the III Corps towards TABLE ROCK. The III Corps will gas and smoke ROUND TOP and LITTLE ROUND TOP. Groupment "A," Army Artillery, supports the I and II Corps from the general vicinity of OAK GROVE SCHOOL.

2. This corps attacks with two divisions in line. It will exert its main effort in the direction of TWO TAVERNS—GRANITE HILL and will seize the ridge north of the CONEWAGO from HEIDERSBURG to BOWLDER, both inclusive.

Time of attack: 7:00 AM.

Zone of action:

East boundary: Unchanged to ST. LUKES CHURCH, thence MORITZ SCHOOL—PINE CHURCH—OAK GROVE SCHOOL (all exclusive).

West boundary: NAILORS MILL (exclusive)—BRIDGEPORT—TANEYTOWN ROAD—HARRISBURG ROAD (all inclusive).

3. (a) The 5th Div, attacking on the right, will promptly secure the high ground north of the WESTERN MARYLAND R. R. It will assist the 6th Div in taking the heights west of GRANITE HILL.

Zone of action:

East boundary: Same as east boundary of II Corps.

West boundary: RJ 526 (SE of LONGVILLE)—CR 528—TWO TAVERNS—GRANITE HILL—HUNTERSTOWN—BELMONT SCHOOL (all exclusive).

- (b) The 6th Div, attacking on the left, will exert its main effort on its right and, with the assistance of the 5th Div, will quickly seize the heights west of GRANITE HILL and north-west of GETTYSBURG.

Zone of action:

East boundary: Same as west boundary 5th Div.

West boundary: Same as west boundary II Corps.

- (c) The 7th Div passes to III Corps at 2:00 PM today.

- (d) Artillery:

Artillery preparation will start at 3:00 AM; prior to this time, artillery fire will be limited to the most urgent requirements.

From 6:50 AM to 7:00 AM, an intense bombardment will be placed on the enemy's front lines.

The attack will be covered by successive concentrations by corps and division artillery.

Corps Artillery:

The 201st FA will support the 5th Div from the vicinity south of GERMANTOWN. The 202d FA will support the 6th Div from vicinity of CR 491 (about 2 miles SW of TWO TAVERNS).

From 3:00 AM to 6:30 AM, WOLF HILL, BENNER'S HILL and POWERS HILL will be neutralized with moderately per-

THE CORPS IN ATTACK

sistent gas; the heights of ST. LUKES CHURCH, the crossing of BALTIMORE TURNPIKE over WHITE RUN and the woods to the north thereof with non-persistent gas.

Division Artillery:

The 4th FA Brig is attached to the 5th Div. After the advance has reached BONNEAUVILLE it will revert to corps control.

Accompanying batteries and guns will be assigned at the discretion of division commanders.

The 6th FA Brig will screen with smoke the heights WOLF HILL—POWERS HILL (both inclusive) from 6:50 AM to 10:00 AM.

The forward displacement of the 5th FA Brig will commence as soon as practicable after 7:00 AM; that of the 6th FA Brig as soon as CULPS HILL has been captured.

For details, see Annex No 1, Artillery (omitted).

(e) Air Service:

The corps squadrons will observe as far north as the CONEWAGO.

One balloon company is charged with general observation; one with observation for corps artillery and one company will be attached to each front line division.

See Annex No 2, Air Service (omitted).

(f) Cavalry:

The corps cavalry will assemble at CR 568 (2 miles SW of GERMANTOWN) and await orders.

(g) Engineers: See Adm O No 2 (omitted).

(h) Reserves:

The 4th Div (less 4th FA Brig) will move from TANEYTOWN during the night 26-27 Nov to concealed bivouacs on ALLOWAY CREEK north of LONGVILLE. After 7:00 AM it will be prepared to move on one hour's notice.

- (x) (1) All division troop movements for the attack will be made between 5:45 PM and 6:30 AM. Special effort will be made to keep the enemy in ignorance as to all movements.
- (2) During the night 26-27 Nov, the 5th and 6th Divs will push their advance infantry lines up close to the enemy's lines.
- (3) Early on night 26-27 Nov, the 6th Div will relieve the 5th Div on that part of the front west of the line: hill 598—eastern houses of TWO TAVERNS.
- (4) Divisions are charged with maintaining connection with units on their left.

4. See Adm O No 2 (omitted).

5. (a) Plan of Sig Com: See Annex No 3 (omitted).

(b) Ax Sig Com:

II Corps (extended): TWO TAVERNS—BONNEAUVILLE—HUNTERSTOWN.

5th Div: CR 528—GERMANTOWN—BONNEAUVILLE—GULLINS—PINE CHURCH.

6th Div: HARNEY—LOW DUTCH ROAD—GRANITE HILL—HUNTERSTOWN.

(c) CPs:

II Corps: TANEYTOWN; after midnight 26-27 Nov, HARNEY.

5th Div: WASHINGTON SCHOOL.

6th Div: HARNEY.

By command of Maj Gen A:

X
C of S.

Distribution: (omitted).

(B) THE ARTILLERY, II CORPS, IN THE ATTACK

The scheme for the employment of the artillery in the II Corps is contained in paragraph 3 (d), Field Orders No. 3, II Corps, 26 November. This paragraph was drawn up by the corps G3, assisted by the corps chief of artillery and his staff, and the instructions contained therein are based upon the Army Artillery Annex discussed in Chapter III.

Discussion

Par. 3 (d) of the corps field orders for the attack is little more than a repetition of selected extracts from the Army Artillery Annex, with the insertion of a certain amount of detail pertinent to this particular corps front.

The sub-paragraph on gas shows that in making plans for gassing the hills south of Gettysburg, the chief of artillery, II Corps, has conferred with the chief of artillery, III Corps. This may have been done in person, but more likely by means of a staff officer.

This paragraph of the corps field orders is very complete, yet it does not contain detail that is of interest to the artilleryman only. It is intended to give a complete picture of the plan of artillery employment, and is not used as a means of conveying detailed instructions of minor importance to the subordinate artillery commanders.

In this situation there is little to place in the corps artillery annex. The corps chief of artillery has not direct command over either the corps or division artillery brigades. Therefore, it is not necessary for him to go into detailed assignment of objectives for any unit. His function is one of coordination. The general scheme for artillery employment is outlined in the Army Artillery Annex; it is the duty of the corps commander's chief of artillery to see that this scheme is carried out and thoroughly coordinated in the corps.

The artillery annex should give the normal and contingent zones for the corps and division artillery and the data necessary for coordination along the boundaries.

The corps artillery annex might also contain a diagram showing the important signal communications to be utilized by the artillery, i.e., the means of communicating with

the corps artillery for counter-battery requests, with the artillery information service, including flash ranging stations, with the artillery units in the adjacent sectors, etc. It may also include a scheme for carrying forward the artillery telephone lines in the advance.

The annex designates the balloons and air squadrons that are to work with the corps artillery and the balloons that are to work with the division artilleries, and their location; or it may refer to the air service annex for this data. There are normally four balloon companies with the corps troops. If all these balloons are available, it is probable that one company will be assigned to work with each division artillery, and one with the corps artillery. There are two observation squadrons with the corps troops.

The annex repeats the instructions contained in the Army Artillery Annex on the subject of munitions, with such modifications and added detail as apply to the II Corps sector. For instance, less ammunition would be placed in the battery positions on the right, where a quick forward displacement is expected, than on the left where batteries are not to move forward until Culps Hill has been captured.

The question of gas employment would be gone into more in detail. The technical instructions relating thereto would not appear in this annex, but would be placed in a memorandum issued only to the artillery units concerned. The Army Artillery Annex requires that certain hills south of Gettysburg be neutralized with gas for a period of three and one-half hours. It is not intended that gas shells be continuously poured into this area for three and one-half hours, but that short concentrations be executed from time to time upon selected points.

The smoke screen in front of these hills is a more difficult problem. The II Corps has a front to screen of not less than 4500 yards exclusive of that portion assigned to the III Corps. With an oblique wind it would take 387 rounds to establish the screen and 2700 rounds to maintain it during each half hour of the advance. This would mean a total of 17,100 rounds during the three hours and ten minutes period if the screen had to be on all of the area during the entire time. The Army Artillery Annex, however, indicates that only certain parts of the area are to be covered.

An examination of the map will show that there is an area about 1000 yards long south of Powers Hill and one about 2000 yards long near Wolf Hill that will have to be covered. Considering the normal average rate of advance of the infantry it will be seen that fire will have to be kept up on the first area for two hours and a half and on the second area for the entire period. This means a total expenditure of 11461 rounds during the three hours and ten minutes and it will take about 30 guns to fire it within that time. As this will leave only 18 guns to fire on other normal division artillery objectives, it is probable that a lighter screen will have to be used. A lighter screen, that would still be effective, could be maintained by reducing the above figures by about one-third. In case the wind is frontal, it will take about four and a half times this quantity of ammunition, and the screen would be impracticable.

At 12:00 noon, 26 November, the army issues the map of army artillery objectives. On this map are plotted the objectives of the army artillery guns assigned in Table II of the Army Artillery Annex. Much more data of importance is placed on this tracing, including the information obtained by the artillery information service up to this time. A more complete map issued by the artillery information service is to be distributed before 9:00 PM. The latter will have considerable influence upon the assignment of objectives. As soon as all army artillery objectives are plotted, the corps artillery of the II Corps will receive a map or tracing showing these objectives. A map or tracing showing both army and corps objectives within the corps sector must then be furnished to the division artilleries in order that the artillery effort may be fully coordinated. Division artillery commanders may be so pressed for time that they cannot wait for this information, in which case they would make their assignments of objectives with a view of making a few alterations after the army corps objectives become known.

We have considered the artillery plan of employment only so far as it relates to the attack on the morning of 27 November. Let us look at the question from a broader

viewpoint. What exigencies may the artillery be required to meet? If the attack is successful, where will the next objectives for the big guns be located, and how far and by what roads will these guns be pushed forward to bring effective fire upon these objectives? Is the artillery prepared to resist a counter attack? How will the artillery be utilized to further the future plans of the army commander? You may be sure that the chief of army artillery has all these matters in mind, and that he has one or more staff officers working exclusively on these plans.

(C) THE ADMINISTRATIVE PLAN, II CORPS, FOR THE ATTACK

Required :

The administrative plan for the attack, based upon the tactical decision of Major General A, II Corps.

The administrative plan recommended by G4, II Corps, is as follows:

To have the automatic supplies (Class I) delivered to corps troops and divisions at their respective railheads.

Railheads:

Corps troops: Taneytown.
4th Division: Crabster.
5th Division: Kump P.O.
6th Division: Taneytown.

Corps troops to draw at 7:00 AM and 6th Division to refill at 11:00 AM.

Ammunition refilling point for all munitions and pyrotechnics, Army Ammunition Depot No 4, Sharretts.

For reserve munitions corps troops and divisions, corp park to be established night 26-27 November at Piney Creek Church.

Engineer material refilling point at Army Engineer Depot No 3, Keymar.

Signal Corps material refilling point at Army Signal Corps Depot No 1, Walkersville.

Medical supply refilling point at Army Medical Supply Depot No 1, Frederick.

Ordnance supply refilling point for general supplies, tanks, tractors, guns and spare parts therefor; Army Ordnance Depot No 1, Frederick.

Small arms repair center after 27 November, Keymar.

Ordnance repair shops for artillery and tanks and spare parts therefor, after 27 November, Corps Ordnance Repair Shops, Taneytown.

Quartermaster supply refilling point for Class II, III and IV supplies, not specified below, Army Quartermaster Depot No 2, Frederick.

Motor transport spare parts and repairs, Army Motor Transport Depot No 1, Frederick.

ADMINISTRATIVE PLAN, II CORPS, FOR ATTACK 69

Reserve supply of gasoline and oil, Army Quartermaster Depot No 3, Keymar.

Refilling point for Chemical Warfare Service supplies, Army Chemical Warfare Service Advanced Depot, Sharretts.

All evacuation by the army; corps hospital station for men, Union Bridge. Corps collecting station for animals, Linwood.

Army and corps reserved roads restricted to motor traffic only. Other restrictions at the discretion of divisions within their respective areas.

Army reserved roads:

Frederick—Woodsboro—Taneytown—Littlestown.

Taneytown—Emmitsburg—Zora—Highfield.

Corps axial road:

Keymar—Taneytown—Harney—Barlow.

The corps engineer troops to maintain all roads within corps area north of the Westminster—Taneytown—Emmitsburg road (exclusive) and south of the division rear boundaries.

The corps engineer officer to assign road work to the 4th Division.

Serviceable salvage of corps troops to proper army depot. Unserviceable salvage to railhead by organizations. Reports on salvage of corps troops to G4 Corps.

To have one company engineer auxiliary battalion report to each front line division for salvage and burial duty.

To have burials in Army Cemetery No 6 at Bruceville. Advanced troops to use most convenient division cemetery.

Reports of burials to be made to G1.

Corps rear boundary to be the Western Maryland RR (exclusive) from Union Bridge (exclusive) to the Monocacy River.

The division rear boundaries to be the line: Galt (inclusive)—Longville (exclusive)—Palmer (inclusive).

To have traffic control in the corps area north of the Tyronne—Taneytown—Bridgeport road taken over by the corps military police by 6:00 PM, 26 November. The corps to control traffic at Taneytown and Crabster and the 5th Division to control the traffic at Kump P.O.

To reduce traffic to a minimum on the army reserved roads after noon 27 November, giving troop truck movements the right of way.

To have a 5-ton truck and wrecking crew at Taneytown to clear roads of stalled vehicles.

To have the corps straggler line along the Tyronne—Taneytown—Bridgeport road.

To have the corps military police make frequent inspections of kitchens within the corps area for the purpose of arresting stragglers.

To have a collecting point for prisoners of war at Taneytown. Evacuation by the army. To have corps transportation evacuate such prisoners of war, as are desired by the corps, from division collecting points.

To issue serviceable captured material to make up shortages. Any surplus to be reported to the army.

CHAPTER V

The Infantry Division

PART I

Problem for Discussion

GENERAL AND SPECIAL SITUATIONS

NOTE:—The general and special situations here outlined will form the basis of Chapter V.

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Topographical Map, Gettysburg-Antietam, 1:21120, 12 sheets about Gettysburg.
Geological Survey, 1:62500; 6 quadrangles about Gettysburg.

General Situation :

The United States (Red) and an Overseas Power (Blue) are at war. Blue has landed its First Army with its proportion of GHQ Reserve troops and has occupied the line Washington—Baltimore—Havre de Grace.

A Red army has completed mobilization and is concentrating in the area Greencastle—Chambersburg—Shippenburg.

Special Situation (Blue) :

The First Army moved northwest as follows:

- I Corps—Baltimore to Taneytown area.
- II Corps—Havre de Grace to York area.
- III Corps—Washington to Frederick area.
- IV Corps—Baltimore to follow the II Corps.
- V Corps—Occupation duty and line of communications.

On reaching the line Frederick—Taneytown—York on 12 June, the First Army G2 Section reported that on that date the Red army started columns east on the roads through the mountains from Emmitsburg to Arendtsville.

The First Army commander decided to concentrate at once with a view to battle and directed the following movements:

- I Corps from Taneytown to Gettysburg area.
- II Corps from York to Heidlersburg area.
- III Corps from Frederick to Taneytown area.
- IV Corps from Baltimore to Westminster area.
- Army troops to area Littlestown—Union Mills—Westminster.

The army cavalry divisions were covering the movement. Each of the front line corps has been assigned a squadron of cavalry from the army cavalry.

Just prior to receipt of orders for the concentration on Gettysburg the I Corps was advancing with three divisions in line in order from right to left—2d—1st—3d, with the 4th Division following the center in reserve.

PART II

Functions of the Elements of a Division on the March

(A) THE INFANTRY DIVISION IN AN ADVANCE

Special Situation (continued):

The 1st Division with the 101st Field Artillery (155-mm. howitzer) attached, is the center front line division of the I Corps and is disposed in two columns as follows:

Left Column
 At Taneytown:
 2d Brigade
 2d Field Artillery
 1 platoon Sanitary Company
 No 1
 Ambulance Company No 1
 less 1 platoon

Right Column
 At Littlestown:
 Headquarters 1st Division
 Division Special Troops, less
 Ordnance, Tank and Service
 Companies
 1st Brigade
 1st Field Artillery Brigade
 (less 2d Field Artillery and
 ammunition train) with the
 101st Field Artillery at-
 tached.
 1st Engineers (less that part
 of train with Service Trains)
 1st Division Air Service
 Sanitary Co No 1 (less 1 pla-
 toon)
 1 platoon Ambulance Company
 No 1

THE INFANTRY DIVISION

At Union Mills:

Service Trains, consisting of:

1st Division Train
Service Company, 1st DivisionAmmunition Train, 1st Field
Artillery Brigade

1st Ordnance Company

1st Tank Company

Train, 1st Engineers (less
part with 1st Engineers)1st Medical Regiment (less
detachments)

On the evening of 12 June, the following order was received by the 1st Division:

I Corps,
WESTMINSTER, PA.,
12 June 19, 6:00 PM.

