COMPLETION REPORT

Camp Wadsworth, Spartanburg

South Carolina

CAMP [illegible], SOUTH CAROLINA

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Office of
CONSTRUCTING QUARTERMASTER
CAMP WADSWORTH

Spartanburg, S. C. Feb. 1, 1919.

From: Constructing Quartermaster

To: Officer in Charge of Construction Division, Washington, D. C.

Subject: Completion Report.

1. In accordance with Supplement to General Instructions to Constructing Quartermasters, dated July, 1918, the following Completion Report is submitted.

2. The Constructing Quartermaster, Major John D. Kilpatrick, O. R. C. N.G. N. J., arrived in Spartanburg at Noon, July 16th, 1917. Major George M. Cole, N. G. Conn. and Captain Charles W. Stark, N.G. N.J., designated as Assistants, arrived at noon, July 15th. First Lieut. R. R. Marston, Engineer Reserve Corps, reported for duty July 20th, 1917. The representatives of the Chamber of Commerce met Major Kilpatrick and his Assistants on July 16th, and took them out to the proposed camp site in order that they could immediately become familiar with the existing conditions. Due to the foresight of Major General Leonard Wood, a local firm of engineers had been instructed through the Chamber of Commerce to prepare a topographical survey with five foot contours of the camp site, and this map was ready upon the arrival of the Constructing Quartermaster. With the aid of this map the original lay-out of the various units was made with due consideration to drainage and available space for drill grounds, and at the same time so arranging the location of the units with respect to the source of supply that there would be no difficulty in the matter of furnishing the troops in camp with the necessary stores. This original lay-out was never changed. It was possible to have a drill field 1000 feet wide, and over a mile long between the legs of the U forming the Thirteen Infantry units.

3. The land upon which the camp was located was under cultivation in some cases and the remainder was wooded land. Upon about three-quarters of the camp site cotton and corn were growing, and the balance consisted of pine and oak timber. There were a few farm buildings occupied upon our arrival, but the tenants moved out when convenient, and in as much as the original lay-out took into consideration the drainage, apparently, there was no necessity of any particular amount of work to put it in condition so that troops could occupy it, except in three of the infantry units, and one of the artillery units, it was necessary to do some grading to construct some open drainage ditches. In the rear of Unit 14, there was a swamp, covering about two acres, which had to be drained, and afterwards filled in to a depth of eighteen inches by means of wheel scrapers and drag pans. No clearing of woods was done by men on the job, except where the trees occupied the sites of the buildings originally. As the troops were about to arrive, a gang of laborers were sent in to clear a width back of the mess buildings sufficient for the location of tents. Of course, when the troops arrived, they proceeded to clear out the underbrush and small trees in the Company streets, leaving, as far as

possible, the trees from four inches and upwards, standing. Instructions were given to this effect because orders were received from the South-Eastern Department that the conservation of all large trees was covered in the lease for the camp site executed by the local Chamber of Commerce. There were some violations of this order, of course, and several enlisted men were punished for disobeying orders, but due to cordial co-operation from the Commanding General of the camp, these violations were kept down to the minimum. Due to the nature of the soil, namely, red clay, the transportation problem in wet weather required careful consideration. With the exception of the improvement of an old county road from Division Headquarters to connect with a concrete pavement constructed around the warehouses, no permanent road construction was originally authorized. The roads mentioned proved to be particularly valuable during the winter of 1917-1918, because of the severe weather, and had it not been for these roads, the various units throughout camp would have had to carry all their stores. On the other roads in camp it was impossible to even use a mule team during January and February. In all other cases the roads were simply graded, and during wet weather were almost impassable.

4 The Contractors, namely, Fiske-Carter Construction Company, of Worcester, Massachusetts, with a branch office in Greenville, South Carolina, had been notified through unofficial sources, that they were to be the contractors, and both Mr. Fiske and Mr. Carter came over from Greenville on July 16th. After they had looked over the conditions with the Constructing Quartermaster, and decided upon what would be needed to carry on the work, they proceeded to call in from the private jobs they were at that time engaged in throughout this vicinity, the various Superintendents and Foremen, and at the same time, advised everyone in the vicinity of their need of men. Mr. Fiske was on the work continuously, and took charge of the construction work, while Mr. Carter, who was also devoting his entire time to the work, looked after the financial end. Mr. Cameron, who had been one of their Superintendents for several years, was brought here as General Superintendent, and Mr. Owen, who had also been with the Company for several years, was made Assistant General Superintendent. The system of handling the construction work, was through Division Superintendents, who directed the work of a certain section of camp under the supervision of the General Superintendent. The gangs consisted of one foreman, with from ten to thirty carpenters or laborers, as the case might be. As to the administrative end, assistants were assigned to follow up the various orders, prepare schedules, expedite shipments of material, auditing, payment of bills and vouchers. The workmen were paid by the paymaster upon rolls prepared by the Field Auditing force of the Constructing Quartermaster's office, in accordance with the provisions governing same in the manual. The Contractors had been engaged in the construction of mill buildings and villages in this locality for several years, and had the necessary equipment such as, scrapers, dump-cars and small tools for beginning the work.

5 When the Contractors arrived on the ground on July 16th, and learned generally what would be required in the way of material, proceeded immediately to place orders for same. It was possible to obtain sufficient lumber in Spartanburg for beginning the work, and the first lumber arrived on the ground Thursday, July 18th. Ground was formally broken in the afternoon of the 19th, and the construction of the first mess building in Unit No. 1 began with a force of twenty five or thirty carpenters and laborers.

6 In regard to labor in this section of the country, a gang system prevailed, in that a foreman from a neighboring town would report that he could bring in say twenty carpenters. He was immediately put to work with his own gang. There is one advantage in this system, in that the men knew the foreman, but in some cases this proves unsatisfactory, because if the foreman is laid off through inefficiency, his gang would almost invariably follow him. There was some difficulty in obtaining labor because three other camps were under construction within one hundred miles, namely at Columbia, Charlotte and Greenville, the latter being only twenty three miles distant, and Charlotte, seventy six, both on the main line of the Southern Railway. Due to the reputation of the Contractors, and the fact that they were so well known throughout this section, there were no serious delays because of insufficient labor. On numerous occasions of course, it would have been impossible to have used two or three hundred more carpenters, but it would have meant often increased wages, and even considering the element of time, this increase was not believed to be justified. It was not necessary to advertise for labor, or to offer any inducements whatever to gather men from any distance. The labor, both white and black, was entirely local, and almost exclusively, pure Americans the class of farmers and townspeople in the neighborhood, being of pure American stock for generations, and were instilled with the feeling that they were also soldiers, and that they were working for the Government. This feeling had its effect apparently, and practically no trouble was had with them. They were very reasonable, and agreed to do their best. It would be unjust to say that everyone on the job worked every minute of the time, but there was no deliberate laying down on the part of any great number, and when they were apparently idle, it was found upon investigation that almost invariably they were awaiting of the arrival of some material which was on the way, or that the foreman was getting instructions on some special point. No labor was housed at the camp, and no mess buildings of any kind erected. The Camp being only two and one half miles from Spartanburg, and the majority of the men living in or about the City, it was quickly decided to carry the men back and forth on the electric Railway passing through the camp. A rate of ten cents per man, each way, was made with the Railway, and they carried through their part of the contract in furnishing a sufficient number of cars to transport the total number of men without serious delay. After experimenting with different methods of handling the fare question, it was decided to have a representative of the Auditor's office go through the train morning and night with the Railway conductor, counting each workman with a hand tally machine. The conductor received a certificate from the representative of the Field Auditor's office as to the number of workmen actually carried, and payments were made by the Contractors upon this basis. Two stops were made by the train on the camp site, and the men were able to be on the job at 7 o'clock in the morning. A ten hour work day was instituted immediately for all classes of labor, and eleven hours pay was given for ten hours work, in other words, eight hours a day basis time, with time and one half for overtime. Only occasional difficulty was met in getting the men in and out, and only one accident occurred, and that was a rear end collision between a soldier train and a work train, resulting in the death of one our surveyors. This accident took place near the City limits, and off the reservation. There being no arrangement between the Government and the Railway Company, damage suits resulting, of course, were brought against the Railway. Another arrangement was made with teamsters and workmen who came with their wagons.