FIELD ORDERS }
No 20. }

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Geological Survey, 1:62500; 6 quadrangles about Gettysburg.

1. (a) Hostile columns moved east late today from the area GREENCASTLE—CHAMBERSBURG—SHIPPENSBURG.
(b) Our army will concentrate towards the line GETTYSBURG—TANEYTOWN.
The army cavalry covers the movement.
Corps movements:

II Corps	*	.	*	.	*	.	*
III Corps	*	.	*	.	*	.	*
IV Corps	*	.	*	.	*	.	*
2. The I Corps will move to a concentrated position about GETTYSBURG on 13 June 19.
3. (a) The 2d Division will * * * * *
(b) The 1st Division will move to a concentrated bivouac just northwest of GETTYSBURG.
Zone of advance:
Right boundary: BALTIMORE TURNPIKE (inclusive).
Left boundary: TANEYTOWN—HARNEY—BARLOW—GETTYSBURG road (inclusive).
Rear elements will clear present area by 3:00 PM, 13 June.
All details under direction of division commander.
- (c) The 3d Division will * * * * *
- (d) The 4th Division will * * * * *
- (x) Prompt report will be made by division commanders on completion of movement.
4. See Administrative Orders No 20, accompanying Field Orders No 19 (omitted).
5. (a) Axes of Signal Communications:
I Corps: BALTIMORE TURNPIKE.
1st Division: BALTIMORE TURNPIKE.
2d Division: * * * * *
4th Division: * * * * *

(b) Command Posts.

I Corps: opens at town hall at GETTYSBURG at 1:00 PM, 13 June, and closes at WESTMINSTER at same hour.

1st Division: will open at PENN COLLEGE at 1:00 PM 13 June, closing at LITTLESTOWN at the same hour.

* * * * *

A,
Major General.

Distribution:
(omitted)

This study involves a consideration of the tactical situation, the relative situations of the two armies, the object of the march, and the relations of the 1st Division to the I Corps and the First Army.

The army is engaged in making a march of concentration with a view to battle. When the concentration is completed the Blue army will be in a better situation than the Red army which must advance from its concentration area through the mountainous country with few roads and those passing through defiles. The concentration of the Blue army must be completed quickly to take full advantage of the situation.

As the Red forces which commenced to move east on the afternoon of 12 June were almost twice as far from the Gettysburg—Emmitsburg line as the Blue forces, it does not seem probable that the concentration can be interfered with, except possibly by cavalry or air service.

The movement is covered by the army and corps cavalry and air services which should be able to give prompt warning of any unexpected movement on the part of the Red forces.

The I Corps prescribes the zone of advance for the 1st Division and the location of its bivouac area after completion of the march. With its cavalry and air service it will furnish reconnaissance and protection and will maintain connection between its divisions.

The First Army covers the movement with its cavalry divisions and air service furnishing protection and strategic reconnaissance. It will be concerned with the supply and evacuation of the division.

In this study we are primarily concerned with the following:

- (a) Camp in the Littlestown—Taneytown area.
- (b) March to Gettysburg area.
- (c) Bivouac in the Gettysburg area (northwest).

In studying the problem before us there are a number of details which must be considered under these three general headings.

From the General and Special Situations and the corps field orders, we know the object and character of the march, the zone of advance, the location of the new area, the protection and reconnaissance to be expected from the First Army and the I Corps and the possibility of coming in contact with the enemy.

The disposition of the division before commencing the march is shown in Special Situation for 1st Division.

The following will be considered under (a) above:

DISPOSITION OF THE TROOPS

The division is disposed in two groups, each having an infantry brigade and a regiment of field artillery (75-mm. gun). The regiment of 155-mm. howitzers attached to the division is with the right column where it can use the best road. The division headquarters and the division special troops, except those elements not needed on a march of this character; the engineer regiment, except part of its train; and the division air service are with the right column.

The service trains, consisting of the division train with supplies and infantry ammunition; the service company; the artillery ammunition train; the ordnance company; the train of the division engineer regiment; that part of the medical regiment not otherwise employed; and the light tank company are at Union Mills where they are out of the way of the remainder of the division and can utilize the best road.

The combat and field trains of all the units are in camp with their organizations.

The division is thus well disposed for the march of the following day.

ISSUE OF ORDERS

As the division is so located that all its units can be reached easily, and the situation is not likely to change be-

fore morning, it will not be necessary to issue a warning order—the division march order will be sufficient.

The following will be considered under (b) :

ZONE OF ADVANCE

This will be as prescribed in the corps order. It may be noted that the zone becomes very narrow in the town of Gettysburg where careful arrangements will be necessary to avoid confusion.

ROADS AVAILABLE

There are two main roads in the zone of advance—the Baltimore Turnpike, which is a first-class road with few hills that amount to anything and few bridges, and the Taneytown—Harney—Barlow—Gettysburg road which is also good. The latter has, however, a number of heavy grades and numerous bridges, but is good enough for the infantry and animal-drawn field artillery which will be assigned to it. The motorized units, with the heavier transportation, are all so situated that they can be assigned to the Baltimore Turnpike.

The map shows a number of other roads in the zone of advance which might be utilized as additional routes but they would be so round-about and the condition of the roads so doubtful that it is not considered advisable to use them.

A number of lateral roads exist which may be used in maintaining connection between the columns.

DISPOSITION OF THE DIVISION

The disposition of the division, both in the Littlestown—Taneytown area and in the Gettysburg area, will affect the routes to be assigned to organizations. The 1st Brigade, with the Field Artillery Brigade (less one regiment), the 155-mm. howitzer regiment attached, will be assigned to the eastern route and the northern part of the Gettysburg area, while the 2d Brigade and the field artillery regiment now with it will be assigned to the western road and to the southern part of the bivouac area.

NUMBER AND COMPOSITION OF COLUMNS

The number of roads available fixes the number of main columns at two, and these are further divided into groups in accordance with tactical and administrative necessities. This must be considered in preparing the march table.

Tactical considerations make it necessary to have in each column infantry and field artillery (75-mm. gun) with some medical units; also that the division special troops, with some exceptions, shall be with division headquarters. The position of the 155-mm. howitzer regiment is fixed in this situation by the advisability of assigning it to the best road, there being no tactical reason why it should not go with the right column.

The field trains and the service trains will be marched separately from the troops.

There are in the division several elements with different rates of march:

- (1) Foot troops.
- (2) Animal-drawn units of the artillery, the combat and field trains, and the service trains.
- (3) Motorized artillery, which comprises both tractor and truck elements.
- (4) Motorized elements of troops and combat, field, and service trains.

All these elements cannot march comfortably together but the animal-drawn artillery and the animal-drawn combat trains must march with the foot troops in this situation.

There are at least two ways of handling the animal-drawn and motor elements of the field and service trains.

The animal-drawn elements of each can follow the troops at the normal marching rate while the motor elements of each move by bounds, or all the animal-drawn elements of each column may be combined in one group which will follow the troops at the normal marching rate and the motor elements in another group which will be held in camp until the troops and animal-drawn elements of the field and service trains have cleared the roads, when the motor elements can make the march without stopping.

Motorized artillery units, when possible, should be marched as a separate group.

The Baltimore Turnpike is one of the main roads to be used by corps and army, because of this and the great

variety of motorized units belonging to the right column, the second method of handling the motor elements of the field and service trains is adopted for that column.

In the left column the situation is not so complicated and the field train can be handled by the first method.

INITIAL POINTS

The initial point for each column is so selected that no counter-marching will be necessary for any unit. The crossings of Alloway Creek on each road are beyond the outpost line of resistance and are about the same distance from the bivouacs of both columns. They will be suitable for initial points.

STARTING TIME

As the movement must be completed promptly, the starting time for the leading elements must be early, but should not be so early as to deprive the troops of their rest. If the advance guards are ordered to clear the initial points at 7:00 AM the time will be about right.

For the motorized elements, the starting time is regulated by the necessity of having the roads clear on one hand, and the necessity of clearing the area for the organizations following on the other.

The motorized elements to be considered in the right column are the 155-mm. howitzer regiment and the motorized elements of the field and service trains.

To fix the starting time of these units, a simple calculation is necessary to determine when the tail of the column of troops and animal-drawn field trains will have cleared Gettysburg.

RATE OF MARCH

The rate of march for all, except the motorized units, will be regulated by that of the infantry in the column. That of the motorized units will be the maximum economical rate suitable for the various types, considering the character and condition of the roads.

Rate on Baltimore Turnpike and Taneytown road will be:

Motorized artillery, tractors	-----	3.5 miles per hour.
Motorized artillery, trucks	-----	8 miles per hour.
Service trains	-----	8 miles per hour.
Field trains, motor	-----	8 miles per hour.

TIME OF CLEARING AREA

In accordance with army orders, the III Corps from the Frederick area will occupy the Taneytown area; army troops and the 4th Division will occupy the Littlestown—Union Mills area. These areas must, therefore, be cleared by the units of the 1st Division in the early afternoon, or by 3:00 PM, as directed by I Corps.

RECONNAISSANCE AND SECURITY DURING THE MARCH

For cavalry reconnaissance, the division must depend on the army and corps cavalry which will perform the strategic reconnaissance and the nearby reconnaissance, respectively.

The division air service will supplement the work of the corps observation squadrons by a reconnaissance, at stated times, of the roads leading from the direction of the enemy. It will be protected, if necessary, during this reconnaissance by the pursuit aviation of the army air service.

Although the enemy will probably not be encountered on this march, and the cavalry and air service should be able to give prompt warning of the approach of any large bodies, it will be necessary for the columns to take some measures for security. Each column will have a small advance guard which can provide for the security of the column and make the more detailed nearby reconnaissance which cannot be done by the corps cavalry. The details can be left to the commanders of the columns. These advance guards will be able to furnish the outposts for the new area, which can, in this way, be promptly posted. An engineer's reconnaissance of routes to be used should be made.

HALTS ENROUTE

The regular hourly halts for infantry on a march should never be omitted under any conditions, and should usually be made by mounted troops and animal-drawn transportation. Motor vehicles do not need to halt in a march of ordinary length for infantry.

The decision as to whether a halt of one hour at noon, generally known as the noonday halt, may be omitted depends on the length of the march, the hour that the troops

may be expected to arrive in their new bivouac and on the weather conditions.

The leading elements of both columns should reach bivouac in Gettysburg before noon, and the tail of the column of combat troops and trains on the Baltimore Turnpike by 3:15 PM, after a march of about six hours. There is therefore no necessity for a noonday halt.

TRAFFIC CONTROL

Normally, traffic control must be considered in the assignment of routes. In this situation the town of Gettysburg is the only point where confusion might occur and careful arrangements and the detail of military police for traffic control at this point will be necessary. This would not appear in the march order or march table.

MEDICAL SERVICE AND EVACUATION

These are considered as they affect the assignment of the units of the medical regiment to the various columns and groups.

To care for the march casualties which have occurred during the march of 12 June, one of the field hospital companies of the division will have been partially established at Union Mills where it will remain in operation until the medical regiment is ready to march. Another field hospital company will be established in the Gettysburg area as soon as the medical regiment arrives there.

Evacuation from these field hospitals will be made to an army evacuation hospital which will be established at Westminster. This evacuation will be carried out by the army.

There are two ways of handling the march casualties which will occur during a day's march.

First: By attaching ambulances to the regiments at the rate of one per battalion with suitable detachments from the sanitary battalion. These ambulances are reported to the regimental surgeons for temporary duty. They transport the march casualties enroute and remain with the regiments after arrival in camp until after sick call when they

transport the evacuation casualties to the hospital sorting station and then rejoin their companies.

Second: By the establishment of march collecting stations on the route of march. These stations are established by the personnel of the sanitary battalion. They are placed from three to four miles apart, at a road junction if possible, and near a dwelling or some building which will afford shelter. An ambulance company is detailed to provide transportation for the casualties.

In this situation there is no necessity of employing the animal-drawn ambulance company with the advance guards so it is available for attachment to regiments. The detachments of the ambulance and sanitary battalions already with the two columns of the division can take care of the march casualties, using the first method described above, transporting them to Gettysburg. The remainder of the medical regiment can march with the service trains.

SUPPLY

In a march of this character, the combat trains can be marched with the troops, following immediately after each battalion so that the water carts and rolling kitchens will be easily available, either for a noonday halt or on arrival in camp.

The details of the supply of the division are found in the administrative order.

COMMUNICATIONS

The division axis of signal communications is Baltimore Turnpike. The division command post will remain in operation at Littlestown until it opens at Penn College at 1:00 PM. One forward communication center will be needed en route. St. Mary's Church, where one of the lateral roads joins the Baltimore Turnpike, will be a suitable place.

REPORTS

Hourly reports from column commanders are sometimes required to keep the division commander informed as to the progress of the movement.

The following will be considered under (c) :

RECONNAISSANCE BEFORE A HALT

The reconnaissance of the corps and army cavalry and air service may be relied on to give prompt warning of the approach of any large bodies of the enemy. The division air service, by reconnaissance of the roads leading towards the enemy, supplements the work of the army and corps agencies and makes a general reconnaissance of the outpost position and the new bivouac area. The more detailed reconnaissance will be made by the advance guards.

The corps has undoubtedly made a reconnaissance of the area assigned to the 1st Division to determine its suitability in a general way. The division must make a more detailed reconnaissance. Quarters parties will be sent forward to locate the exact position of the bivouac areas of the various units and to find the best routes leading to them. A reconnaissance by medical officers will also be necessary.

SECURITY IN BIVOUAC

Security will be furnished by the outposts. As each column is preceded by an advance guard, the easiest and simplest method will be to make each infantry brigade responsible for the security of its half of the front. The outposts can be furnished by the advance guards and will be quickly and easily posted.

A decision must be made as to the location of the line of resistance of the outpost. This line must be so situated as to cover the bivouac area and must be suitable for a battle position in case of attack. The line through hill 668—hill 627—L. Hoppy—road junction 555—will fulfill these conditions. As there seems no probability of meeting the enemy, orders for the outpost can be issued at once; otherwise reconnaissances would be made and orders issued during the march.

DISPOSITION OF UNITS AS AFFECTED BY PROBABLE FUTURE OPERATIONS

As the army is concentrating with a view to battle, all dispositions of the division must be made with this end in

view and care should be taken that the division is disposed sufficiently in depth.

The infantry brigades will, of course, be located nearest to the enemy and preferably side by side. This is easy on account of the disposition of the units on the march and will be favorable for their future employment.

The artillery brigade should be located in rear of the infantry brigades both for protection and so that it will be able to perform its mission in case of attack. The other units of the division will be located further to the rear where they will be so placed as to best perform their various functions. The special troops and the engineers will be located near division headquarters. The service trains can be placed well to the rear as they will not be needed immediately.

All motor units, and especially the 155-mm. howitzer regiment and the tank company, should be located near good roads.

DEGREE OF READINESS NECESSARY

The infantry brigades and the field artillery brigade must be held in readiness for prompt action and their location should be such as to make this possible. The other units of the division need not be in the same state of readiness.

PROTECTION FROM AIRPLANE OBSERVATION

All bivouacs must be concealed. This makes it necessary to utilize the natural facilities for concealment which exist in the area.

The 1st Brigade will find ample space in the woods and orchard on the south end of Oak Ridge, while the 2d Brigade will find shelter in the woods and orchards near J. Forney and N. Grist.

The field artillery brigade can be placed in the woods on hill 582. The camouflage nets with which the artillery is provided can be utilized to increase the screened area available.

Other units of the division can find shelter in the groves and orchards in the vicinity of Penn College.

ROUTES BY WHICH AREAS CAN BE ENTERED
AND LEFT

The routes by which the various units can reach their bivouac areas must be considered, as well as those by which they can leave them to move forward.

Here this is a simple question, as the two main roads are well situated both for entering and leaving the area.

The consideration of the points mentioned above is the basis for the following order and march and camp tables:

1st Div,
LITTLESTOWN, PA.,
12 June 19, 8:00 PM.

FIELD ORDERS }
No 21. }

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Topographical Map, Gettysburg-Antietam, 1:21120; 12 sheets about Gettysburg.

1. Hostile columns moved east late today from the area GREENCASTLE—CHAMBERSBURG—SHIPPENSBURG. Our corps continues to move to a concentrated position about GETTYSBURG. The army and corps cavalry is covering the movement.
2. This division will move tomorrow to a concentrated bivouac north-west of GETTYSBURG, in accordance with attached March and Camp Tables.
3. (a) The Div AS will remain at LITTLESTOWN. Beginning at 7:00 AM tomorrow reconnaissance will be made every two hours of the roads in the direction,
 - (1) GETTYSBURG—ARENDSVILLE—SHIPPENSBURG.
 - (2) BARLOW—GETTYSBURG—CHAMBERSBURG.
- (x) (1) Commanders of infantry brigades will assure local protection for their respective commands while enroute to the new area.
- (2) Commencing at 8:00 AM, and until completion of the move, commanders of all columns will report their location hourly.
- (3) Upon arrival in the new area outposts will be established along the line: hill 668 (north of RJ 625)—hill 627—L. HOPPY—RJ 555. In case of attack this line will be held. Each infantry brigade will be responsible for its sector.

Boundary between brigades: MUMMASBURG ROAD to CR at point 347.70—752.65—house just south of hill 667—bridge at point 344.0—754.0, all to 1st Brig.

4. Rations.

DPs for 13 June:

MUMMASBURG ROAD (just east of PENN COLLEGE).	
1st Brig	-----4:00 PM.
1st FA Brig	-----5:00 PM.
1st Med Regt	-----6:00 PM.
Sp Trs	-----6:30 PM.
LUTH T. SEMINARY grounds (349.1—750.2):	
2d Brig	-----4:30 PM.
1st Engrs	-----5:30 PM.

Div AS, no change.

THE INFANTRY DIVISION

5. (a) Ax Sig Com: LITTLESTOWN—GERMANTOWN—GETTYSBURG.
Advance message center will be established at ST. MARY'S R.F. CHURCH at 9:00 AM.
- (b) CPs:
1st Div: closes at LITTLESTOWN at 1:00 PM and opens at PENN COLLEGE at same hour.
1st Brig: enroute; M. McLEAN farmhouse after 1:00 PM.
2d Brig: enroute; farmhouse at 347.8—751.5 after 1:00 PM.

Copies to:

CG	Surg	1st Sig Co
Aides	Hq Comdt & PM	1st Engrs
C of S	OO	1st Obsn Sq
G1	ASO	1st Med Regt
G2	QM	II AC
G3	Adj	2d Div
G4	Inspr	3d Div
DMGHO	1st Brig	4th Div
Sig O	2d Brig	War Diary
Cml O	1st FA Brig	File.
Engrs	1st Tk Co	

MARCH TABLE

TABLE A: To accompany FO No 21, 1st Div

Serial No.	Date June	Organizations and Commanders	From	To	Routes	Remarks
1	13	Brig Gen B 1st Brig Sp Trs 1st Div, less Serv Co, 1st Ord Co and 1st Tk Co. 1st FA Brig, less 2d FA and Am Tn. 1st Engrs, less T plat Hq and Serv Co. Sn Co No 1, less 1 plat. 1 plat Amb Co No 1	LITTLES- TOWN area	GETTYSBURG area	BALTIMORE TURNPIKE to GETTYSBURG then by MUMMASBURG ROAD.	Advance guard to clear ALLOWAY CREEK at 7:00 A.M. No noonday halt.
2	13	Capt I Anl Sec F Tns of organizations in Serial 1. Wag Cos No 1 and 2, Div Tn. Wag Sec T Co, Am Tn, 1st FA Brig. Wag Sec T plat Hq and Serv Co, 1st Engrs.	LITTLES- TOWN area UNION MILLS	GETTYSBURG area	Same as Serial 1	Formed in order of units in troop col- umn to follow Ser- ial 1 without dis- tance. No noon- day halt.
3	13	Col H 101st FA (155 mm How)	LITTLES- TOWN area	GETTYSBURG	Same as Serial 1	Head of column to leave LITTLESTOWN at 11:45 A.M. Field trains to fol- low troops and combat trains as directed by column commander. To clear LITTLESTOWN by 1:45 P.M.
4	13	Maj M 1st Med Regt, less dets. 1st Div Tn, less Wag Cos No 1 and 2. Motor elements F Tns of organiza- tions in Serial 1. 1st Tk Co. Motor elements T plat Hq and Serv Co, 1st Engrs. 1st Ord Co Am Tn 1st FA Brig less Wag Sec T Co.	UNION MILLS LITTLES- TOWN area UNION MILLS	GETTYSBURG area	Same as Serial 1	Head of column to leave UNION MILLS at 1:45 P.M. Area to be cleared of all units by 3:00 P.M. G4 may regulate move of Motor Repair Sections separately if desir- able.
5	13	Brig Gen C 2d Brig 2d FA Amb Co No 1 less 1 plat 1 plat Sn Co No 1	TANEY- TOWN area	GETTYSBURG area	Via HARNEY—BARLOW to GETTYSBURG then by CHAMBERSBURG ROAD.	Advance guard will clear ALLOWAY CREEK at 7:00 A.M. No noonday halt for this serial num- ber. Field trains will follow troops without distance— movement regulat- ed by column com- mander. Area to be cleared of all units by 3:00 P.M.

THE INFANTRY DIVISION

CAMP TABLE

TABLE B—To accompany FO No 21, 1st Div.

<i>Unit</i>	<i>Location</i>	<i>Remarks</i>
Hq 1st Div (both echelons)	PENN COLLEGE buildings and grounds	
Sp Trs 1st Div, less 1st Tk Co, Serv Co and 1st Ord Co		
1st Engrs	Orchard 400 yards southwest of PENN COLLEGE	To approach by unimproved road just south of PENN COLLEGE.
1st Brig	Area including the wooded hills 623 and 642 on OAK RIDGE west of READING RR south to MUMMASBURG ROAD (inclusive).	
2d Brig	Area bounded on the east by 1st FA Brig area; on the west by a line from the crossing of WILLOUGHBY RUN on MUMMASBURG ROAD to RJ 577; on the north by MUMMASBURG ROAD (exclusive); on the south by CHAMBERSBURG ROAD.	
1st FA Brig, less Am Tn	Area including wooded hill 582 and orchard one mile NW of GETTYSBURG.	Camouflage nets utilized around border of woods and orchard will increase screened area available.
1st Div Tn and Serv Co	In triangle east of PENN COLLEGE grounds.	
Am Tn 1st FA Brig and 1st Ord Co	In city block just southeast of PENN COLLEGE grounds.	
1st Tk Co	Orchard 1000 yards northwest of PENN COLLEGE.	
1st Med Regt	In grove just northeast of PENN COLLEGE grounds.	

PART III

FUNCTIONS OF THE ELEMENTS OF A
DIVISION DURING COMBAT

Special Situation (continued):

The concentration on Gettysburg was completed on 14 June. The army cavalry has moved west into the mountains to delay the hostile columns and maintain contact.

The II and III Corps have moved towards Arendtsville and Emmitsburg, respectively, establishing the general army alignment on a north and south line through Gettysburg.

During the day of 14 June, the army cavalry was driven out of the mountains on all the main roads by extremely aggressive action and hostile columns deployed for action on the general line Emmitsburg—Arendtsville just east of the mountains, opposed by the army cavalry. The army air service retains control of the air for the present.

The army commander directed a general attack on the enemy positions with a view to throwing the hostile army back into the mountains, seizing the passes and destroying those elements of the enemy which have debouched into the plain. The main attack to be made by the III Corps between Orrtanna and Fairfield, the I Corps to seize and hold the passes between Hilltown and Orrtanna.

The 3d and 4th Divisions have been transferred to the III Corps.

(B) THE INFANTRY DIVISION IN AN ATTACK

Special Situation (continued):

This is a continuation of the operations of the 1st Division of the I Corps, whose movement to a concentrated bivouac northwest of Gettysburg was discussed in Chapter V (A).

The division, as it was established in bivouac on 13 June, is situated as shown in Table B accompanying Field Orders No. 21, 1st Division.

Extract from Par. (3) of the I Corps field orders for the attack:

- (b) The 1st Div will move during the night of 14-15 June to the general line MUMMASBURG—SEVENSTARS, and form for attack along the eastern branch of MARSH CREEK. It will attack, at 4:00 AM, 15 June, driving the enemy from his positions east of SOUTH MOUNTAIN, and will hold a position on the general line CASHTOWN—ORRTANNA, sending strong patrols west of that line to harass the enemy. By turning hill 969 it will assist the 2d Div in the capture of that position. By its progress it will assist the III Corps on its left.

Zone of action:

North boundary: MUMMASBURG—HILLTOWN road from CR 679 to bridge over MARSH CREEK near hill 687—northern limits of CASHTOWN—CR 954 (all inclusive).

South boundary: CHAMBERSBURG ROAD to L. HOPPY—SEVENSTARS—MCKNIGHTSTOWN STA. (all inclusive)—ORRTANNA (exclusive).

* * * * *

NOTE.—Corps artillery plan directs 30 minute artillery preparation. Corps and army artillery directed to concentrate on main roads to prevent hostile reinforcements from moving east.

The 2d Division extends the attack to the north and the III Corps is attacking on the south.

The attack order of the I Corps was received at 1st Division Headquarters at 3:00 PM, 14 June. The information so far at the disposal of the division commander is extremely meager. He must immediately take steps to obtain additional information of the enemy's dispositions. This he will obtain through reconnaissance by the division air service, ground observation, reconnaissance by himself and staff, and by infantry patrols.

He may expect some information from the corps cavalry and the corps air service and can call on the corps air service to secure photographs of such parts of his zone of action as he may consider necessary and which cannot be obtained by the division air service.

He will have the intelligence reports of the corps and division G2 sections.

To form the general plan, the division commander must have knowledge of four factors:

- (a) his mission.
- (b) the enemy.
- (c) his own and supporting troops.
- (d) the terrain.

MISSION:—The corps order gives the zone of action and objective of the division. The mission of the I Corps is to seize and hold the Cashtown passes.

The 1st Division is ordered to attack on a wide front with a limited objective. It also must assist in the advance of the 2d Division on its right and of the III Corps on its left. The most important part of its mission is the seizure of the exits of the passes at Cashtown and that immediately south; those farther south are of minor importance.

THE ENEMY:—General A knows that he drove our cavalry out of the mountains during the day. That he is deployed on the general line Arendtsville—Emmitsburg. He is in his own territory—his morale should be high, his ranks full and his equipment in good shape. He has advanced his heads of columns fifteen miles on a front of fifteen miles during the last few days. He is probably closer to his bases than the Blue army is to its own. His intentions are certainly aggressive as he needs, and will probably try to get as quickly as possible, “elbow room” east of the mountains. The exact location of his units is very indefinite.

HIS OWN AND SUPPORTING TROOPS:—The 1st Division reinforced by a regiment of 155-mm. howitzers, is part of an invading army of five corps. His own corps now has only two divisions. The 2d Division is attacking on the north. The 3d Division, now assigned to the III Corps, is attacking on the south.

TERRAIN:—The division commander has maps, but these must be supplemented by reconnaissance. Personal reconnaissance must be made by the division commander, chief of staff and G3 for the general plan. By G4, the division engineer, the division machine gun and howitzer officer, division artillery commander and tank commander for special plans, and by the heads of various services for the proper operation of their services. The problem of the division commander might be solved from the map, but it will be much better solved if he, his chief of staff and G3 all know the ground in front of them from personal observation. The division has been in its present bivouac since early afternoon of 13 June. There has been an opportunity for the officers mentioned to become acquainted with the general lie of the ground towards the enemy. The division commander will, however, desire to take a more detailed look at

the ground and to study it in connection with his map so as to come to some decision as to the general plan to be followed to carry out the mission assigned him by the I Corps.

The general staff sections and the artillery commander will have been informed as to the contents of the corps order, and their reconnaissance can be made simultaneously with his own. The chief of staff must stay at the division command post to maintain supervision and keep touch with the corps during the absence of the division commander. The division commander will take G3 with him on his reconnaissance so that the latter may more thoroughly understand the exact maneuver decided on. A brief message to the brigade commanders of infantry, stating that the division will attack in the morning, will enable them also to start their general reconnaissance.

Looking at the map, the division commander studies the points from which a view of the country may be obtained; hills 626, 668, 687, 627, 667 and some of the buildings in Mummasburg afford such views.

The division commander decides to go by automobile to three points near the road and not too far advanced from the outpost lines. He chooses hills 626, 668 and 687. Enroute to these places he notices the general lie of the country.

East of the eastern branch of Marsh Creek there is a succession of low ridges running generally north and south, separated by slightly wooded valleys. The roads follow, generally, the direction of the ridges, except the Chambersburg and Mummasburg Roads which run diagonally northwest across the area. There is a lack of prominent landmarks. There are a few small patches of woods and the wooded stream valleys afford some concealment.

On his way to the high points in his front, General A stops at the post of the commander of the 1st Brigade outpost. He does this for two reasons, 1st, to obtain the very latest information from that source, 2d, to obtain a small escort because he wants to go to places beyond the outpost line of resistance.

The outpost commander tells him that the army cavalry is no longer in his front having withdrawn to the northeast; that the squadron of corps cavalry is still patrolling in front

of the outpost; that they are to withdraw to bivouac east of hill 687 at dusk (8:30 PM) leaving standing patrols at Mummasburg, the crossings of Marsh Creek northeast of Sevenstars and crossroads 617.

He tells General A also that a message just received from the cavalry squadron commander states that at 3:00 PM his patrol on hill 604 was driven in to Sevenstars by a hostile cavalry platoon, and that small parties of enemy infantry had appeared at McKnightstown and on the hill to the north.

On his visit to hills 626, 668, 687, General A notices that he has a good view of the country as far as the McKnightstown ridge. His view is stopped on the south by the heavily wooded ridge south of Sevenstars. He has been able to see the roofs of McKnightstown Sta. He can see some cavalry parties on the east side of Marsh Creek. Of the enemy he can see nothing.

Farther to the west, his view strikes the heavily wooded ridges on the line Cashtown—Orrtanna, roughly on the 900-foot contour. Looking towards the enemy position he sees that the ground is a series of ridges running northwest and southeast and that there is a well defined ridge on the general line Orrtanna—crossroads 701. The creeks run in the same direction. From the character of that part of the streams immediately in front of the outpost, it is evident that they are not serious obstacles, as their banks are not sharp. Animal-drawn vehicles and tanks will find many crossings.

The enemy's advance observation groups, which have been reported on a north and south line through McKnightstown, have a good view as far east as the eastern branch of Marsh Creek. The trees in the creek bottom are tall and thick, affording good concealment. The ridge on which McKnightstown stands, the woods to the south, the prominent hill 653, and the ridge leading southeast from hill 969 will probably be enemy outpost positions. As the enemy has gained hill 969 he will endeavor to hold on to it tenaciously because of the observation it affords.

Studying the ground as well as his map, General A decides that the enemy will probably occupy a battle position

somewhat as follows: As there has been only a limited time for organization the defense will be deployed defense, or at most a defense in one position. He has located apparently the outpost line or covering force. The main line of resistance of the battle position will probably pass through the following points: crossroads 659—hill 682 (800 yards north of Tollgate)—point 340.4—754.6—point 339.9—754.0—east of hill 641—hill 642—crossroads 616, connecting on the left and right with the enemy positions on hill 969—and hill 731 (southeast of Orrtanna), respectively; with a regimental reserve line through hill 722—crossroads 662—hill 687—point 339.1—753.0.

General A must depend largely on the reconnaissance of his air service to confirm his estimate of the location of this position. Photographs by the air service, if there is time to obtain them, will help. Putting himself in the enemy's position, General A decides that the wooded ravine of the eastern branch of Marsh Creek affords cover from view for the assaulting battalions, except from hill 969. That reserve troops can be located in the ravines east of hills 602, 603, 687, 668, 627 with security from view of any observation posts on the high hills west of Cashtown. His forward elements, however, will be seen from hill 969 after daybreak. The enemy can see all tops of ridges as far as the Gettysburg—Biglerville road, but his view of the 1st Division's back areas is at very long range, so that it cannot be very accurate.

General A is ordered to hold a position on the general line Cashtown—Orrtanna, so in planning the attack he must give some consideration to what the probable line to be held by the division will be.