that camping places were provided for them in the woods. They would take their covered wagon bodies off the wagon frame, and sleep in them, and made their fires and subsisted themselves. This arrangement continued until long after the troops began to arrive, and we had no trouble with them. The maximum number employed at any one time was during a week in August, when 5,606 men were employed of all kinds on the work. The only men that apparently were members of unions, were the electrical workers and pipe fitters and plumbers. There were no carpenters' unions here in this neighborhood, and almost all of the men employed were country men and city dwellers, who were accustomed to doing that class of work in connection with other means of livlihood. The rates of pay for each trade and each class of labor were as follows.-

Class of Labor	Initial Rate as of Aug.-1917.	Increased Rate	Date Increase
Blacksmith		40¢	10/18
" helper		35¢	"
Bricklayer	50¢ per hour	55¢	"
" foreman	55¢ " "	60¢	"
" Helper	22½¢ " "	30¢	"
Carpenters	35¢ " "	55¢	"
" foreman	45¢ " "	65¢	"
" helper		22½¢to25¢-30¢	4/18-10/18
Cement finisher	50¢ " "	22½¢to25¢-55¢	" "
Chauffeurs	3.00 " day	$1.00 per week	"
Concrete foreman		3.00 " day	10/18
Electrician	40¢ " hour	60¢—70¢	4/18-10/18
" foreman	45¢ " "	70¢to85¢-75¢	4/18-10/18
" groundman		40¢	10/18
" helper	27½¢ " "	30¢—35¢	4/18-10/18
" lineman	50¢ " "	70¢	10/18
" line-helper		30¢—35¢	4/18-10/18
Electric wire foreman		70¢—75¢	4/18-10/18
" wireman		60¢	4/18
Engineer, hoisting		50¢	10/18
Glazier		40¢	10/18
Labor, common	30¢ per hour	25¢—30¢	4/18-10/18
" foreman	35¢ " "	($3.50to4.50day	4/18
		($4.00to5.00"	10/18
Mason		50¢—55¢	4/18-10/18
" foreman		55¢—60¢	4/18-10/18
Machinist		40¢	10/18
Marker maker		30¢	10/18
Mechanic		40¢	10/18
Painter		35¢—40¢	4/18-10/18
" foreman		50¢	10/18
Pipe-layer	37½¢ per hour	25¢—30¢	4/18-10/18
Plasterer		55¢	"
" foreman		40¢	10/18
Plumber	37½¢ " "	45¢-75¢	4/18- 6/18
" foreman	62½¢—	($10.00 per day	4/18
		85¢ " hour	6/18
" helper	30¢ " "	37½¢ "	4/18

Class of Labor	Initial Rate as of August-1917	Increased Rate	Date Increase
Scraper leaders & dumpers	35¢ per hour	35¢ per hour	10/18
Steam-fitters		75¢ " "	10/18
" helper		37½ " "	10/18
" foreman		88¢ " "	10/18
Ancillers		(25¢-30¢-32½¢	4/18
		(45¢	10/18
Teams, two horse with driver		55¢-65¢	4/18--10/18
Truck-drivers (auto)		$1.00 per week	10/18
Watchmen		3.50 " day	"
Waterboys	17½¢ " "		

7 In the beginning of the work no ditching machines, machine t ols, etc. were used other than the ordinary road scrapers and rollers. Of course, in the construction of the railroad sidings and the main lead tracks, the excavation was so heavy that steam shovels were used to great advantage. Later in connection with the construction of the sewerage system two trenching machines proved to be a very economical investment, as little rock was encountered in the trenches. Power driven saws were used continuously on the work, and if the building to be constructed was of any considerable size, a small power driven saw was set up at the site of the work, and at all times one was ready for use in the main lumber yard situated along the electric railway. Later also in connection with the road construction, one-fifteen ton and one- ton ton, and two-five ton road rollers were of considerable value. Likewise in connection with the concrete road construction, and other concrete work, either the small Hunter mixer or the large boom mixer were used to a considerable advantage. In all, four of the smaller type, and three of the larger type machines were employed on the work. Owing to the condition of the roads, particularly after a storm, auto trucks could not be used to much advantage, and for that reason, only one - one ton and one half White truck was placed upon the work for transportation of express and small freight shipments between Spartanburg and the camp. In every other case the hauling was done with wagons. During good weather motor trucks were available from truck company No. 17 stationed at this camp in command of Captain John N. Gage, and these were used for transporting lumber, etc. from the Fair Forest Station , approximately two miles from the center of camp,or from Spartanburg three miles away, but after a rain the three ton trucks referred to were of no use, and the mule teams were used.

8 The attitude of the people in Spartanburg County, and, also, in the City adjacent, was friendly in the extreme. As stated previously, they were almost entirely pure Americans of English descent. The Chamber of Commerce of Spartanburg complied with all the terms of its agreement with the Government, and there was the greatest amount of co-operation throughout the work. The public seemed to realize that the work being carried on required the co-operation of all concerned, and did everything in their power to help make the camp ready for the New York troops, which were to be sent here for training to go abroad and fight their battles for them.

9 Every possible precaution was taken to prevent fire, and the suggestions, as per your circular letter of August 4th, were carried out in detail. The result was that on the construction work there was only one fire on the night of November 29th, when a temporary cement shed was destroyed. Even since the camp has been completed with the exception of the construction of three mess buildings in Area B, there have been practically no fires of a serious nature. A Battalion of the 2nd North Carolina Infantry, under Major Hinkle, which was ordered here in July, were of great assistance in this connection, and performed their duty on fire protection and theft of material in a soldierly manner, but the camp very quickly, however, who we hope that their men were on guard duty every other day, and on August 8th a Company of New York Engineers arrived here, and as soon as there was temporary water supply available for them, they helped out on guard duty. All corn, cotton and other crops were removed, or recovered by their owners in advance of the construction, so that thin, dried up material would not be a menace. Arrangements were made with the City of Spartanburg to respond with their apparatus in case of fire. In addition to the troops mentioned above, there was a staff of special watchmen on duty until a sufficient number of soldiers arrived to take over this work. Rubbish and waste material was removed daily from inside and outside of all buildings under construction. No smoking was allowed in or around the buildings until the permanent water supply system was installed, and the hose reels and hose arrived. All buildings containing gasoline were placed at proper distances from wooden buildings under construction. All underbrush was removed to a safe distance from buildings, and was not burned until troops were in camp, when these brush fires were guarded.