The main line of resistance of the battle position held for the purpose of blocking the passes cannot be placed on the eastern slope of the high hills about Cashtown. Here it would be in a bad position, with no field of fire and with its whole defense organization exposed to the view of the enemy. The main line of resistance must be farther back or farther forward. If pushed farther forward, it must be placed at least as far west as the western slopes of the ridges west of Cashtown. There it will be overlooked by the higher ridges farther to the west. The situation is particularly bad

in the southern part of the division zone of action. A position farther east, facing the passes, will be more suitable for carrying out the mission to which the I Corps has been assigned. Such a line is found along the general line hill 727—hill 726—hill 687 and the ridge running south from that hill; connecting with the positions to the north and south. Here the line of resistance of the battle position could be placed on the reverse slopes, and there be partially concealed from enemy observation. General A thinks that he will receive more definite instructions from the corps in regard to the defensive position later, but he considers the line mentioned above to be the most probable one. The exact location of the battle position on the Cashtown—Orrtanna line would not be announced in the field orders for attack, its location being described in general terms. It would be necessary to issue a field order at some later time for the occupation and organization of the position decided upon.

The frontage given the division is rather large. General A knows that the division cannot be strong everywhere but must concentrate as much as possible for the main blow where success will bring the greatest results. The advance that the division is expected to make is about 7,000 yards. The probable enemy battle position is about 4,000 yards distant from the line of departure. The attack must be pushed at least as far as the foot of the mountains and patrols sent still farther west. General A must decide what formation of the division is most suitable for the situation.

In general, he must decide whether to employ his brigades side by side or one behind the other. Were the front narrow, and a strong effort to take a second position necessary after capturing the first position, the formation with brigades one behind the other would be suitable.

Here there is only one position and that must be rather hastily organized. The principal resistance will be encountered at the line of resistance of the enemy battle position. The position is such that all parts of it are not of equal importance and a concentration of effort for the main blow may be brought about by suitable assignment of frontages to the units selected for that mission. The front is too wide for efficient supervision by one commander.

After the main line of resistance of the battle position has been penetrated, General A is justified in the assumption that no other complete position will be found. It will be a question of dealing with more or less isolated tactical localities, in which situation it will be difficult for the commander of a long line to take proper advantage of opportunities for mutual cooperation between units.

The division will occupy a defensive position when the attack is over.

All these considerations favor the formation of the division with brigades side by side. General A therefore decides to attack in that formation. He now turns back to his command post, he has sufficient data from his own reconnaissance and that of his staff to decide on the detailed plan of action; there will be time for further detailed reconnaissance and arrangements on the part of staff officers and chiefs of services, whose general reconnaissances have been going on simultaneously with his own.

On his return to his command post General A secures from his chief of staff copies of intelligence reports and messages which have been received during his absence, among others the following:

TELEPHONE MESSAGE

From: Div Obsn Sta
At: Hill 626

14 June 19

4:15 PM

No 6

Telephone

To: G2, 1st Div

Infantry platoon moved south from CR 647 at 4:00 PM. Enemy appears to be intrenching on hill 653 north of MCKNIGHTSTOWN. Outpost notified.

T

From: BIO 1st Div
At: LITTLESTOWN

14 June 19

4:15 PM

No 9

Telephone

To: G2, 1st Div

Reconnaissance 1st Div plane—Lt. Smith, pilot: Lt. Jones, observer, over CHAMBERSBURG ROAD—3:15 PM to 4:05 PM. Altitude 3,000 to 10,000 feet. Small mounted detachment in woods 500 yards west of hill 604. Two automobiles running from MCKNIGHTSTOWN to CASHTOWN.

Smoke in orchard 1500 yards NW of MCKNIGHTSTOWN. About one platoon infantry on road near J. SMALL marching east at 3:40 PM.

Deployed infantry between hill 682 and woods west of MCKNIGHTSTOWN and at hill 687 north of ORRTANNA. Wagons and troops in both towns—column of artillery one mile west of HILLTOWN. Small groups deployed infantry in holes on hill 653. Reported to G2, I Corps.

J—Observer

A brief message was sent by radio to the division command post as the plane passed and the above was telephoned from the airdrome after the observer had landed.

These messages confirm, in part at least, the information received from the corps cavalry and General A's estimate of the enemy's probable defensive organization.

The artillery commander will submit the results of his reconnaissance to the division commander, with recommendations for the use of the artillery, when called for.

CONSIDERATION OF THE DETAILED PLAN

In considering his detailed plan the division commander must decide what the decisive element is.

It is evident that he must quickly gain a position from which he can control the road leading west through Cash-town and the one immediately south of it through road junction 717, as these are the main roads by which the enemy can debouch from the mountains.

The main effort must be made there, so that the brigade assigned to the northern part of the zone of action will be given the narrower front and will be reinforced by the tank company which, General A has decided from his own reconnaissance and the information furnished him by the tank commander, can be utilized on that flank. The artillery will be so posted that it can place most of its fire on this part of the enemy's positions.

General A must decide also on the boundary between the brigades. The line should, where possible, include prominent objects easily identified on the ground as well as on the map, and should be so located as to give the task of attacking definite tactical localities and terrain features to each brigade without exceeding the frontage decided on as proper in this situation.

General A decides that the northern brigade must deal with hill 653 and enemy outpost positions on the southern slope of hill 969.

The detached hill 682, with the ridge northwest of Tollgate, will probably be the scene of the first serious resistance in that part of the zone of action. Farther west, hill 722, hill 726 with the orchard east of it, and the high ground north and south of Cashtown will be centers of enemy resistance. Progress seems likely to be easier in the center. There the direction of the draws lend themselves to outflanking movements and to mutual assistance between the two brigades. Here also success promises the most results, as the roads leading west will be secured.

In the southern part of the zone of action, the ridge on which McKnightstown stands and that east of McKnightstown Sta. are important points in the enemy outpost position. The first serious resistance will probably be on the low ridge southwest of J. Small, where the attack must advance over open ground. The woods 1000 yards north of Orrtanna, being a probable position for enemy reserves, will be of some importance.

General A decides that both brigades must make their main efforts in the center of the zone of action. He decides therefore to make the boundary between brigades as follows:

Hill 647 to northern brigade,
Hill 582 to southern brigade,
Northern part of hill 653 to northern brigade,
McKnightstown to southern brigade,
The orchard southwest of crossroads 662 to northern brigade,
Road junction 717 to northern brigade.

This gives an initial frontage of about 1500 yards to the northern brigade and 2000 yards to the southern. The frontage on the objective of the division is about 1800 yards for the northern and 2500 for the southern. These are large frontages, but it must be remembered that the division is not making an attack requiring deep penetration and long sustained effort; that its strength will not be equally distributed along the frontage but concentrated at decisive points; and that the enemy has had little time to organize. The relative frontage is correct, as the penetration by the northern brigade must be pushed quickly to gain a position to block the main highways leading west from Cashtown which are more important than those leading west from Orrtanna. Its mission also requires a rapid advance in the northern part

of the division zone of action in order to assist the 2d Division in the capture of the enemy position on hill 969 by outflanking movement to the south of it.

The enemy's situation is not well known. As strong a reserve as possible with the formation adopted is therefore quite essential. That part of the regiment of engineers which is not needed for attachment to the *two brigades* are the only troops available, without depleting a brigade.

This will not, however, be sufficient, as it does not give the division commander sufficient strength to use as a maneuvering body to influence the combat at critical stages and meet enemy counter-attacks which will surely be made, as the enemy is in a position to bring up troops for that purpose. He therefore assigns one battalion of infantry from each brigade, finding out from the brigade commanders which organizations are most able to furnish these battalions.

In selecting positions for the reserve, the following points must be considered:

- (1) To so place them that they will be quickly available to reinforce the main blow of the division, assisting the progress of the units making the blow by maneuvering against the flank of enemy positions which are preventing their advance.

- (2) Their location in regard to suitable routes for movement forward.

- (3) Their location to be able to meet enemy counter-attacks and for securing the defensive position which will be occupied later.

- (4) Good communication with the division command post.

- (5) Cover from view and fire. Far enough to the rear to be out of the way of brigade units moving to the attack and so placed as not to interfere with the artillery.

All of these considerations will be satisfied by positions near the left center of the division zone of action. To assist the 1st Brigade, it will be necessary to take advantage of the direction of the valleys which lead northwest and afford facilities for outflanking the enemy position in front of that brigade.

Enemy counter-attack may be expected from the direction of the Cashtown pass as this is the enemy's main route of approach; reserves moving behind the right of the 2d Brigade will be in position to meet them. Cover and communications are good in this part of the division zone.

The work of the engineers will be principally the quick repair of bridges and the preparation of crossings to facili-

tate the advance, particularly of the artillery and tanks. The 1st Brigade has been assigned the tanks and has the larger number of natural obstacles to overcome. This brigade is therefore given the greater number of engineer companies originally. The remainder of the engineers will be employed on road work subject to call for combat duty.

The division observation squadron has its landing field at Littlestown where it is well situated to perform its mission. Close to the command post there seems to be no very good auxiliary landing field but one might be arranged for on which single planes could land. The headquarters section of the division air service, which includes the division air service commander, will be at the division command post.

The mission of the division observation squadron, in addition to its routine duties of working with the division artillery and battle observation, will be to perform its reconnaissance duties in the division zone of action from the enemy outpost positions as far west as the road leading southwest from road junction 1112 to crossroads 1281; to observe the enemy movements on the roads; to make detailed reconnaissance to determine the enemy defensive organization and to discover the location of his reserves; and to watch for indications of counter-attacks. This will prove difficult in the wooded terrain west of the line CASH-TOWN—ORRTANNA.

General A has taken one and one-half hours for his reconnaissance. There is still daylight for several hours. The brigade commanders can do some more planning and reconnaissance before they receive the field order. The sun does not set until 7:40 PM. A warning message will inform them of the situation and give them time to start their work.

1st Div,
PENN COLLEGE, PA.,
14 June 19, 4:30 PM.

To—

CG 1st Brig
CG 2d Brig
CG 1st FA Brig

Map: Topographical Map, Gettysburg-Antietam, 1:21120; Gettysburg, Knoxlyn, Arendtsville, Hunterstown, Newman and Fairfield Sheets.

1. Division attacks enemy positions on line CASH-TOWN—ORRTANNA tomorrow morning. Line of departure: Eastern branch MARSH

INFANTRY DIVISION IN ATTACK

99

CREEK from MUMMASBURG (inclusive) to CHAMBERSBURG ROAD (inclusive).

Boundaries:

1st Brig:

North: MUMMASBURG—hill 722—CASHTOWN (all inclusive).

South: Hill 647 (point 346.6—755.2)—bridge at point 342.6—755.3—church 500 yards NW of TOLLGATE—SE corner of orchard at point 339.5—755.2—CR 787 (all inclusive).

2d Brig:

North: Same as south boundary 1st Brig.

South: CHAMBERSBURG ROAD to L. HOPPY—SEVENSTARS—MCKNIGHTSTOWN STA. (all inclusive)—ORRTANNA—RJ at point 334.0—752.3 (both exclusive).

1st Brig, supported by 1st FA.

2d Brig, supported by 2d FA.

CG 1st FA Brig will arrange for accompanying guns for assault battalions.

The 1st Tk Co is attached to 1st Brig.

All necessary reconnaissances will be made immediately.

Attack order will issue at 6:30 PM.

A
Maj Gen

1st Div,
PENN COLLEGE, PA.,
14 June 19, 6:30 PM.

FIELD ORDERS }
No 23. }

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Topographical Map, Gettysburg-Antietam, 1:21120; Gettysburg, Arendtsville, Hunterstown, Knoxlyn, Fairfield and Newman sheets.

1. (a) The enemy has advanced into the plain east of SOUTH MOUNTAIN to the general line ARENDTSVILLE—EMMITSBURG. In our front his outpost line of resistance is CR 647—hill 653—MCKNIGHTSTOWN—RJ 586. The main line of resistance of the battle position is on the high ground west of the RJ 659—MCKNIGHTSTOWN—RJ 596—RJ 590—RJ 616 road. His positions have been hastily organized; very little wire has been discovered.
- (b) The First Army attacks tomorrow penetrating the hostile center, seizing the passes and destroying the enemy units which have debouched into the plain. The 2d Div will secure the line hill 969—hill 911. The III Corps will secure the hill 731—WILSON HILL ridge. Our Army Cavalry has withdrawn towards the northeast.
2. This division will attack the enemy's position west of MCKNIGHTSTOWN within its zone of action, advancing to the general line CASHTOWN—ORRTANNA, where it will consolidate, exploiting well to the front with strong patrols.

Zone of action:

North boundary: GOLDENVILLE—HILLTOWN road to bridge over MARSH CREEK near hill 687—northern exits of CASHTOWN (all inclusive)—summit of ROCK TOP (1187)—RJ 954 (both exclusive).

South boundary: CHAMBERSBURG ROAD to L. HOPPY—SEVENSTARS—MCKNIGHTSTOWN STA. (all inclusive)—ORRTANNA—RJ at point 334.0—752.3 (both exclusive).

Line of Departure:

Eastern branch of MARSH CREEK from MUMMASBURG to CHAMBERSBURG ROAD.

Time of Attack: 4:00 AM.

THE INFANTRY DIVISION

3. (a) The 1st Brig, attacking within its zone of action, will make its main effort on its left and, in conjunction with the 2d Brig on the south, will penetrate the enemy's position west and northwest of MCKNIGHTSTOWN. It will assist the 3d Div on the north in the capture of hill 969 by flanking action from the south.

It will halt on the general line CASHTOWN—RJ 787 and consolidate for defense, sending strong exploitation columns to the general line of the RJ 1112—RJ 1281 road to maintain contact with and harass the retreating enemy.

Zone of action:

North boundary: Same as north boundary, 1st Div.

South boundary: Hill 647 (inclusive)—MCKNIGHTSTOWN—(exclusive)—RJ 787—road bend at point 333.7—755.8 (both inclusive).

Movement to positions via MUMMASBURG ROAD and roads to the north within the division zone of action, clearing CR 625 by 12:00 midnight.

- (b) The 2d Brig, attacking within its zone of action, will make its main effort on its right assisting the 1st Brig in its penetration of the enemy's position west and northwest of MCKNIGHTSTOWN. By its progress it will assist the III Corps on the south.

Zone of action:

North boundary: Same as south boundary, 1st Brig.

South boundary: Same as south boundary, 1st Div.

Movement to positions via the CHAMBERSBURG ROAD, clearing the L. HOPPY—CR 625 road by 12:00 midnight.

- (c) 1. The 1st FA Brig, with the 101st FA (155 mm how) attached, will support the attack.
The 1st FA will support the 1st Brig from positions east of MUMMASBURG.
The 2d FA will support the 2d Brig from positions in the vicinity of hill 626.
The 101st FA will support both brigades from positions near the L. HOPPY—CR 625 road.
Support will be by successive concentrations.
2. The artillery will follow the infantry brigades into position. The head of the column on the MUMMASBURG ROAD will not reach WILLOUGHBY RUN before 12:00 midnight.
3. Artillery preparation will commence at 3:30 AM. It will consist of a bombardment of the enemy front lines participated in by all available guns. Firing before 3:30 AM will be reduced to a minimum.
4. The 1st and 2d FA will be prepared to advance rapidly in support of the infantry brigades.
- (d) One battalion from each infantry brigade will be held in division reserve in the woods south of hill 647.
- (e) The 1st Tk Co is attached to the 1st Brig.
- (f) The Div AS will commence reconnaissance at daybreak, and maintain constant observation over the division zone of action. Prompt information is desired in regard to enemy defensive organization, troop concentrations, and of movements on roads in rear of his position, especially those leading towards CHAMBERSBURG.
- (g) One bn, 1st Engrs (less 1 co) is attached to the 1st Brig. One company 1st Engrs is attached to the 2d Brig. The remainder of engineers as per Adm O No 24.
- (x) 1. One section of 75 mm guns will be attached to each of the infantry assault battalions as accompanying guns.

2. Every precaution will be taken to preserve silence and secrecy in the movement to attack positions.
The movements of infantry brigades into position will be covered by security detachments whose advance patrols will not be pushed more than 200 yards west of the eastern branch of MARSH CREEK.
3. All troop movements in preparation for the attack will be made after 8:30 PM.
4. See Adm O No 24.
5. (a) Ax Sig Com:
 - 1st Div: MUMMASBURG ROAD to CR 625—CR 597—SEVENSTARS—CASHTOWN.
 - 1st Brig: Point 346.2—756.4—RJ 617—MUMMASBURG—HILL-TOWN road to RJ 659—CASHTOWN.
 - 2d Brig: Point 345.7—754.0 then same as 1st Div to MC-KNIGHTSTOWN—thence RJ 596—RJ 627—RJ 676—RJ 691.
- (b) CPs:
 - 1st Div: Opens at houses at point 347.2—753.5 at 12:00 midnight 14-15 June.
 - 1st Brig: House at 346.2—756.4 after midnight, 14-15 June.
 - 2d Brig: House at point 345.7—754.0 after 12:00 midnight, 14-15 June.

A,
Maj Gen.

Copies to:

CG	Surg	1st Sig Co
Aides	Hq Comdt & PM	1st Engrs
C of S	OO	1st Obsn Sq
G1	ASO	1st Med Regt
G2	QM	I Corps
G3	Adj	III Corps
G4	Inspr	2d Div
DMGHO	1st Brig	3d Div
Sig O	2d Brig	War Diary
Cml O	1st FA Brig	File.
Engr	1st Tk Co	

(C) THE DIVISION ARTILLERY IN AN ATTACK

Situation:

This discussion will be devoted to the 1st Field Artillery Brigade of the 1st Division on the 14-15 June, 1919, the day preceding and the day of the attack. The situation is the same as in Chapter V (B). The 101st Field Artillery (155-mm. howitzers) remains attached to the Brigade.

The concentration bivouac of the 1st Field Artillery Brigade was "area including wooded hill 582 and orchard one mile northwest of Gettysburg;" of the Ammunition Train, 1st Field Artillery Brigade, "in city block just southeast of Penn College grounds."

The brigade bivouac is rather cramped. But, as indicated under remarks in the quartering table, some open space may be used if camouflage nets are employed. Water facilities are apparently poor. However, the situation is practicable and necessary under the circumstances.

At 3:00 PM, 14 June, after the division commander has read the corps order just received, General E (the artillery commander) avails himself of the opportunity for reconnaissance. He is accompanied by his executive and his three regimental commanders. Before leaving, General E inquires of the division commander the approximate time he may use in this reconnaissance. It is not possible for General E to give definite orders at this time, as the plans for the division, as a whole, are unformed. General E's reconnaissance is therefore confined to determining:

- (a) Suitable general positions for the regiments.
- (b) Routes of access and egress forward.
- (c) Command and observation posts.
- (d) Possibilities in the matter of signal communications.
- (e) General visibility of the zone of the attack.

These points can be covered only in a very general way, but the impressions gained and notes made will be of material assistance to General E and his regimental commanders later when they must study the map and make definite dispositions, and will save time. As a result of the reconnaissance, the outstanding feature of the situation will undoubtedly be the great advantage of observation possessed by the enemy, due to the terrain.

General E will see at once the importance of the Chambersburg Road as a route of advance. He will also see that advanced positions will be necessary because of the depth of the attack and the evident absence of hostile strength near the line of departure. He can therefore decide generally that:

- (a) His pieces will be placed as near the front lines as permitted, and,
- (b) With one 75-mm. regiment in rear of each infantry brigade, the left 75-mm. regiment and the 155-mm. howitzer regiment conveniently accessible to the Chambersburg Road.

Upon his return to camp, General E receives the division warning order. The accompanying guns constitute a detachment from his command. The number of guns is not

stated, nor is the number of assault battalions. He assumes, however, that it is the usual number, four, for the division. Based on a hasty survey of the zones of action of the 75-mm. regiments, he decides that as the 1st Field Artillery supports the main attack, it will be best to take these guns from the 2d Field Artillery. It is, of course, desirable to draw them all from a single unit to avoid crippling several units. His 155-mm. howitzer regiment affords a powerful means of levelling any inequalities in the support afforded the two infantry brigades. General E then issues the following warning order:

1st FA Brig,
PENN COLLEGE, PA.,
14 June 19, 5:00 PM.

To: Regtl Comdrs

Maps: Topographical Map, Gettysburg-Antietam, 1:21120; all sheets north and west of Gettysburg, inclusive.

Division attacks enemy position on line CASHTOWN—ORRTANNA tomorrow morning. Line of departure: Eastern branch MARSH CREEK from MUMMASBURG (inclusive), to CHAMBERSBURG ROAD (inclusive).

Boundaries:

North (1st Div and 1st Brig): MUMMASBURG—hill 722—CASHTOWN (all inclusive).

South (1st Div and 2d Brig): CHAMBERSBURG ROAD to L. HOPPY—SEVENSTARS—MCKNIGHTSTOWN STA. (all inclusive)—ORRTANNA (exclusive)—RJ at point 334.0—752.3 (both exclusive).

Between brigades: Hill 647 (inclusive)—MCKNIGHTSTOWN (exclusive)—RJ 787—road bend at point 333.7—755.8 (both inclusive).

1st FA supports 1st Brig from advanced positions near MUMMASBURG ROAD.

2d FA supports 2d Brig from positions near L. HOPPY—CR 625 road in the vicinity of hill 627. One battery will furnish accompanying guns to assault battalions of division.

101st FA supports division from positions near L. HOPPY—CR 625 road north of 2d FA.

Reconnaissance at once.

Orders follow.

E
Brig Gen

General E doubtless was consulted in the preparation of the division order, and consequently he obtained early knowledge of its provisions. Moreover, his recommendations in regard to the artillery, where not incompatible with other considerations, probably will be adopted by the division commander.

Upon receipt of the division order, or if possible before, he sets to work on his own order, which thus can be issued quite promptly after the division order. In accordance with General E's view of the necessities of the situation, the division order permits him to occupy positions east of Mumsburg—hill 626, thus excluding only sufficient ground for the infantry to form for attack. The general indications of positions in his warning order comply with the division order. In forming his detailed plan a number of questions present themselves for decision.

One battalion of the 101st Field Artillery might have been assigned to the support of each infantry brigade. Such an assignment might be advisable if the nature and location of the resistance to be encountered were known more clearly. The situation may develop, however, so that the entire support of the 155-mm. howitzer regiment will be needed behind one infantry brigade. It seems best to retain the entire regiment for general support as indicated in his warning order—at least for the early stages of the attack.

An important question is whether to advance the artillery during the attack; the division order prescribes that the 75-mm. regiments shall be prepared to advance their positions rapidly. The initial artillery positions will be from 4000 to 5000 yards from the hostile main objective, and considerably further from the line finally to be held by our troops. These ranges are practicable for both light and medium weapons, but they are decidedly long for close support on objectives which at present can only be guessed. Communications, hurriedly laid, will be none too reliable; observation would have to be pushed far forward with difficult communications. Moreover, the full fruits of a successful attack will be gained only if the roads over the mountains are barred effectually to the enemy before he is driven out of his position. To interdict these roads from the initial artillery positions would involve ranges of over 8000 yards. These are theoretically possible with both weapons with suitable shell, but considerable firing at these ranges with the 155-mm. howitzers would strain and probably damage the carriages, and accuracy would be poor. On the other hand, movement of the artillery will require time and interrupt the support of the infantry; the movement

almost surely will be more or less visible to the enemy from the numerous points of vantage held by him.

General E decides to accept partially the hazard of forward movement, and to order forward the 75-mm. regiments and one battalion of the 155-mm. howitzer regiment. The remaining two battalions of the latter regiment can be ordered forward later if the situation warrants, probably after the capture of the main hostile position. The forward 155-mm. battalion will be sufficient to interdict the two principal routes of egress available for the enemy, and will leave a strong quota of 155-mm. artillery constantly in position to cover the movement of the other units.

The vicinity of hill 653 is selected for the advanced position of the 1st Field Artillery because it can be reached with not too much exposure and by other than a main road; observation can be had at McKnightstown, and the range will be effective for the main hostile position. A position near crossroads 614, although quickly reached, is rejected mainly on account of poorer observation.

Along the stream just west of hill 604 is selected for the 2d Field Artillery, not because it is ideal, but because, in point of cover, observation and accessibility, it offers fewer objectionable features than more forward positions. The Chambersburg Road will be designated as a route of advance; small groups of carriages, moving rapidly, may be able to advance over it. On the other hand, all or a large part of this movement may have to be made across country.

The forward battalion of the 101st Field Artillery is assigned to a position just south of McKnightstown, utilizing cover of the terrain and woods there.

It is eminently proper for General E to prescribe in some detail the forward movement of the artillery, for this movement must be a coordinated one in order that appropriate shifting of artillery support may be made, if necessary to cover the movement. The burden of making these dispositions during the attack will fall principally on General E with or without instructions from the division commander.

Similarly, it is incumbent on General E to prescribe certain points in connection with the artillery mission to guide his subordinates, insure concerted action, prevent duplica-

tion of effort on some objectives and neglect of others, and, in a measure, control ammunition expenditure. The corps artillery can be counted upon for counterbattery work.

The corps and division orders call for an initial preparation of 30 minutes, 3:30 to 4:00 AM. The corps artillery plan prescribes that the corps and army artillery, during this preparation, shall concentrate on the main roads and prevent hostile reinforcements from moving east. This permits the division artillery to place its preparation on points on or near the main objective and in advance of it. Care should be taken in this preparation not to destroy roads which will be used by our troops during their advance, particularly the axial roads of the division and brigades. The duration of the preparation and the limited amount of artillery and ammunition will not permit serious destruction, and preparation should be placed, primarily, on the points which are apt to give trouble during the early stages of the attack.

As is generally the case, care must be exercised properly to gauge and distribute the available ammunition supply so as to avoid a shortage or exhaustion of ammunition before the mission of the division is carried out. The supply initially available is as follows:

ROUNDS PER PIECE

	<i>Firing Battery</i>	<i>Combat Train</i>	<i>*Ammunition Train</i>	<i>Total</i>
75s-----	177	159	150	486
155s-----	42	120	40	202

*Includes one transport company and one-half an ammunition company from corps artillery ammunition train. There are six transport companies in the train, to supply four regiments, so this is not a full quarter of the transportation available. One company is used to avoid splitting units.

It is assumed the 75s have both shell and shrapnel, and the usual allowance—10% of smoke.

The artillery brigade munitions officer, after inquiry of G4 of the division, informs General E that the refilling point remains unchanged at Littlestown. This makes it impracticable to obtain additional ammunition for the attack unless it develops unfavorably, and the forward displacements are not made. General E has thus four to five hours of fire available for the 75s, and about four hours

available for the 155s, but since firing cannot by any means be continuous, this should suffice. The munitions officer learns from G4, that his recommendation for location of ammunition distributing points at farm east of hill 687 and in the vicinity of road junction 611 have been approved. He plans to use only the motor section of the ammunition train in rear of the distributing points; and keep the horse section available to assist the battalion combat trains in supplying ammunition during the combat.

The 1st Field Artillery must not cross Willoughby Run before midnight. The time from camp to Willoughby Run is 25 minutes, so the 1st Field Artillery can leave camp at 11:35 PM. The time thence to road junction 593 is 35 minutes, so if Willoughby Run is crossed at midnight, this point can be reached at 12:35 AM. The artillery is assumed to be marching at three and a half miles an hour. The length of the regimental column in time—without field train—is about 45 minutes, so that to move by the Mummasburg Road and have the head of the column reach Willoughby Run at midnight, the march must be timed to have the regiment clear of camp by 12:20 AM. The last battery may then be expected to be able to arrive at its position about one hour later or 1:20 AM, giving it two hours and ten minutes to prepare for opening fire. It must not delay its movement, since other troops follow it on the same road.

The 101st Field Artillery and the 2d Field Artillery will proceed to position via the Chambersburg Road in the order named, following the 2d Brigade. The rate of march of a motorized regiment is taken as the same as that of a light regiment, which is substantially correct with the present equipment. The 2d Brigade may be expected to clear the road over hill 627 by midnight; so the head of the artillery column can be on this road at that time. Hill 627—via the designated route—is about one hour's march from camp; hence the 101st Field Artillery can leave camp at 11:00 PM. Since the length of the regimental column, without field train, is about 70 minutes, the regiment should clear camp by 12:10 AM. The 2d Field Artillery should clear camp at 1:00 AM. The 101st Field Artillery will then arrive at its position about 1:00 AM, and the 2d Field Artil-

lery about 1:45 AM; this gives sufficient time to prepare for firing.

The situation is not especially favorable for signal communication: the lines will be rather long between regiments and General E at division headquarters. Initially the brigade lays lines to regimental command posts along the Mummasburg Road and the road leading north from crossroads 625. When the division command post moves forward, the artillery axis is advanced along the divisional axial road from road junction 593, leaving the original lines in place. Then, when General E arrives at Sevenstars, he still will have communication with all three of his regiments. The forward positions of the units will be conveniently accessible to the artillery axis. Forward battalions can use it, if necessary, for communication with their regimental commanders.

At 8:00 PM General E issues the following order:

1st FA Brig,
PENN COLLEGE,
14 June 19, 8:00 PM.

FIELD ORDERS }
No 7. }

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.

Topographical Map: Gettysburg-Antietam, 1:21120; Gettysburg, Arendtsville, Hunterstown, Knoxlyn, Fairfield and Newman Sheets.

1. (a) The enemy has advanced into the plain east of SOUTH MOUNTAIN to the general line ARENDSVILLE—EMMITSBURG. In our front he occupies the general line CASHTOWN—ORRTANNA. His outpost line of resistance is: CR 647—hill 653—MCKNIGHTSTOWN—RJ 586. The main line of resistance of the battle position is on the high ground west of the RJ 659—MCKNIGHTSTOWN—RJ 596—RJ 590—RJ 616 road. His positions have been hastily organized; very little wire has been discovered.
- (b) The First Army attacks tomorrow penetrating the hostile center, seizing the passes and destroying the enemy units which have debouched into the plain. The 2d Div will secure hill 969—hill 911. The III Corps will secure the hill 231—WILSON HILL ridge. The 1st Div attacks the enemy position advancing to the general line CASHTOWN—ORRTANNA, where it will consolidate, exploiting well to the front with strong patrols.

Line of departure: eastern branch of MARSH CREEK from MUMMASBURG to CHAMBERSBURG ROAD.

Time of attack: 4:00 AM, 15 June.

Boundaries:

North: GOLDENVILLE—HILLTOWN road to bridge across MARSH CREEK near hill 687—northern exits CASHTOWN (all inclusive)—summit of ROCK TOP (1187)—RJ 954 (both exclusive).

South: CHAMBERSBURG ROAD to L. HOPPY—SEVENSTARS—MCKNIGHTSTOWN STA (all inclusive)—ORRTANNA—RJ at point 334.0—752.3 (both exclusive).

The 1st Brig making its main effort on its left, penetrates the hostile position west and northwest of MCKNIGHTSTOWN in conjunction with the 2d Brig, and advances to the general line CASHTOWN—RJ 787, where it halts and organizes for defense. It assists the 2d Div in the capture of hill 969 by flanking action from the south.

Boundaries:

North: same as division.

South: hill 64E (inclusive) MCKNIGHTSTOWN (exclusive)

—RJ 787—road bend at point 333.7—755.8 (both inclusive).

The 2d Brig making its main effort on its right, assists the 1st Brig in its penetration of the enemy's position west and northwest of MCKNIGHTSTOWN, and advances to the general line RJ 787—ORRTANNA where it halts and organizes for defense.

Boundaries:

North: same as south boundary 1st Brig.

South: same as division.

2. This brigade, with the 101st FA attached, supports the attack of the 1st Div, by preparation fire and concentrations.
3. (a) The 1st FA from positions near RJ 593 will support the attack of the 1st Brig.

Special attention will be given to hill 653, the southern slopes (within the division zone) of hill 969, and hill 682.

- (b) The 2d FA (less one battery) from positions near the L. HOPPY—CR 625 road in the vicinity of hill 627, will support the attack of the 2d Brig. MCKNIGHTSTOWN will be covered by the 101st FA. Special attention will be given to that part of hill 653 within the 2d Brig zone, to hill 607, and to the ridge between the two creeks north and south of J. SMALL.

One battery will be used for accompanying guns, one gun being attached to each assault battalion.

- (c) The 101st FA will support the attack of the division from positions near the L. HOPPY—CR 625 road just north of the 2d FA. Its preparation will be placed on MCKNIGHTSTOWN—CASHTOWN and the roads in rear of the hostile main position to a depth of 1000 yards. During the attack one battalion will interdict the roads in rear of the main hostile position. The remaining battalions will place a covering fire on MCKNIGHTSTOWN as soon as the attack has progressed to the vicinity of CR 612. This fire will be lifted successively to the woods and orchard west of MCKNIGHTSTOWN, the orchard at CR 662, the orchard southwest of hill 726 and woods to the north, CASHTOWN and the woods west of RJ 676; and on such other places as may be assigned during the attack. Preparation will be made to assist the 2d Div artillery—on orders from these headquarters—in the reduction of hill 969.