10. The camp sanitation was in charge of Captain W. H. Allen, U. S. Army, who reported as Sanitary Officer, and later was promoted to the rank of Major, and designated as the Commanding Officer of the Base Hospital. Maj. Allen was most efficient and careful in this work, and assisted by his own staff, made daily inspections around camp, and sanitary conditions were kept in first class shape. This work was later taken over by the Division Sanitary Officer. A sanitary squad was formed from the force of laborers used by the Contractors, and it was the duty of this squad to see that the latrines constructed for the use of the workmen were maintained in a sanitary manner, and that they were daily disinfected with a mixture of crude oil and kerosene. Likewise, this squad saw that the stables were kept in a sanitary condition, and that all stable wastes were taken away from camp each day. This work was in charge of Mr. Richards, of the Contractors' force, who worked under the direction of the Sanitary Officer. In each case latrines were constructed at points convenient to the work going on.

11. The public roads serving the camp from Spartanburg were anything but satisfactory. When the camp work was begun there were only two principal roads one known as the Greenville Road, very hilly, and of the other known as the National Highway little more can be said in praise of same, except that some years previous this had been macadamized. Neither of these roads were of much use for anything but wagon traffic after a slight rain. Upon the arrival in this camp of the New York Engineers, arrangements were made whereby the Engineers laid out and constructed a dirt road connecting with the old Greenville Road within the camp limits, and known as the Smoke Road. This road leading from Spartanburg through camp to Division Headquarters, was not improved with any type of pavement surface, but beginning at the intersection point, and extending along the old Greenville Road to the intersection with what was known as the Pinehurst Road, and thence along this road which was the westerly boundary of the camp site, a turvia macadam was laid to a

point within three hundred feet of the warehouse, and from here to and around the various Quartermaster Warehouses a concrete pavement was constructed. This road insured a means of furnishing supplies, etc. to a point in the middle of the various areas, but the secondary roads, leading from this improved road were of the typical clay of this section, and were more or less impassable in bad weather. In May, 1918, a request was made by this office for funds with which to construct concrete pavements upon all main roads through camp, and also the secondary roads. This request was not granted until October, 1918, and as a result of this, only about one half mile of concrete pavement was constructed, and about one mile of ordinary water bound macdam, for the reason that the armistice was signed, and the work abandoned. However, the Government did contribute $42,000.00 toward the construction of a brick pavement upon the National Highway within the City limits, and the Blake Road from the Camp limits into the City of Spartanburg. This combined with an asphalt pavement, laid in the summer of 1918 along the National Highway within the County limits insured good roads outside of the camp limits. The water bound macdam referred to above was constructed from the Post Office through the Base Hospital to the National Highway, with the idea that the Base Hospital would remain here longer than any of the other Units, and should at all times be able to reach the Railroad Station in Spartanburg for receiving and discharging Over-seas patients, because the troop siding is unapproachable in bad weather. This siding is located along the main line of the Southern Railway at Fair Forest. As to the secondary roads, the general scheme was to have one passing every mess shack in camp. This was done, but only of the type common in this part of the country, namely, a top soil. These roads were constructed merely by using the road scrapers to scoop out a gutter, depositing the surplus top soil in the middle of the road, and afterwards have a road sprinkler to wet the top soil, and then by a liberal use of a disc harrow, mix the clay and sandy soil thoroughly, and allow the traffic to pack the surface. It can readily be seen that in rainy weather the heavy traffic ruts badly the surface, and after a few days of rain, the road is practically impassable. From what I have seen of conditions in this section of the country, I believe that a concrete pavement is the most satisfactory type, due to the fact that very little trouble is found with expansion and contraction. One thing should be remembered, however, in the construction of a concrete pavement, and that is, the ingredients should be thoroughly mixed, and the surface floated carefully to insure a firm bond between the sand and cement.

12 As stated before an electric railway run through camp near the site of the warehouses, and about one mile north of this was the main line of the Southern with a station at Fair Forest. No tracks were laid for temporary construction purposes. Twelve thousand nine hundred and eighty eight lineal feet of railway track was constructed on the Government Reservation for permanent use, and four thousand eight hundred and thirteen lineal feet off the Reservation for permanent use, three thousand nine hundred and thirteen lineal feet of which is a troop track parallel to the main line of the Southern Railway. All this track was constructed by the Railway Companies at no expense to the Government. Later, after the Railroad Administration took over the operation, additional tracks were authorized by the Construction Division at Washington, to connect with several of the hay sheds, the reclamation warehouse, and the four additional warehouses. This authorization was given in October, 1918, and due to the signing of the Armistice, the work was abandoned with the exception of a spur to the four new warehouses, which was constructed and paid for out of Government funds.

13 No temporary water system had been installed on the camp site when work was started, but, on authority from the Southeastern Department, the Chamber of Commerce had connected a spring and were completing this when the Constructing Quartermaster arrived. For about two weeks, however, it was necessary to furnish drinking water to the workmen by carrying it in carts. A sufficient supply was obtained from the spring, which was piped to an elevation upon which a tank was erected, and this, also, furnished enough for the workmen and for the Battalion of North Carolina troops. The original arrangement with the City of Spartanburg called for them to furnish a supply of water at zero pressure, at the nearest corner of the camp site. In the latter part of June, this was changed by the Southeastern Department by advising them to carry the pipe line through the camp site to the highest point in the southwest corner. They ordered wood pipe for this purpose, but, your office advised them on July 26th that all wood pipe had been commandeered by the Government, and that they would have to use twelve inch cast iron pipe, which had been released for that purpose. Without any further authority, they entered into the spirit of the proposition, and pushed this pipe line of 41,000 feet, with all possible speed. The cast iron pipe, of course, cost much more than they had originally figured upon by using the wood pipe, above referred to. The City was reimbursed for this additional expense in accordance with a contract between the Water Company and the Government drawn up by Major Shelby, later Colonel Shelby. Delivery of cast iron pipe was slow, but the pipe line was carried to the camp site by the City as fast as conditions would permit, and was completed from this point to the site for the elevated tanks by the Camp Contractors, being completed August 15th. Through some arrangement in your office, however, the two elevated tanks of 200,000 gallons capacity each, which had been ordered from California on July 25th, were delayed in arriving, and one of them did not reach here until August 25th. The foundation was ready when it arrived, and same was quickly erected. As soon as this was done, the City commenced pumping water, and the water system was ready for troops about September 1st. Quicker results would have been obtained had a 50,000 gallon tank even been purchased in the Eastern States. A great advantage to everyone concerned was the non-arrival of troops during August, with the result that a great deal more of the camp was constructed without the Contractors being hampered by the presence of soldiers. In the meantime, six inch lateral pipes had all been laid, together with small pipe connections to the mess shacks, so that by September 5th, about 80% of the necessary units in the camp were completed for enough to allow of occupancy; that is, mess shacks, latrines and showers were connected, but the electrical work was behind. By keeping in touch with the Commanding General, who co-operated to the fullest extent, it was possible to have the units that he wished to be on the ground first, ready for them upon their arrival. This water system was ample until a sewerage system was planned, and construction authorized. This meant that there must be instead of a daily capacity of 1,500,000 gallons, at least 2,500,000 gallons, because the capacity of this camp in the summer of 1918 was at least 55,000 men. Therefore the Construction Division authorized and ordered first, two additional tanks with the necessary valves, etc. together with an electric driven and a gasoline driven pump to force the water up into the new tanks. One of these tanks is located next to the original ones, and the other one near the Remount and Quartermaster Area. The elevation of these tanks was some fifteen feet higher than the original in order to give a more adequate fire protection as well as additional storage. Later the Construction Division also authorized and ordered a ten inch and six inch wood pipe reinforcing main to be laid through the middle of each Regimental Area, and a gasoline driven and electric driven

pump, with the idea that this additional construction would considerably increase the pressure, and give a quicker distribution of the water. This arrangement would have been of some assistance, but would not have furnished enough water for the needs of the camp, and when the Armistice was signed, plans had already been prepared, and authorization for funds requested for a 2,000,000 gallon plant to be constructed on the Tiger River about three miles west of the camp site. After the signing of the Armistice, this work was not considered necessary.