- (x) 1. Units will move to position as follows:
 - 1st FA, via MUMMASBURG ROAD, will clear camp at 12:00 AM. Head of column will cross WILLOUGHBY RUN not earlier than midnight.
 - 101st FA, via CHAMBERSBURG ROAD, will clear camp at 12:10 AM.
 - 2d FA will follow the 101st FA.

All units will be ready to fire by 3:30 AM.
2. The period 3:30 AM to 4:00 AM will be used for adjustment fire and preparation with shell on known or suspected points of the hostile position which, for the 75 mm regiments, in general, will be those points expected to offer early resistance to our advance.

THE INFANTRY DIVISION

During the advance, concentrations will be placed successively on the hostile points of resistance immediately opposing our infantry. This fire, in general, will be lifted on approach of the infantry, by means of signals prearranged with infantry commanders.

Shrapnel will be used by the 75 mm guns as far as the supply permits.

After the capture of the main position, the 75 mm guns will fire upon call from the infantry or upon visible hostile troops; the howitzers will interdict the roads used by the enemy to the limit of range.

Ammunition expenditure per battery per hour:
75 mm guns, 400 rounds; howitzers, 200 rounds.

All units will be prepared to undertake assigned missions by means of aerial observation.

Except where necessary in overcoming actual resistance, destruction of roads forward of the hostile main position will be avoided.

3. Forward movements as follows:

1st FA, via hill 602—CR 560—across country to position near hill 653, one battalion to move upon capture of hill 653.

2d FA, via CHAMBERSBURG ROAD, to position along stream just west of hill 604, one battalion to move upon capture of this position.

Rear battalions to advance as soon as forward battalions are in position and ready to resume support of the infantry.

The battalion of the 101st FA assigned to interdiction fire will follow the 2d FA forward to position south of MCKNIGHTSTOWN. The remaining battalions to remain in initial position until further orders.

4. (a) See Adm O No 10, attached.

(b) Field trains will be assembled on present camp ground just south of the MUMMASBURG ROAD, and there await orders.

5. (a) Arty Ax Sig Com: MUMMASBURG ROAD to CR 625—CR 597—SEVENSTARS—CASHTOWN.

(b) CPs:

1st Div, 1st FA Brig and 101st FA,	}	Effective at
houses at point 347.2—753.5.		
1st Brig and 1st FA, house at point		
346.2—756.4.		
2d Brig and 2d FA, house at point	}	14-15 June
345.7—754.0.		

12:00
midnight

E

Brig Gen

Copies to:

1st Div; CG	1st FA Brig, CG	1st FA
C of S	Aides	2d FA
G1	Ex	101st FA
G2	B1	Am Tn
G3	B2	War Diary
G4	B3	File
Sig O	B4	
1st and 2d Brigs, CGs	Com O	

As soon as released, the commander of the brigade ammunition train will report to General E, who will instruct him to empty his train at the distributing points and refill. The brigade munitions officer works in close touch with the division G4.

It will be seen by a comparison of the foregoing orders with the division attack order that the artillery order must include a considerable portion of the division order. Paragraph 1 of the artillery order includes such information of the enemy and our own troops as is necessary for the artillery. In this case it should include details of the division attack; and also might include information as to corps and army artillery, units for aerial observation, and engineers working for, or with, the artillery. Paragraph 2 is a brief statement of the artillery support planned. Paragraph 3 has subparagraphs based on the regiments, or other sub-divisions of the artillery command. Provisions of the division order are included where they are directive to the artillery; they may be elaborated upon, and others may be added, in conformity with the division plan.

Sub-paragraph (x) of paragraph 3 of the artillery order usually contains the following:

Details of the movement into position. These must be closely tied to the division plan to avoid interference and loss of time.

Details of firing, including adjustment, if any, preparation, covering fire, and restrictions on ammunition expenditure which are usually necessary. Care must be used not to circumscribe the actions of the infantry commanders but at the same time to insure them full and concerted support.

Indications as to time and route of forward movement of the artillery, if any.

Some of these details, such as the ones pertaining to forward movements, may be placed in the regimental subparagraphs of paragraph 3, rather than in sub-paragraph (x). However, when of interest to the command as a whole—as the forward displacement is in this case—they can best be covered in (x).

Paragraphs 4 and 5 of the artillery order correspond closely with those of the division order. The artillery brigade axis of signal communications should be announced; the artillery regimental command posts may or may not be prescribed by the brigade commander, depending on the

situation. Their announcement tends to avoid confusion, but may hamper the regimental commander.

The distribution of the artillery order should include the division and supported infantry commanders.

(D) THE ADMINISTRATIVE ORDER FOR THE ATTACK

NOTE:—For the march on 13 June the changes in the administrative details were so few that they were embodied in paragraph 4 of the field orders.

1st Div,
PENN COLLEGE, PA.,
14 June 19, 6:30 PM.

ADMINISTRATIVE ORDERS }
No 24. } To accompany FO No 23.

Maps: General Map, Gettysburg-Antietam, 1 inch = 10 miles.
Topographical Map, Gettysburg-Antietam, 1:21120; Arendtsville, Hunters-
town, Gettysburg and Knoxlyn Sheets.

I. SUPPLY.

A. Railhead:

No change.

B. Rations:

DP's for 15 June 19:

CR 625:

1st Brig: 10:00 AM

1st FA Brig (less Am Tn): 11:00 AM

1st Tk Co: 12:00 noon

1st Engrs: 12:15 PM

CR 597:

2d Brig: 10:00 AM

All others, no change.

C. Ammunition:

DP's:

Artillery:

Farm house east of hill 687 and RJ 611.

Infantry:

1st Brig: RJ 593.

2d Brig: CR 597.

D. Engineer Material:

1. Refilling point: GETTYSBURG.

2. DP's; Wire, sand bags and other trench material, RJ just east of hill 682 (north of MCKNIGHTSTOWN) and MCKNIGHTSTOWN STA., as soon as the advance passes the line—hill 969—hill 727—hill 726—hill 687.

E. Signal Corps:

DP:

Wire for all units, L. HOPPY.

F. Ordnance:

Spare parts and repairs:

RJ at point 344.6—754.2

G. Quartermaster:

Reserve gasoline and oil:

PENN COLLEGE.

II. EVACUATION.

By army.

A. Men:

1. Coll Sta's:
CR 1600 yards northwest of J. FORNEY and CR 577.
2. Hosp Sta:
PENN COLLEGE.

B. Animals:

Coll Sta:
N. GRIST

III. ROADS.

A. Maintenance:

1. By the 1st Engrs within the division area west of the TEXAS—GETTYSBURG road.
2. All bridges within the area will be strengthened to carry 155 mm hows.
3. The farm road from CR 597 to main north and south road 300 yards north will be put in condition for motor traffic.
4. Traffic direction signs will be posted in accordance with circulation map.

B. Circulation:

1. Axial roads:
Div, MUMMASBURG ROAD to CR 625—CR 597—SEVEN-STARS—CHAMBERSBURG ROAD.
2. See circulation map attached.

IV. SALVAGE AND BURIAL.

A. Salvage:

1. All salvage will be evacuated to R DP's by organizations.
2. Captured material will be evacuated by the Div Tn to its bivouac.

B. Burial:

1. The Div QM will have charge of all burials east of the line MCKNIGHTSTOWN—MCKNIGHTSTOWN STA.
2. Organizations will have charge of all burials within their respective zones of action west of the above line.
3. The Div Chap is charged with the preparation of records and reports of all burials. He will be assisted by organization chaplains.
4. The 1st Engrs will furnish 60 men and the necessary tools. Details will be arranged with the QM.

C. The QM will organize a salvage detail to work in conjunction with the burial detail.

V. MILITARY POLICE.

A. Traffic Control:

1. The following schedule of traffic priority will govern during the attack:
Ambulances at all times.
Sig C supplies, after H plus 1 hour.
C Tns, H plus 1 hour 15 minutes.
Ammunition, H plus 2 hours.
Road material, H plus 3 hours.
Rations and forage H plus 8 hours.

2. Fifty yards will be maintained between vehicles or groups of ten men moving west of the eastern branch of MARSH CREEK in daylight.

B. *Straggler line:*

1. Along the CR 679—CR 625—L. HOPPY road.
2. Collecting point, CR 625.
3. All unauthorized men going to the rear will be arrested and turned over to collecting point.

VI. PRISONERS OF WAR.

- A. Collecting point, RJ 611.

VII. TRAINS.

All trains except combat trains will remain off the roads east of the line WILLOUGHBY RUN—CR 769 until H hour.

A. *Service Trains:*

Bivouacs:

Div Tn:	PENN COLLEGE
Service Co:	
Am Tn 1st FA Brig:	J. FORNEY
Ord Co Maint:	
Engr Regt Tn:	CR 625
Med Regt Tn:	PENN COLLEGE

B. *Field Trains:*

Bivouacs:

1st Brig, in area north of C. TOPPER.
 2d Brig, in area north of J. FORNEY and south of C. TOPPER.
 1st FA Brig, no change.

- C. Locations will be reported to, and courier service established with G4 by H hour.

VIII. MISCELLANEOUS.

- A. Mail will be distributed at R DP's.
- B. The usual reports of captured material will be rendered to G1. Reports will include captures as of 6:00 PM daily.
- C. Rear boundary of the division: CARLISLE ROAD (exclusive).

By command of Major General A,

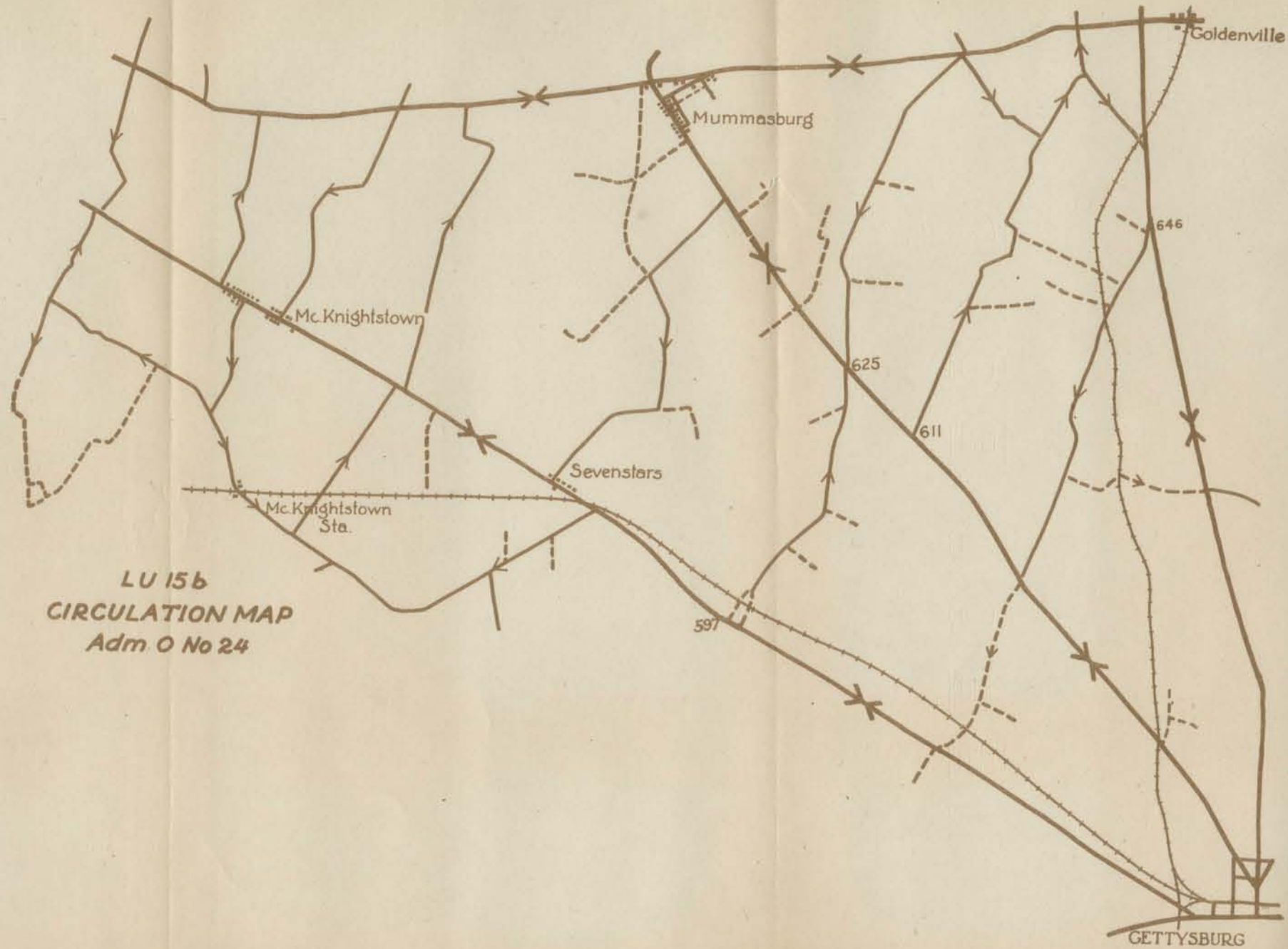
X,
 C of S.

Official:

Y,
 AC of S, G4.

Distribution:

CG	Engr	1st FA Brig
ADC's	Fin O	1st Obsn Sq
C of S	Hq Comdt and PM	1st Engrs
G1	Inspr	1st Med Regt
G2	JA	1st Sig Co
G3	OO	1st Tk Co
G4	QM	Div Tn
Adj	Sig O	1st Army
ASO	Surg	I Corps
Chap	Post Sec	2d Div
Cml O	1st Brig	3d Div
DMGHO	2d Brig	War Diary
		File



LU 15b
CIRCULATION MAP
Adm O No 24

(E) COORDINATION WITHIN THE DIVISION

1. **DEFINITION:**—By coordination is meant the working of all parts of the division as a team.

Without this coordination there results a divergence of effort, a lack of unity, and the division commander is denied the opportunity of employing his division as a unit. Considering the division as a heavy and cumbersome piece of machinery of great power, it is evident that the parts must interlock and work together to obtain the best effort, as well as to avoid the danger of breakdown from the great force exerted when the full power is turned on. In well trained divisions the coordination seems automatic, machine-like in its operation. It is certain that in all such cases, although only the results are visible, the coordinating control and direction is never absent. When a machine is running smoothly, the engineer does not interfere beyond supplying the fuel and oil needed, observing it closely in order to effect necessary repairs, alterations and replacements. This is the general line along which a division should be handled to obtain its greatest effect.

2. **CLASSES OF COORDINATION:**—The subject of coordination within the division divides itself into three main classes:

First:—Personal coordination, which comprises everything relating to the human element, which must never be lost sight of in warfare.

Second:—Tactical coordination, which comprises:

- (a) The planning and ordering of action; a command and staff function.
- (b) The combination of tactical units of different arms for concert of effort; a command and staff function.
- (c) The execution of orders, including local concentrations of effort by combined use of different arms and weapons; a line duty.

Third:—Service coordination, which comprises:

- (a) The planning of action of all service elements in accordance with the general action of the division; a staff function.
- (b) The execution of the orders; a service duty.

It will be noted that the question of coordination does not pertain exclusively to the command and staff, or to the line, but intimately concerns both.

The foregoing general classes of coordination will be considered separately.

3. THE PERSONAL COORDINATION OF BOTH STAFF AND LINE:—Here the question of command first arises. In France three distinct types of division commanders were observed. One communicated all directions to the chief of staff by written memoranda made of record. The second attended all staff conferences and made verbal decisions on points as they arose. The third had no set method, but handled a difficult situation so well, with excellent military judgment, tactical ability and great knowledge of modern staff work, that his lack of fixed methods brought no bad effect. The main point about each of these types is that each maintained the command, the general control and the general direction of affairs in his own hands which is an absolute necessity to coordination in any unit whatever its size. Strength of command is essential to coordination, as all subordinates know that decisions and orders are backed by an absolute and strong controlling command.

In addition to this, commanders are concerned with the personal characteristics of the commanders of their lower units. The division commander, by constant observation, must study the personal characteristics of his brigade commanders and senior staff officers, if his division is to operate as a team. All men cannot be handled alike. One man must be driven, another held with a tight rein; one will exhibit the hide of a rhinoceros, while the slightest censure will effect a sensitive man like a blow. The military judgment of one man is excellent, while different reasons, such as physical or psychological weakness, will compel reports from other men to be accepted with reservations. One commander will require only general instructions, while another will require constant observation and detailed instructions. These considerations were well covered by Napoleon in dealing with the art of war.

Another point that must be borne in mind by commanders and staff officers, if they desire machine-like precision in movement or maneuver, is the peculiar human tendency to misunderstand situations and misinterpret orders. This necessitates the following up of orders and observation of

the execution in order to correct misunderstandings and to permit prompt and unobserved corrections of errors.

Another point will suffice for the consideration of the personal element. This is the prompt, brief, soldierly expression of approval for excellent work, which, when generally known, leads to a rise in the morale of the immediate units, and the desire of emulation on the part of others. When necessary, this must be emphasized by an equally prompt expression of disapproval directed privately to the responsible person only, with other appropriate action where failure or poor work is evident.

From the above it is evident that military commanders cannot expect coordinated action unless they take into consideration the limitations of human nature, and handle their responsible subordinates in accordance with their personal characteristics. The more inflexible the system, the poorer the coordination. This view is backed by the strongest military authorities, those who have had the greatest success in handling troops.

How does this apply to the division? First, the division commander and his senior staff officers preferably should mess together, thus allowing for an automatic discussion of affairs three times daily. The old idea that "shop" could not be talked at meals does not apply in time of war. Second, the division commander and staff officers, by personal visits on both sides, should keep in constant touch with subordinate commanders and commands. Third, there should be a daily division staff conference attended by chiefs of sections and heads of services, for report of the day's operations and the condition of supply, and discussion and instructions as to the day following. In no other way can coordination of staff and line effort be effected as readily. This daily staff conference is of greatest importance. Neither inconvenience nor actual danger should prevent it. It is vitally important in obtaining coordination, as the plans and orders, to avoid confusion, must keep ahead of the operations and the needs of the troops. Foreseeing the needs of the situation is not the least difficulty of the staff. All possible eventualities should be considered, and tentative plans should be taken under consideration and, when advisable, actually formulated.

The old adage "A stitch in time saves nine" is nowhere more true than in division staff work.

4. In considering coordination within the division staff the following line from Frederick Remington applies strongly: "Their methods are the methods that proceed without commotion." In campaign; noise, disorder and confusion about any staff are synonymous with poor staff work. Extreme concentration is necessary, and the more difficult the situation, the greater the demand for concentration. Absolute control of staff sections and the turning out of good work with the minimum of observable effort and friction is an excellent indication of self-possession and of a complete grasp of the situation. Such work also indicates the ability to plan logically and systematically, and to formulate orders clearly and simply with all essential points included and non-essential ones omitted.

After the basic planning and orders and the instructions are completed, it is extremely important that subordinates, to the greatest possible extent, should be allowed to handle their part of the work of the machine without interference. If not competent they should either be trained or relieved from the work. It is a mistake, either as a line or staff officer, to give a piece of work to a subordinate and then to back him into a corner of doubt and confusion by inquiring about details before he has solved his part of the problem. If the details are his he should be permitted to think them out, and given time and opportunity for logical work. The critical judgment comes after the problem has been solved. The able officer should be given a free rein, while the work of those who cannot be fully trusted should be carefully checked.

The failure of effort of certain divisions in France illustrates another point. A certain chain of command is laid down for purposes of control. It is the greatest mistake on the part of the division staff or line commanders to disregard this chain. If a battalion or other fraction of the command is to be assigned a particular task or mission, the orders must go through the proper commanders or confusion is certain. As the greatest concession in this line, when grave emergencies require direct action, copies of the

orders directing this action must be sent to the senior commanders to keep them fully conversant with the situation.

The systematic handling of paper work is of great importance. Instances have been noted where the division commander personally opened and examined all the mail. Where the mail for the division commander numbers hundreds of letters daily, as it often does, such a system makes a clerk of the commanding general, and prevents his giving proper consideration to the important matters.

The chief of staff has no time for this kind of work. The secretary of the general staff, when one is provided, should open and route all communications to the proper office.* The great bulk of the communications deal with routine matters which should be entirely handled in the office concerned. Important matters are invariably submitted by the chief of staff to the commanding general, but the latter's attention should not be called to unimportant things. Those who have served at a headquarters in campaign will understand the importance of this systematic and mechanical handling of paper work, which, once systematized, cares for itself. Without such a system, the command is buried in a mass of detail. This independent handling of routine business by staff sections and services forms an important link in the chain of coordination.

The training of subordinates along this line has a distinct bearing upon coordination within the staff. Emergencies occur to every staff during campaigns when confusion or duplication of effort can be prevented only by the strongest control and direction on the part of the chief of staff and the commanding general, but these are exceptional.

5. TACTICAL COORDINATION:—The question of tactical coordination will be considered next. Coordination requires careful planning, clear orders, the strongest possible combination of arms and weapons, and efficient execution of orders, together with independent action in emergencies, best suited to the general or local situation.

Tactical plans and orders pertain primarily to the operations section of the staff, as does the combining of the

*In the division this duty should be performed by the division adjutant.

different arms on the march, or the securing of the maximum power for battle. All tactical plans are based upon the information of the enemy and the terrain supplied by G2, or obtained directly by reconnaissance.

6. It is not necessary to discuss the importance and necessity of a complete estimate of the situation as that is covered in another part of the course. No logical and complete plan or order can be formulated without such an estimate. One point, however, should be emphasized as it will assist in future work with units which employ the combined arms. In these units the action of the infantry forms the basis of all plans. The action of all other arms must conform to the infantry action.

7. First should be determined the infantry action, necessities, limits and missions from superior orders or available data, and then the infantry formation is decided upon. The plan must be simple and direct, with concentration of effort as opposed to dispersion. The former leads to the use of every available arm, every unit, every man and every weapon, which is coordination. Dispersion (unless warranted by a fortunate combination of circumstances) will lead to action with only a fraction of the available strength. Detachments should be held to the absolute minimum.

Next should be considered the questions of reconnaissance, protection and cover by the air service, the cavalry and the advanced elements. Then arises the question of the concentration of force. The artillery should be tied in with the infantry to obtain the best results. The auxiliaries, tanks, all available machine guns and other special arms should be tied in to obtain the maximum of power. These must be so placed that all will be available if needed. The services should then be considered—how can they best be used to supply the various needs of the troops.

The question of communications and the location of command posts is an important one. The necessities of the particular situation should be carefully considered and outlined in the plan and orders; but only such details are covered as are desired handled in a particular way, or which are of special importance. In the usual case the plan of

signal communications, previously announced, will care for the details, but if any are of special importance they must be provided for.

8. Combined with the logical method of planning must be the natural or acquired ability of expressing ideas in brief and simple language. In dealing with large units, time is always too short for mental rambling, and coordination of one's own mental efforts is a necessity for a staff or line officer at all times. To avoid waste of time, to insure logical procedure, and to assist in the formulation of orders it is recommended that the form and substance contained in a type form of division orders be fully mastered.

9. With reference to coordinating the action of the various arms, it is found that the lessons of the World War indicate the necessity of direct support of infantry units by artillery units. With the two infantry brigades in line this may lead to support by one artillery regiment of each brigade; with the infantry brigades in column, one artillery regiment may well support each regiment of the leading brigade. The employment of accompanying batteries and guns is another phase of artillery and infantry coordination requiring attention. General instructions covering these points are sometimes published in division orders, leaving the details to be arranged by the artillery and infantry commanders concerned.

10. In a sense, all auxiliary weapons, including tanks, can be considered as augmenting the infantry fire by concentrations on points or areas, but the artillery support is, in general, separate and distinct in its importance. Except in special cases, infantry alone cannot make a successful assault against a force of all arms. The necessity for coordination between artillery and infantry elements cannot be too strongly emphasized.

11. The question of tanks, chemical service and other auxiliary arms is usually handled similarly but by attachment to infantry units. All machine guns should be brought into action, if it is possible to do so. Idle guns are of no assistance. They are, in fact, a burden, and harmless to the enemy. Overhead fire can usually be arranged even for machine gun elements tactically in reserve, including, excep-

tionally, those of the light tank company. This represents a great increase in the fire upon the enemy.

12. This handling of combined fire power devolves upon commanders of units from the platoon up, and battle coordination requires the ability to concentrate fire from all arms available. It should be remembered that infantry troops are widely distributed, thus automatically distributing the rifle fire; the concentrations spoken of therefore naturally fall to the auxiliary weapons, automatic rifles, machine guns, light mortars, one-pounders, in addition to the artillery.

13. In considering the diagrams illustrating the general character of possible combinations of arms within the division, avoid the error, which is apt to occur in the study of diagrammatic illustrations, of accepting these blindly as applying to all cases. They illustrate what is meant by tactical combinations in general. The particular combination to best solve a particular situation is always a matter to be determined by a study of the individual case.

The aim should always be to bring, not only a sufficient power to bear, but an overwhelming power, if that is possible. The possible combinations and the allotment, often customary and convenient as a matter of organization, must always be borne in mind by the operations staff and the senior line officers. Thus, if one of the artillery regiments is accustomed to support a particular infantry brigade, that combination should not be departed from except when the exigencies of the situation absolutely demand it.

In the accompanying diagrams it has been the endeavor to illustrate the maximum power that can be concentrated to assist the infantry in the usual attack formations of the division, this being the principal object of tactical coordination of effort. All of the formations shown here were actually used by divisions in the First Army during the World War.

The attack in column of brigades, each brigade in column of regiments, will be considered first. This is the strongest and most powerful attack under the conditions of a very narrow front, a great penetration against powerful resistance, and over a long period of time. The narrow

front and the great depth of deployment are necessary to sustain the division during its long attack, and to supply the fresh impulses necessary to maintain the continuity of the attack. If these fresh impulses—reserve units close at hand—are not available the attack slows down and is finally stopped for lack of driving power. This permits of powerful and concerted counter-attacks by the enemy.

Diagram No. 2 illustrates the attack in column of brigades each with regiments in line, and an attack with brigades in line, each in column of regiments. One of these forms is used when the division is deployed on an average front, 1500 to 2000 yards, or when powerful defense and long continuance of the attack are not anticipated. These are also very powerful forms of attack, though limited to situations in which the division has been assigned a moderate frontage. The choice is determined by the tactical situation and the terrain. The difficulties of control by one man across the entire front may often dictate the use of the two brigades abreast.

Diagram No. 3 illustrate the attack with the infantry brigades in line, each with its regiments abreast, each regiment in column of battalions. During the World War some of the best American divisions used this form of attack almost to the exclusion of any other, disregarding almost entirely the considerations of frontage, penetration and duration of the attack. The great ability of some of these commanders compels respect for their opinions. However, the other forms have advantages, particularly along the lines of long sustained action and of replacement, and have been successfully used. They should be noted and borne in mind, leaving the decision as to the proper formation to be determined by a study of the particular situation. It should be remembered that the third form illustrated is applicable particularly to situations in which the division is deployed on a broad front—2000 yards or more against a shallow or poorly defended position, or when the action is likely to be short and the position carried in one assault. As this form lacks sufficient depth of deployment to maintain the division in action for an extended period of time, it is not applicable to a deep penetration, an attack against power-

DIAGRAM No. 1

Attack in column of brigades
in column of regiments

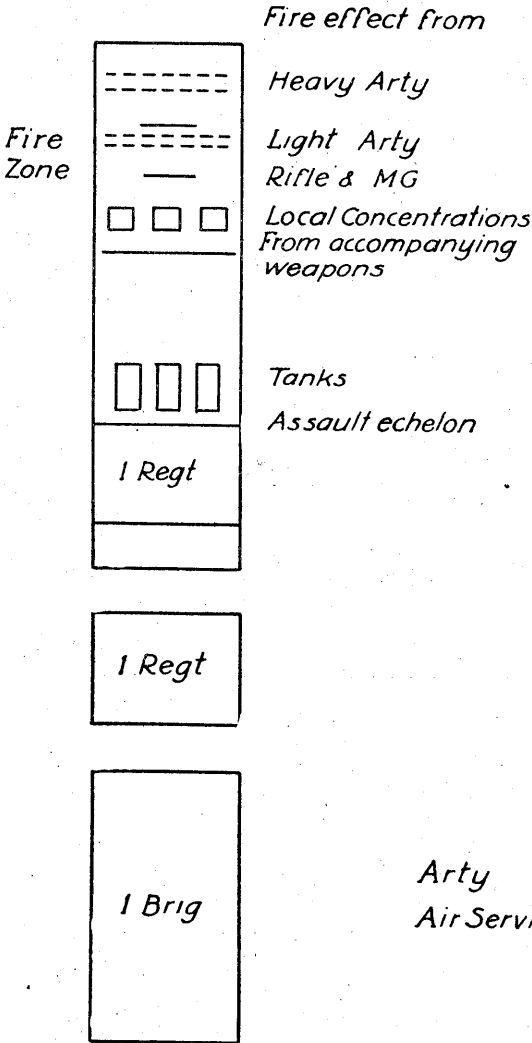


DIAGRAM No. 2

(1) Attack in column of brigades.
(2) Attack in line of brigades.

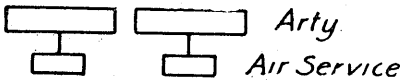
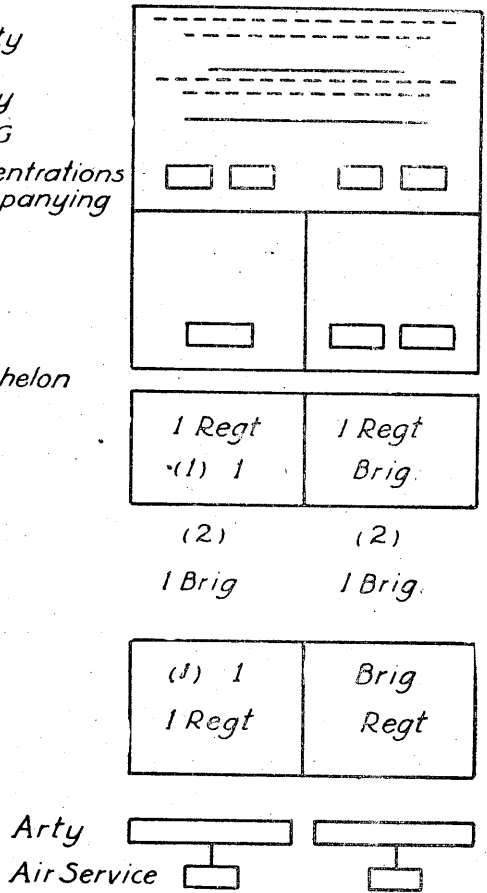
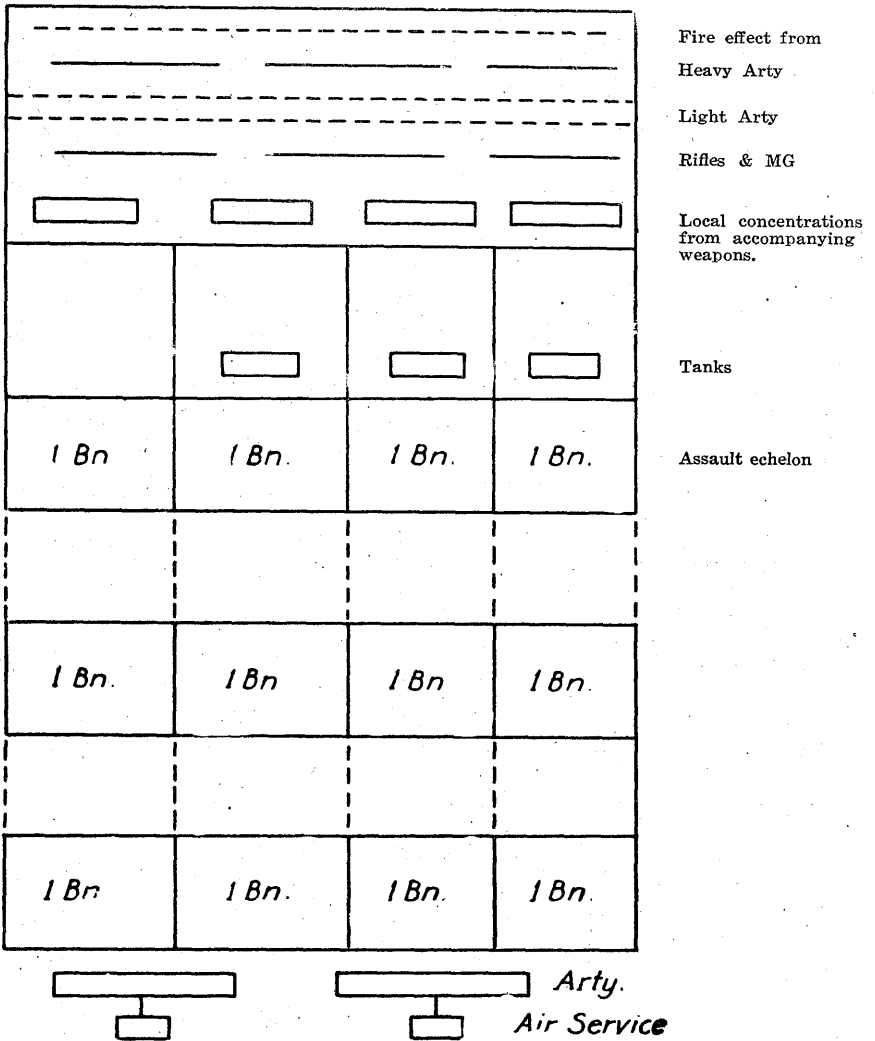


DIAGRAM NO. 3

Attack in line of brigades in line of regiments in column of battalions



ful resistance deployed in great depth, or an attack that must be maintained for a long time.