16 When this camp was originally planned, it apparently was not intended as a semi-permanent one, but only for mobilization and training of National Guard Units. For that reason the typical latrine building was constructed, but after this camp had been occupied for some eight months, it was found that the additional latrine space required, was not available, and for that reason, instructions were given this office to prepare plans and estimates for a complete sewerage system. In the preparation of these plans, careful consideration was given the general topography of the site, because an economical system as was consistent with the requirements, had to be designed. Particularly difficult was the location of the septic tank. It was finally decided to lease additional land, and construct same on the easterly boundary of the camp site where same is intersected by the natural drainage through the middle of camp, and on the edge of the Fair Forest Creek, with the idea that the effluent could be carried away by this Creek. After this location was finally decided upon, it was comparatively easy to locate three main trunk lines, one along the southerly side of camp, one through the middle, and the third for taking care of the northerly side. The final plan under which the system was constructed called for a separate line to take care of all mess sheds, and in this connection, a grease trap was constructed for each Regimental Area. Another line was laid for the lavatory buildings, which buildings were located either at the foot of the Company Street, or immediately in the rear of the mess building, depending upon the topography of the land. Due to several low places, it was necessary to carry the sewer either on a wooden trestle, or on earth fill, both methods of construction proving to be very satisfactory. The septic tank provided for a daily capacity of 2,500,000 gallons. It was divided into three sections in order that same could be maintained. The distribution chamber was located about fifty feet away from the septic tank with the necessary gates, etc. for operation. In connection with the construction of this system, the only real difficulty that this camp had in securing the necessary labor, was encountered. Due to the tremendous amount of plumbing work through out the country, it was practically impossible to secure the quantity of plumbers needed, and it was absolutely impossible to get the amount of work out of those who were on the job. This condition was found to be universal, and as a result of same, the plumbing work was only about one third done when the Armistice was signed, and soon thereafter all work was abandoned. The rest of this system was pushed to completion in a very satisfactory manner; at one time two ditching machines and 1200 men were engaged upon this work, and due to the capable material expediter, the Contractors had in their employ, there was practically no delay on the shipments of pipe. In connection with the backfilling of these trenches, it was found that two men with a team of mules, and a scraper could perform this work much more economically than a gang of laborers, and this method was used wherever possible.

18 In June, 1917, contract was made with the South Carolina Light Power and Railway Company to supply Camp Wadsworth with light and power at a flat rate of $.0168 per Kilo Watt Hour. In accordance with the terms of the contract, the Power Company constructed the service lines from Spartanburg to camp at their own expense, and metered the current at entrance to Camp, thereby taking all losses due to transmission over lines from town to Camp. Line from town to Camp constructed at Power Company's expense, approximately $20,000.00. Transmission line of wooden pole with iron cross arm construction, wood covered steel pins and porcelain insulators, carries six conductors of bare copper No. 1 B & S gauge delivering three phase, 2300 v., 60 cycles A C current. Later, owing to the increase in load, due to growth of camp, the Power Company found it necessary to install two G. E. I. R. B. service regulators to compensate for line drop. Power Company owns all lightning arresters, transformers, regulators and controls disconnecting switches and watt hour meter ahead of switchboard bus-bars.

Switchboard is of three panel type, slate with three Ammeters and current transformers, one Voltmeter, one ground detector, three Condit Elect. Mfg. Company auto oil switches mounted on board.

Two main circuits run from switch house through camp, Nos. 1 and 2. No. 1 circuit feeds areas 1, 2, 3, 4, 16, 17, 18, 19, 40 and 31, connected load 452 Kilo Watts. No. 2 circuit feeds areas 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38 and 39, connected load 594½ Kilo Watts.

There are three street lighting systems in camp as follows:- Quartermaster warehouses, multiple 110 v. 100 watt nitrogen lamp system. Remount, constant current, 2300 v. series system of 32-6.6, and Hospital system same as Remount.

Approximately 1400 buildings in camp and 8,065 tents, are wired for electricity. At full load, number of lamps burning, 18,500.

Camp Transmission line, three phase, 2300 v., with single phase for area secondary distribution, with single phase transformers connected to successive phases for balancing. All transformers are protected by General Electric Compression type lightning arresters with separate ground wire of No. 6 B. & S. gauge, protected from ground line to seven feet above with a wooden moulder. Secondary system consists of three wire grounded neutral, 115-230 volt system, protected by 100 Ampere fused E. F. G. T. switch attached to same check at foot of transformer pole. There are approximately six miles of three phase 2300 v. transmission lines in camp; there are ninety two transformers, sixteen of which are installed in Base Hospital, and three in Remount. The following is approximate amount of wire in this camp:-

General Section		Hospital Section.	
No. 00-B & S. gauge	17160 ft.	No. 14	62,440 ft.
2	43772 "	12	22,540 "
4	442,855 "	6	34,710 "
10	300 "	2	20,450 "
12	400 "		
14	570,000 "		
18 reinf. cord	63,200 "		

16. Referring to the construction of other utilities throughout camp, below is a tabulated list showing the utility, the necessity for same as far as possible, and the amount of money expended. For convenience these utilities are grouped according to the organization for which they were constructed, namely- Base Hospital, Camp Quartermaster, and Remount; all others are shown under Miscellaneous Construction.

(a) BASE HOSPITAL.

1 Sewerage System. Owing to the fact that the Base Hospital was to be a more or less permanent institution, it was considered necessary to construct a sewerage system together with the modern plumbing fixtures and a disposal plant. This was authorized on December 3-rd, 1917, several months before a camp sewerage system was contemplated. It was completed in the early part of 1918, and turned over to the Base Hospital for use. About $30,000.00 was expended on same.

2 Steam Disinfector. This is a machine mounted on wheels and can be moved to any part of the hospital for use. The cost of same was $1522.00.

3 Stoves. Owing to the more severe weather in this camp than was originally expected, stoves were found to be absolutely necessary, and were installed in all buildings. The amount expended on this work was about $15,000.00 .

4 Fire Protection. When the ward buildings were originally planned, only one door opened on the corridors, and it was felt that in case of fire, the patients would have some difficulty in escaping. Therefore, two additional doors were cut on the side of the ward buildings next to the corridor with additional steps leading from the corridor floor to the ground with the idea that patients could be carried out of danger. The next question which arose, was the use of the fire apparatus among the ward buildings,because they were all connected with corridors, so run-ways were constructed up to the corridors in order that the fire engines could get into any section of the hospital grounds. About $3600.00 was spent on this work.

5 Fire Alarm System . In order to promptly notify the fire department an Acme Automatic Alarm System was authorized and installed. This work cost about $2000.00.

6. Steam Disinfector. In addition to the portable steam disinfector mentioned above, a larger one with separate steam boiler was ordered by the Materials Division, and instructions given for installation of same. It was set up in the building originally constructed as a laundry, in December, 1918. About $800.00 was expended for the boiler, and installation of both.

7. Installation and repair to Heaters. In some cases new buildings had been constructed since the winter of 1917-1918, and authorization was given for the installation of heaters and stoves where required, as well as repairs to existing flues in order to eliminate the possibility of a fire.

(b) CAMP QUARTERMASTER

1 Truck Scale. In connection with the weighing of coal, etc. for the Fuel and Forage Division, a twenty ton truck scale was installed. $1600.00 was expended.

2. Gasoline Filling Station. As this camp began to assume the nature of a semi-permanent one, and the number of automobiles increased, a gasoline filling station was needed. This was constructed with a small room at one end for the storage and issue of oil. Two drive-ways were provided for delivering gasoline to the various automobiles. The gasoline tank was located underneath the driveways with the necessary pumps on the level with the ground for drawing the gasoline. About $2, 650.00 was expended for same.

3. Motor Repair Shop. Likewise, it was found necessary to have a motor repair shop because of the increase in the number of motor-vehicles. Also, a place for the storage of auto equipment for issue was provided. The total cost of this work was about $12,000.00.

4. Coal Trestle, and Truck Scale. A coal trestle, 300 ft. long was constructed from the main siding of the Southern Railway leading into camp. A truck scale was to be installed just far enough away from the coal trestle switch as to allow the weighing of the coal cars, and also for the purpose of weighing any other supplies coming into camp. Due to the Railroad Administration taking over the operation of the roads, instructions were received by the Construction Division, presumably from the Administration, that this scale need not be installed. Some work, however, had been done, but it was possible to salvage the scales complete. $11,200.00 was spent on the two utilities.

5. Refrigeration and Ice-making Plant. Due to the scarcity of ice in this section of the country, an ice-making plant was authorized and constructed, the daily capacity of which was twenty tons. A small refrigeration room was also included in the authorization. However, no storage space was provided, and plans were under way at the time the Armistice was signed for the construction of a storage building, in order that the plant could furnish all the ice required for use in camp, even during the hot summer months. Of course this was abandoned when instructions were given that all tent camps would be discontinued, except for demobilization purposes. $54,000.00 spent on this plant.

6. Oil House. For the storage of oil issued by the Fuel and Forage Division, a galvanized iron storehouse was constructed at a cost of about $1400.00.

7. Track Facilities. Additional tracks were planned for the four new warehouses, the Reclamation warehouse, the hay sheds for Camp Q. M. and Remount, but owing to the signing of the Armistice, the only one completed was that leading to the new warehouses, for which about $1500.00 was spent. This is the only track constructed in or out of camp for which the Government paid directly, all others were constructed by the Railway Company at their own expense.

(c) REMOUNT.

1 Purchase of Ball Cocks. Twenty four ball cocks were furnished to the Remount for use in the water troughs, for which $225.00 was paid.

2 Other than the erection of fences, enclosing of one open shelter, no other utilities were constructed. All other construction performed in the Remount consisted of buildings, which will be covered later in this report.

(A) MISCELLANEOUS.

1 Post-Office. A building was constructed of typical design as a camp post-office similar to those in the other National Guard Camps.

2 Telephone Building. A two story building was constructed for the telephone exchange, and in connection with same, a building to house the telephone operators. The cost of this work was about 5000.00.

3 Oil House. This was constructed for the use of the Ordnance Department at a cost of $700.00.

4 Liberty Theatre. This theatre was of the small type, the seating capacity of from 800 to 1,000. The cost of same was $6500.00.

5 Camp Bakery. When this camp assumed a more or less permanent nature, it was considered necessary to construct a typical camp bakery to take the place of the field bakery which had been used since the opening of camp. This new bakery was ready for use in August, 1918. The cost of same was about $15,600.00.

6. Fire Pails. Enough fire pails were purchased for distribution in the various buildings throughout camp in accordance with the schedule furnished by the Fire Protection Division.

7 Hose Reels and Equipment. Hand hose reels with the necessary equipment were furnished by the Fire Protection Division, and were stored at points around camp where it was considered they would be of the most advantage. This was before the authorization was given for the construction of the fire houses and the engines.

8 Fire Stations. Four fire stations were authorized, and the construction of same completed in the summer of 1918. One of these stations was located near the Remount, another next to the Quartermaster warehouses, another on the grounds of the Base Hospital, and the fourth near the Headquarters for Corps and Army Troops at the other side of camp so that the fire apparatus would be convenient to all sections. The apparatus was furnished by the Fire Protection Division. The buildings cost about $17,000.00.

9 Laundry. When it was found that this camp was to be used extensively for the training of troops, a laundry was much needed, not only from an economical standpoint, but also because the laundry facilities in Spartanburg, were very limited. Therefore, in August, 1918, authorization was given for the construction of this building, and the Salvage Division was to furnish the machinery and operate same. When the Armistice was signed, the roof and sides of the building were finished, but the flooring, electric and plumbing work had not been completed. Work on the building was abandoned, and same was found to be an ideal store-house in connection with the salvaging of the surplus material from construction work. Likewise, the laundry machinery which had been received, could be properly protected from the weather in this building, until the machinery was needed elsewhere.

10 Liberty Theatre. Due to the increase in the capacity of this camp during 1918, the small Liberty Theatre was found to be inadequate, and an additional new one was authorized with a seating capacity of about 1600. It was the intention to use this building for theatrical purposes, and the smaller one for moving pictures, but when the Armistice was signed, the work was abandoned, although most of the material for same had been received.

11 Lecture Hall. In connection with the Gas School, a lecture hall was required. This was authorized in October, 1918, and completed at an expenditure of $600.00.

12 Dehorning Plant. This plant was authorized, but due to the signing of the Armistice, work was abandoned.

13 Coffee Roasting and Grinding Plant. This plant was authorized, but due to the signing of the Armistice, work was abandoned.

17 COMPLETION AND TRANSFER OF UNITS.

(a) Table showing original construction of buildings in each unit.

Unit No.	Built For	Date Comm'd.	Date Transf.	Date Completed	No. Buildings
1	Machine Gun Bn.(3)	9-16-17	12-2-17	9-16-17	67
2	Infantry Regiment	11- 1-17	11-10-17	12- -17	53
3	" "	11- 1-17	11-10-17	12- 17	53
4	" "	10- 1-17	11-22-17	10- 1-17	53
5	" "	10- 2-17	12-11-17	10- 2-17	66
6	" "	9-24-17	12-14-17	9-27-17	65
7	" "	10-10-17	11-30-17	10-13-17	53
8	" "	10- 9-17	12- 4-17	10-12-17	53
9	" "	9-14-17	12- 7-17	9-16-17	53
10	" "	9-23-17	12-10-17	10- 1-17	53
11	" "	10- 9-17	11-30-17	10-12-17	53