14. Let it be assumed in the problem, Chapter V, that the enemy has fortified from the mountains out as far as McKnightstown, and that the division has been assigned a front of 1000 yards. The decision might be to attack in column of brigades, each in column of regiments. The infantry formation should be decided upon first. The artillery is the twin sister of the infantry. There are two regiments of light guns. These are ordered to support directly the assaulting regiment. It is the function of the artillery commander to assign these regiments to the support of the assaulting battalions.

What machine gun help is possible? The assault regiment has three companies. Those of the other regiments, and also of the division tank company, provided the tanks are not to be used in the attack, are available and may be used for overhead fire in the initial stages of the attack, reverting to their own units when this fire is no longer possible. Here is a tremendous machine gun strength. It is usually a mistake not to use it all at first if the hostile position is clearly outlined. The force brought to bear should be overwhelming. In addition, there are local concentrations against strong points by accompanying batteries and guns, machine guns and the infantry special weapons. With all these used in addition to the artillery, and they should be used, the infantry will not complain of lack of support. The division tank company should also be used, attaching it to the unit charged with making the main blow.

The division commander has a squadron of air service with two flights of six planes each. As a general rule, the air service commander is directed to carry out certain duties, such as reconnaissance and the observation of artillery fire, and it is his function to detail planes in the proper number for each of these duties. In special cases, the division commander may designate the number of planes for each of these duties, though this is an exceptional procedure.

15. It is not necessary to take time for a minute examination of the forms of deployment shown in the diagrams, as this discussion is for the purpose of showing the general

method of tactically tying in other arms to the infantry action in order to effect the necessary coordination.

16. The preceding discussion refers to combinations of arms and weapons, but there must also be borne in mind the necessity for coordination of effort. The terrain held by the enemy is not of uniform importance to him. In the problem the ground about Cashtown, where the main road debouches into the plain, is the vital sector. In practically every situation it will be found that certain localities are of greater importance to the enemy than others. These are the points against which the coordination of effort must be especially directed. The others are of lesser importance, and the attack upon them is of a containing nature, or with a view to infiltration; but if the study of the problem discloses points whose fall will involve the capture of adjacent ground or the whole position, or points where successful penetrations will result in the reduction of adjacent strong points or areas, this fact indicates the necessity for concentration of arms, weapons, and means against them. This may be called "the principle of the decisive blow"—the concentration of effort against the vital points—while maintaining pressure against the remainder of the front. This principle is fundamental, but there were many cases during the World War in which it was completely overlooked.

It must be constantly borne in mind that by concentration of effort against vital points it is not meant that the infantry is necessarily thrown directly against them. If the vital point is a strongly defended point or area whose fall will threaten the enemy's line, the concentration of all auxiliaries will be directly on this point while the infantry contains it in front and endeavors to reduce it by penetrations and flanking movements. In other words, while the concentration of effort is directly on the vital point, the concentration of the infantry is not necessarily against it, and it is reduced without a direct infantry assault.

17. Coordination in the deployment and the time of assault is an important consideration in all these forms of attack. The deployment may be covered in the division order by the assignment of a deploying area for each brigade and separate unit, in which case the use of local cover-

ing detachments is a normal duty of infantry commanders concerned. The simultaneous attack is arranged by the assignment of a line of departure, or by direction that the assault units cross a well defined topographical line, such as a road or line perpendicular to the advance, at the same hour. This line is analogous to the initial point in marches. In the latter case the duty of working out the time element devolves upon the subordinate commanders; but in the former case the higher commander sets the exact time in order to secure unity of effort.

18. In connection with the use of all available means of striking the enemy, the artillery has high explosive, shrapnel, and smoke shells; gas shells are also frequently available, being divided into persistent and non-persistent. The particular class of shell to be used is determined by the situation, and the designation of the shell to use is, to some extent, a function of the coordinating element of the division. In the problem in this text the high hill just north of the 1st Division sector is an important point, as it gives to the enemy an excellent point for observation. In this respect it is similar to Mont Sec in the St. Mihiel attack, and it should be thoroughly "smoked" to blind the hostile observers that will certainly be on it.

The orchards and woods near the hostile positions are dangerous and are, at best, some hours away. Non-persistent gas, if available, mixed in with the high explosives of the 155-mm. howitzers, would be most effective there. By the time the Blue troops reach these places the non-persistent gas will have dissipated.

The point to the above suggestions is, that we have many agencies for assisting the infantry, and proper coordination requires forethought and every possible use of the means at hand. The hill mentioned is in the sector of another division, but we are not forbidden to arrange such matters with adjoining troops. In fact, this is the normal procedure. Again, there is the corps and army artillery available for assisting in just such situations as this, and they should be called upon. This chapter does not include the coordination between the division and the corps and army agencies, but the function of these agencies—combat troops, air service, artillery, etc.,—must not be lost sight of.

They are always subject to call, and this should be understood.

19. Battle coordination is a continuing function during action and consideration should be given to the functions of lines of signal communication, signal plans and the chain of information officers and agents to tie the command together and to insure a continuous flow of orders and information. It must not be forgotten that time spent on a thorough organization of message centers is time well spent.

20. One of the greatest coordinating agencies in campaign is the telephone. It should be used to the fullest extent. In general, its use should not be restricted on the grounds of secrecy, or listening-in by the enemy. Time, effort and annoyance are saved by its use, and the advantages of prompt, clear and full understanding far outweigh the disadvantage of the occasional fragmentary messages which may be picked up by an enemy. The radio must be used with discretion, but the telephone brings your man to you in the twinkling of an eye for discussion or explanation. Therefore, if coordination is to be obtained, the division telephone system must be intelligently installed and freely used. Never send for an officer, line or staff, when the telephone can be equally well used. His time is valuable. Economy of time is always important in battle. The above refers to the tactical use of the telephone. Unrestricted and unintelligent use of the lines in rear areas would, of course, almost immediately block the entire system.

21. In addition to coordination of fire power, there is another form of battle coordination of importance which formed a weak point in American operations in France. This is the duty of mutual assistance in emergencies. There were many cases of divisions held up by powerful areas of resistance, that received no assistance from successful divisions on the right and left, the latter sticking rigidly within their own assigned limits; or regiments and battalions held up by strong points and left to their own devices, with adjoining troops in good positions to have turned the flank of the hostile resistance. This form of line coordination of effort must be thoroughly trained into any modern army, and applies to all units from the largest to the smallest.

22. Before leaving the subject of tactical coordination it will be observed that the staff coordination in the case of a march, as illustrated by the problem, consists; first, of the detailed planning and formulating of orders based upon certain specific considerations which have been itemized in Chapter V (A); second, of cross checking these plans and orders by the chief of staff and by the division commander, when necessary, and the tying into the G3 plans the service plans of G4; third, the safety insurance against misunderstanding or misinterpretation on the part of brigade and other commanders; and fourth, where necessary, the personal supervision of the execution of the orders by staff officers.

23. The same general principles apply in combat, as already illustrated in this chapter. The staff plans will be based on the limits of the infantry and the assigned missions. The formation of the division and the possible combinations of assisting arms and means must be carefully considered. The staff must coordinate the deployment, the simultaneous attack and the teamplay, to gain advantage from the ground forms and the concentrations against vital points.

24. In the case of a march, the line coordination would consist of the preparation of proper plans and orders by subordinate commanders, giving time and place of starting; in the strict observance by troops of the rules of march discipline; in independent and energetic action by troop commanders in any emergency; the local protection of all columns; intercommunication, particularly between columns, in which staff officers with motor transportation may be very useful. These were the rules followed by our Third Army in the march into Germany, an unusually successful and well managed movement.

25. The line coordination in the attack, as pointed out above, in addition to the designation of the time and place of starting, would consist of the necessary instructions to insure control, concentration of fire by different weapons or arms, mutual assistance and a constant interchange of information laterally and up and down, all of which are of equal importance to coordination of effort.

26. COORDINATION OF THE SERVICES:—The conference on the administrative details has indicated the great scope of this subject. The handling of supply and the administrative control of the services is conceded by all great military writers to be more difficult than the tactical handling of troops. History is full of examples of disasters caused by failure to coordinate the services, particularly the supply of all kinds, with the movements of the troops.

27. A recapitulation of the points covered in Chapter V in the march order and the battle plan will be sufficient. The following points were considered in the preparation of the administrative order for the attack problem: railhead, supply, distributing points for all units; ammunition refilling and distributing points for infantry and artillery; corps and division engineer and signal dumps; water supply; evacuation; collecting stations; circulation, maintenance and traffic control of roads; salvage and burial; military police and stragglers; collecting points for and evacuation of prisoners of war; time and place of release of service trains; position and movement of field and division trains; assignment of extra trucks, disposition of surplus baggage; mail; and the details of moving their own sections—all these would prevent time hanging heavily on the hands of G1 and G4. Only systematic planning and formulating orders will obtain coordination of all these elements.

28. The outlines of the tactical and administrative orders give little trouble in actual campaign, as any good staff officer will have in his note book the outlined subjects to be covered in the normal classes of action. The related questions and conditions which must be borne in mind are the ones that cause the trouble in handling the services of all kinds.

29. The following is an outline of the problems that confronted the assistant chief of staff, G4, in drawing up his administrative order:

1. Road system available, with coordination of route and time in order to prevent confusion and crossing.
2. The time elements involved.
3. Regimental field trains—status of the supplies carried by them.
4. Where are they?
5. The operation of the division train between the railhead and distributing points. What assignment will be made for distributing points?

6. Are the distributing points conveniently situated as to roads, distances from troops, facilities for handling wagons and supplies?

7. Ammunition supply: Have all the trains their prescribed allowance? Where is the refilling point? Has the division any ammunition on credit?

8. Should trains be released? If so, where and how distributed as to roads? Are any special orders required for the medical regiment and engineer regiment trains?

9. The difference in rate of travel of horse and motorized sections, and the necessity of moving motorized sections by bounds.

10. The sufficiency of camps, billets, water, etc.

11. Questions of terrain, road conditions, necessity for protection of supply elements.

12. Sufficiency and convenience of evacuating agencies.

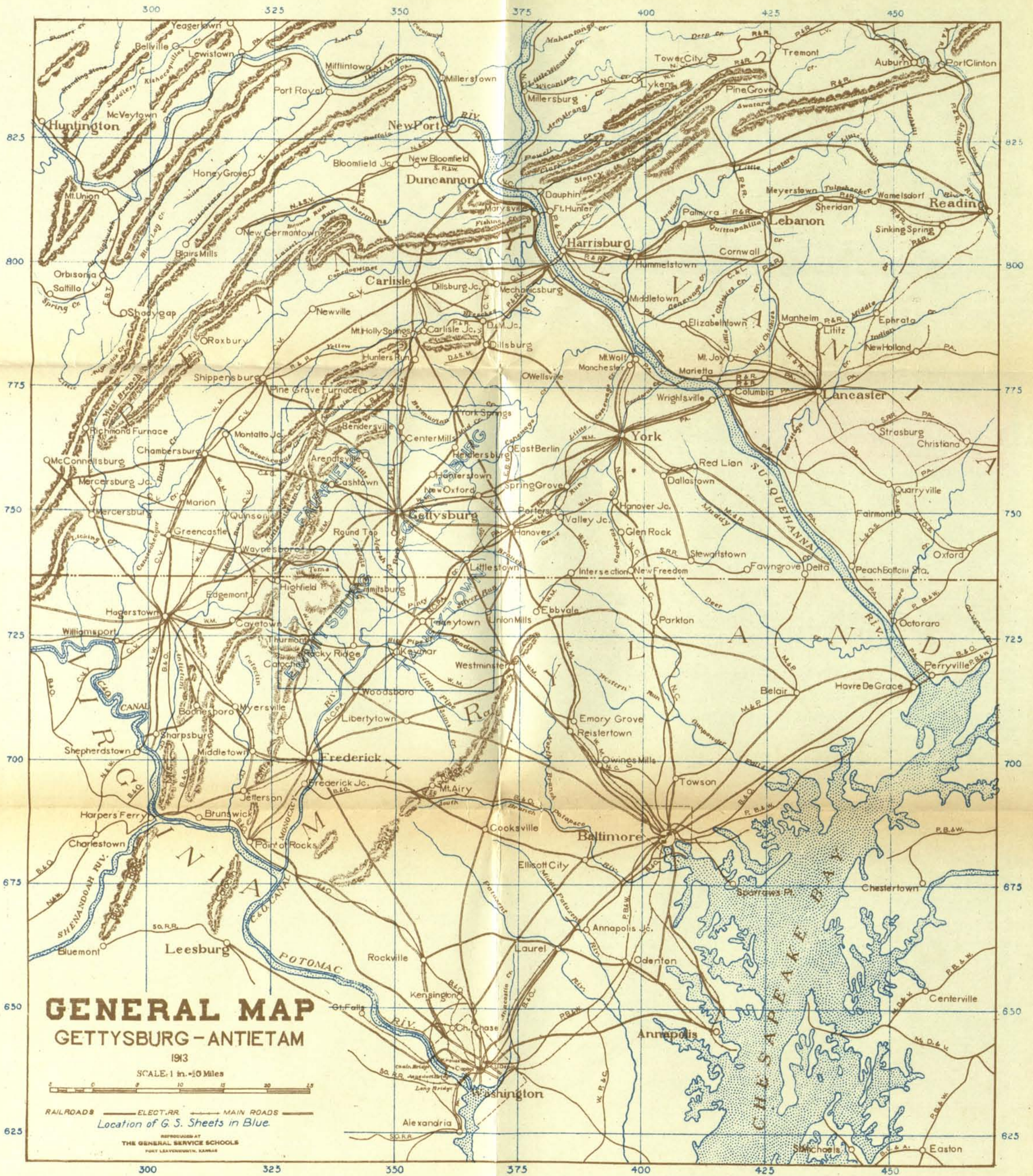
30. All these and numerous other points arise to complicate the administrative estimate of the situation. Upon the coordination of effort between the heads of the different services, the absence of friction and the willing acceptance of decisions, will depend clear, clean cut administrative orders, which, like all other orders, should set forth the decisions in simple, clear language. Nothing will better repay some effort on the part of officers in high command, or responsible staff officers, than a thorough study of the administrative requirements of a division. The best results will come when such officers combine executive ability with grasp of details.

31. In administrative work, as well as in tactical, and in line and service coordination, daily situation maps are of great assistance. The G3 section keeps a daily situation map showing, primarily, the location of all combat units of the division. The G4 section similarly keeps a map showing the location of the various services, installations, etc. The G1 section combines the information contained on the above maps, and from this and its own data prepares a station list showing the location of all elements of the division. A well organized map section is a necessity in every staff. A good map showing details, is often better than pages of written matter.

32. Before closing this chapter it is desired to emphasize this point: to attain precision throughout, the division must be regarded as a real team in which every officer, line or staff, will play his part, and every unit will know its functions and through divisional spirit can be depended upon for the necessary teamplay. If these functions are

normal they are already known: special functions or actions require planning and orders to make the will of the commander known to subordinates and these orders are more or less detailed, depending upon the sphere of action or the influence of each.

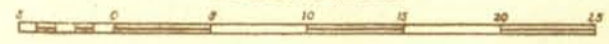
A division is too heavy, cumbersome and complicated a machine to be handled in detail by any one man. Therefore the success which the division attains, whether in planning or in execution, will depend upon the degree of coordination within the division. Only coordination of all the elements will give that prompt and powerful response to the will of the commander which is essential in bringing the full power of the division to bear in any military situation.



GENERAL MAP GETTYSBURG - ANTIETAM

1913

SCALE: 1 in. = 10 Miles



RAILROADS — ELECT. RR. — MAIN ROADS
Location of G. S. Sheets in Blue.

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