Unit No.	Built For	Date Comml.	Date Transf.	Date Occupied	No. Buildings
12	Infantry Regiment	9-26-17	12-13-17	9-27-17	65
13	" "	9-11-17	12-14-17	9-12-17	65
14	Signal Battalion	9-13-17	12-27-17	9-14-17	31
15	Military Police	9- 7-17	12-17-17	9- 9-17	19
16	Engineer Regiment	9- 8-17	12-14-17	9- 8-17	44
17	Sanitary Trains	9- 6-17	12-26-17	9- 6-17	34
18	Base Hospital	9- -17	12-21-17	9- -17	44
19	Division Headquarters	9- 1-17	12-26-17	9- 1-17	14
20	Trench M.G.	10- -17	12-15-17	10 -17	5
21	Field Artillery	9-25-17	12-17-17	9-26-17	36
22	" "	9-12-17	12-26-17	9-17-17	65
23	" "	10-15-17	12-19-17	10-15-17	65
24	Amm. Train	9- 7-17	12-18-17	9- 9-17	41
25	Supply Train	9- 7-17	12-18-17	9- 9-17	20
26	Camp Quartermaster	10- -17	11-16-17	9- -17	10
27	Field Bakery	9- 4-17	11-24-17	9- 6-17	4
28	Camp Q. M. (Adm.)	9- -17	11-24-17	9- -17	10
29	F. A. Brig. Hdqs.	9-26-17	12-27-17	9-30-17	7
30	Inf. Brig. Hdqs.	9- -17	12-26-17	9- -17	7
31	" " "	9- -17	12-26-17	9- -17	7
32	" " "	9- 17	12-27-17	10- -17	7
33	" " "	10- -17	12-19-17	10- -17	6
34	Remount	9- -17	12-26-17	9- -17	60
35	Motor Truck Co.	9- -17	12-26-17	9- -17	4
36	Ordnance Depot	10- -17	12-27-17	10- -17	9
37	Camp Prison	10- -17	12-19-17	10- -17	4
38 }	Not used as Unit No.				
39 }					
40	Post Office and Telephone Building	10- -17	12-26-17	10- -17	4

(b) Description of changes and additions to all buildings, and new construction since December 18th, 1917, not covered previously in this report, with amount of money expended on same.

1. PROVISIONAL DEPOT CORPS AND ARMY TROOPS.

This camp was originally planned for a National Guard Mobilization Camp, but after the organization, from the New York Division, of a Pershing Division, several areas with skeleton Regiments occupying same were rendered surplus. These areas were 2-3-4-7-8-9-10 and 11. Orders were received in January, 1918, designating this camp as a Provisional Depot for Corps and Army Troops, and accommodations were authorized to be constructed for seven Pioneer Regiments of Infantry and three Anti Air-Craft Machine Gun Battalions, together with the necessary Headquarters. When the areas referred to above were originally constructed, the Companies consisted of 150 men, while the size of a Company in a Pioneer Regiment was 250 men. This necessitated an addition to each mess hall, and other work incidental to accommodate the increase. Tents floors and walls were provided for the full sized Regiments. Heating stoves were furnished for the mess buildings, etc. Eight two story Regimental Infirmaries were constructed. Regimental shower baths with heating facilities were provided. Headquarters Buildings, together with officers' quarters were constructed. A garage was provided for the accomodation of the automobiles, etc. connected with Provisional

Most of the buildings constructed under this authorization were turned over by May, 1918, although some of the buildings were occupied prior to this time; in other words, immediately upon completion of a building, it was turned overto the Commanding Officer.

2. BASE HOSPITAL.

Laboratory Annex. It was found that the original laboratory was not large enough to meet the requirements due to the increased accommodations provided in the hospital generally, and for that reason, authorization was given for the Annex. This was constructed at a cost of about $400.00, and was completed in the early part of 1918.

Lining Walls and Ceilings. The Hospital was originally designed with the idea that the winters in this section were very mild, but owing to the extremely cold weather of last winter, authority was given on November 10th, 1917, for the lining of all walls and ceilings of the buildings with beaver board in order that they could be properly heated. This work was started immediately upon receipt of the material and rushed to completion. About $23,000.00 was spent for same.

Steam Heat in Operating Pavilion, and painting Walls and Ceiling. As it was found impractical to heat the Operating Rooms with stoves, authority was given on December 3rd, 1917, for the installation of a steam heating plant, and this was completed at a cost of about $2500.00 in time to be of considerable use, during that winter. In order to give a better light for operations, it was decided to paint the walls and ceiling. This was done at a cost of $75.00.

Officers' and Nurses' Quarters. Owing to lack of sufficient quarters for the officers a three wing addition was authorized on January 3rd, 1918 to the present officers' quarters. Likewise on the same date authorization was given for the construction of a new nurses' quarters with accommodations therein for the messing equipment which was temporarily located in the original building for nurses. About $50,000.00 was expended for these two buildings with their equipment.

Eye, Ear, Nose and Throat Clinic. No provision for a clinic of this kind had been made originally. The authorization for this work was given in January,1918, and was completed at a cost of $5700.00.

Two Story Convalescent Ward Buildings. In order to afford accommodations for convalescent patients, eleven typical two story ward buildings were authorized and completed in July, 1918. About $140,000.00 was spent in constructing same.

General Mess Hall Addition. It was found that the original general mess was not of sufficient size to accommodate all

the patients who were not confined to their ward. Owing to the limited space for this addition between the present mess hall and the open corridor, it was decided to construct the addition of stucco for fire protection purposes. This addition was completed in the summer of 1918 at a cost of $5000.00.

Dental Infirmaries. Two typical, two story dental infirmaries were authorized and constructed. One of these was located in the Base Hospital area, and the other one near Headquarters for Corps and Army Troops. These buildings were completely equipped, and used from August, 1918 to date. About $16,000.00 was expended upon same.

Isolation Ward for Female Nurses. Up to this time no provision had been made for treating female nurses suffering from contagious diseases. An addition was constructed to one of the wings of the new quarters for this purpose at a cost of $1600.00. This was ready for occupancy in August, 1918.

Conversion of Barracks into Mess Hall and Steam Cooking Apparatus for General Mess. In order to provide a mess hall and kitchen for the medical enlisted detachment, one of the barracks was fitted up with a kitchen, including ranges, etc., and the rest of the barrack building converted into a mess hall. A complete steam cooking apparatus for the general mess and for the diet kitchen was installed. This change resulted in the ability to feed more men because food could be prepared more quickly when cooking by steam. At the same time, larger ranges were installed for preparation of the rest of the food. On all the above work, about $15,000.00 was expended.

Additional Nurses' Quarters. Four typical one story nurses' quarters were constructed in order to accommodate the increase in the number of nurses in the hospitals and also the student nurses who were attending the school which was opened here in the fall of 1918. These quarters were connected on the front with a covered porch, and on the back by a corridor. The total amount of money expended on this authorization was $12,000.00. The quarters were ready for occupancy in November, 1918, and immediately upon the completion of any one of these buildings, it was turned over to the Commanding Officer of the Base Hospital for use.

3 CAMP QUARTERMASTER.

Clothing and Shoe Repair Shop. The Reclamation Division was organized at this camp in January, 1918, and building accommodations were required. A clothing repair shop and a shoe repair shop equipped with the latest machinery were authorized. The building, accommodating both these shops, was constructed from construction funds, for which about $4,000.00 was expended. The machinery was furnished by the Reclamation Division in Washington.

Personnel Building. Up to December, 1918, only one building had been provided for the Administration of the Camp Quartermaster's Office, which was entirely too small for the proper accommodation of all the Divisions. Therefore, in January, 1918, authorization was given for the construction of a building approximately 20 x 60, which was intended for the use of the Finance Division. Owing to the organization in January of the Maintenance and Repair Branch with its own Personnel, this building was turned over to them. It was not until October, 1918, that they vacated said building, and the Finance Division moved into same. The total cost was about $1500.00.

Railway Transportation Division Office. The Transportation Division had formerly been located in a part of one of the large warehouses, but in order to give them the room required for the proper administration of their duties, a small building was authorized and constructed in February, 1918, at a cost of about $450.00.

Barracks for Motor Repair Shop. Although the authorization covered the construction of barracks, this building was used as a mess hall and kitchen, because no authorization had been given for the construction of this accommodation. The men lived in tents in the vicinity of the mess hall. About $500.00 was expended on same. Hay

Hay Shed. Up to April, 1918, no provision had been made for the storing of hay issued by the Camp Quartermaster. Although four sheds were requested, at this time, authorization was given only for one to be constructed. This was completed in June, 1918 at a cost of about $12,000.00. The location selected for same required considerable grading to prepare the site, and this accounts for the apparent excessive cost.

Additional Warehouses. Four additional Quartermaster Warehouses and one Reclamation Warehouse were authorized in the summer of 1918 in order to properly supply the increasing needs of the camp. These were completed in September, 1918, at a cost of about $106,000.00.

Canvas and Cot Repair Shop. This was authorized in September, 1918, and completed in October at a cost of about $3400.00.

4. 27th DIVISION.

Personnel Building. This building was constructed in the early part of 1918 for the use of the Personnel Officer connected with the 27th Division, and cost about $2400.00.

Camp Stockade. It was found necessary to increase the accommodations not only for prisoners, but also for the guards at the stockade. Mess Halls and an increase in kitchen facilities were provided in addition to those originally constructed. About $5,000.00 was spent on this work.

Roofing Paper for Mess Halls, Showers and Latrines. $2000.00 was spent to cover the outside walls of these buildings for protection against cold weather.

Oat Crushing and Hay Chopping Building. This was constructed in the early part of 1918 at a cost of $[illegible]0.00.

Barracks. Barracks were constructed for the accommodation of the officers and also for all the enlisted men assigned to the Remount Detachment of the typical one story type at a cost of about $17,000. These were ready for occupancy in the early part of 1918, and were equipped with stoves at a cost of $600.00.

Hay Sheds. Three additional hay sheds were constructed during the early part of 1918 at a cost of $25,500.00.

Additional Barracks. Due to the increase in the enlisted personnel of the Remount, three additional barracks were constructed for their accommodation at a cost of $5,000.00. These were ready for occupancy in the summer of 1918.

Rigging and Cargo Corral, Carpenter Shops and Pack Horses. This construction was completed during the early summer of 1918 at a cost of $1500.00.

Stables for Forty Riding Horses. Completed in June, 1918, at a cost of $2,000.00.

One Additional Stable for Sixty Eight Draft Animals. About $2,000.00 was expended on this construction, which stable was ready for occupancy in June, 1918.

Regimental Infirmary. A typical two story infirmary was constructed, for the Remount Area at a cost of about $4,800.00. The building was ready for occupancy in July, 1918.

Fifty Per cent. Increase. Due to the fact that more animals were shipped into the Remount than was originally planned, the accommodations for these animals were authorized. The original authorization called for a fifty per cent. extension, for which $41,000.00 was appropriated. The work, however, was only about two thirds completed when the funds were exhausted, and since no additional funds were ever allotted, the work was never completed. The construction was stopped in August, 1918.

Building for Horse-Shoers, Teamsters and Packers' School. This building cost about $[illegible]00.00, and was ready for use in the summer of 1918.

MISCELLANEOUS.

The Officers' Training School. The establishment for Officers of a Training School was authorized for this camp in January, 1918. The Commanding General selected a part of Area 2 for the accommodation of the school. The various mess buildings, etc. in this area were enclosed and otherwise re-arranged so as to meet the requirements. About $5000.00 was expended on this work, and the school opened in January.

Stoves for Regimental Warehouses. Up to this time no authorization had been given for this installation, but in January, stoves were authorized and furnished at a cost of about $900.00.

Storehouse on Artillery Range. This was completed in January, 1918, at a cost of $800.00.

Ordnance Repair Shop. This was completed in February, 1918 at a cost of $4200.00.

Red Cross Warehouse. Originally the Red Cross in this camp had no facilities for storage, but in the early part of 1918, a warehouse was authorized, and $700.00 was expended for the construction of same.

Screening Vestibules. Acting upon orders from the Surgeon General's Office, instructions were given that screened vestibules should be constructed at the door of every mess hall in camp. This work was completed in the early summer of 1918, being held up to some extent because of inability to get screening. About $42,500.00 was spent upon this work.

Regimental Corrals. Originally no corrals had been provided for the individual regiments, and consequently the animals assigned to each Regiment, were kept in the stables. In May, 1918, corrals were constructed for each Regimental Area in camp, where the existing space would permit at a cost of about $4600.00.

Installation of Ranges and Bakeries. The ranges, etc. were completed for the Camp Bakery in the summer of 1918. Ranges were also authorized for each mess hall in camp. These ranges were the No. 8 Army Range, and sometimes designated as a 125 man range. These ranges were all received and paid for, but owing to the signing of the Armistice, only half of them were installed. The total cost of the above work was about $24,000.00.

Accommodations for Engineers, Sub-Depot. This consisted of an office building, together with a small storehouse. The cost of this work was about $2,000.00.

Storehouses for Ordnance. About $9700.00 was spent for the construction of these buildings, and they were ready for occupancy in the late summer of 1918.

Post-Office Accommodations. This construction consisted of barracks for employees, which were ready for occupancy [illegible] summer of 1918. About $2400.00 was spent on this con-

Accommodations for Bakery Schools and Companies. This consisted of a building for instruction purposes, and barracks for the men. About $11,500.00 was expended upon this construction.

Accommodations for Military Police in Spartanburg. Land was leased in Spartanburg to accommodate the Military Police, and a mess building was erected. About $4200.00 was spent on this work. Tent floors and sides, latrines and shower baths were also provided.

Garages. Four garages were authorized for the accomodation of motor vehicles in camp; one for Camp Quartermaster, one for Motor Repair Shop, and two large ones for the accommodation of two Truck Companies, but owing to the signing of the Armistice, only one of these was completed. About $25,400.00 was spent upon this work.

Mess Halls and Lavatories for Reserve Labor Battalion. When the camp was originally planned, no Labor Battalions had been authorized, but during the summer of 1918, the Labor Battalion was organized here, and accommodations, consisting of mess halls, lavatories and shower baths, were constructed and ready for occupancy in the fall of 1918. About $27,000.00 was spent upon this work.

Buildings for Reclamation Company. This authorization was cancelled after the signing of the Armistice, and no money expended. Buildings from other areas were moved to Reclamation Area to accomodate the Personnel.

12. Date of arrivals of troops and their numbers are as follows:-

UNIT	Date of Arr.	Present Off.	Present Att.	Present Enl.	Absent Att.	Absent Off.	Absent Att.	Absent Enl.	Absent Att.
Co.D.22nd Engrs.	8-3	4		155					
Div. H. Q.	9-1	22	1	198		3		8	
Engrs.less Co.D.	9-2	29	3	693	24		1	22	1
Bakery Co. 101 (N.Y.N.B.Co.#1)	9-6	1	1	195					
2nd N.Y. F.Hosp.	9-8	4		69	2	2		11	
4th N.Y. F.Hosp.	9-8	5		71		1		9	
1st N.Y. F.Hosp.	9-8	5		71		2		9	
H.Q. Sup. Trains	9-8	3		18		1			
Military Police	9-8	6	1	281	6	4	1	22	
Hq. Det.Tr.Am.P.	9-8	1		5					
Ammunition Train	9-8	18	1	680	35			4	
2nd N.Y. F. Hosp.	9-8	5		75		1		7	
Supply Train	9-8	7		348				39	
1st N.Y. Amb.Co.	9-8	2		143		2		7	
4th N.Y. Amb.Co.	9-10	3		116		2		5	
2nd N.Y.Amb.Co.	9-10	3	2	111		2		3	
3rd N.Y. Amb.Co.	9-10	4		149		1		7	
7th N.Y. Infantry	9-13	49	6	1884	32	1		62	3
Engineer Train	9-14	4	1	165	14			1	
Signal Bn.	9-14	13	2	234	4			2	2

UNIT	Date of Arr.	Present Off.	Present Att.	Present Enl.	Absent Att.	Absent Off.	Absent Att.	Absent Enl.	Absent Att.
Hq. N.Y.F.A.Brig.	9-15	1		14					
Hq. 1st N.Y.Inf.Br.	9-15	3		15					
12th N.Y. Inf.	9-15	49	4	1644	119	2		72	
Hq. 2nd. N.Y.Inf.Br.	9-15	2		14				1	
Det., 1st N.Y. Cav.	9-17	19	3	479	10	2		78	
2nd Bn. 2nd N.Y. FA	9-17	14	3	581	42	1		19	3
2nd N.Y. Infantry	9-27	46	4	1972	38	2		87	
3rd N.Y. Infantry	9-27	48	4	1856	69	3		86	3
3rd N.Y. FA	9-28	25	3	1119	22	3	1	157	1
1st N.Y. Infantry	9-28	17	4	1912	35	1		22	
Hq. 2nd NY FA (70th Hq.Co.Sup. Co.)	9-30	7		67	8	5		60	
71st N.Y. Infantry	10- 1	44	4	1755	36	3		88	2
22nd N.Y. "	10- 2	42	3	2254	47	4		60	1
Hq. 3rd N.Y. Inf.Br.	2	4		15					
74th N.Y. Infantry	2	47	4	1741	36	2		41	2
14th N. Y. Infantry	3	45	4	1689	62			51	1
1st Bn., 2nd.NY FA	10	16	3	512	47	1	3	48	4
Det., 1st NY Cav.	11	31	4	872	28		3	35	10
Squad. A.,N.Y. Cav.	11	16		455	9	2	1	44	
Det. 67th N.Y. Inf.	12	22	3	881	21			32	
(156th NY Infantry less 1st Bn.)	12	31	4	1220	78	1		62	9)
10th N. Y. Infantry	13	21	3	741	20	4	2	12	12
1st NY FA	15	36	3	1134	21	2	1	97	
Co. Chb., 10th N.Y. Inf.	25	7		202				8	
Co. A., 10th N.Y. Inf.	26	3		111				13	
Co. F., 10th N.Y. Inf.	27	5		144	2			4	
1st Bn. , 47th N.Y. Inf.	28	12	1	905		2		17	
Co. H., 10th N. Y. Inf.	29	2		144				5	
Co. B., M.G.C. 10th N.Y. Infantry	29	9	1	362	4	1		14	
3rd Bn., 47th N.Y. Inf.	11-1	15	1	804		1		45	

The above table represents the troops belonging to the National Guard Division of New York State, which was sent here for mobilization and training. From this Division, the 27th (New York Division) was organized, trained, equipped and sent over-seas under command of Major General John F. O'Ryan. Owing to the fact that the old New York National Guard Division had more Infantry Regiments than was required for a Pershing Division, several Regiments were left here in a skeletonized form. In January, 1918 orders were received for the organization of a Provisional Depot for Corps and Army troops at this camp for the training and equipping originally of seven Pioneer Regiments of Infantry, and three Anti Air-Craft Machine Gun Battalions; and later three Pioneer Regiments and two Anti Air-Craft Machine Gun Battalions were added to the list. These Regiments and Battalions received their Personnel from the draft men sent to this camp during the summer and fall of 1918 with the exception of the enlisted men and officers remaining from the old New York Division, and several of the Regiments belonging to the Massachusetts and Connecticut National Guard which had been transferred here as a Pioneer Regiment.

Up to the time the Armistice was signed the 51st , 52nd, 53rd, 54th , 56th and 57th Pioneer Regiments and five Anti Air-Craft Machine Gun Battalions had been sent across from this camp . Just prior to the signing of the Armistice orders were issued for the organization here of the 9th Division in the area formerly occupied by the 27th Division and in June and July by a part of the 6th Division. There remained at this camp in November a skeleton Division, which was to have been the 96th, and the 58th, 60th, 61st and 62nd Pioneer Regiments with only a comparatively few men in each Regiment. Enough draft men to fill the above organizations were due in October, but owing to the epedemic of influenza, the men were never sent, as the Armistice was signed in the meantime, and all drafts were suspended.

Referring to the method of receiving troops in camp, a troop siding was constructed off the main line of the Southern Railway at what is known as the Fair Forest Station, and during good weather there was no difficulty in either the unloading or loading of same. During rainy weather, owing to the lack of improved roads, this siding was practically inaccessible, and in that case it was necessary to unload them in Spartanburg. When the draft men began to arrive, owing to the fact that they were not organized motor trucks were used to transport the men from the siding to the Receiving Station, where their preliminary cards were filled out, and the men assigned to Regiments for completion of their records and equipment when later they were transferred to an organization which was to be filled up for training and sending overseas. In other words, one Regiment was used as a Depot for receiving of troops.

18a Relative to the arrival of munition or supplies with dates stated at monthly or semi-monthly periods from date of beginning of construction, would say that as this office had nothing to do with this subject, there is no information available with which to prepare this report.

19 The system of timekeeping and paying the workmen can be outlined as follows:- All workmen on the job are required to have time checks. When a man makes application for employment, if employed, he is given an order by the foreman or sub-foreman to the timekeeping department for a time check. This order specifies his duties, rate and foreman under whom employed. He is given a time check which he retains as long as he is on the job, unless for some reason, the check issued is retired, and another check issued in lieu thereof. At the time of the issuance of the time check, an employment card is made by the time-keeping department, designated as Employment Card No. 2. This card shows the number of the time check issued to the man, date of employment, his name, class, rate, etc., and the department in which he is employed. If for any reason there is any change made in the number originally furnished, class or rate, a change card designated as No. 3 is issued, showing the information. This change card is placed on file with the employment card, and holds as a permanent record. If the man should leave the service, either by discharge, or of his own accord, discharge card form No. 4 is issued showing the information, and this card is placed on file along with No. 2 and No. 3, completing the record file of service. After the file is completed, it is

drawn from the live file, and placed in the dead file for future reference in alphabetical arrangement. When a man leaves the service, either by discharge or resignation, he is given a pink slip by the timekeeper to the paymaster of the contractor, showing he is leaving the service, and that his number has been surrendered. This is identification and authority to the paymaster to pay the man for the last time made. A regular discharge ticket is made at the time the number is surrendered. This ticket shows full information as to the time made, class and rate and amount due; a space being provided also for the receipt of the payee. In addition to the above record, a weekly time card is also kept showing the time made by the employee daily, total hours for the week, and total amount due for the week. The weekly time card is kept in the time keeping department in numerical sequence. The time checkers in the field report the time daily on a form which is made up in books, the original sheet being perforated, carrying four time slips to the sheet. The time checker in the field makes this form in duplicate by carbon process, the duplicate being retained by him as a record, and the original slip turned in to the time-keeping department. These time slips are then arranged in numerical order, and turned over to the timekeepers in the office for posting to the weekly time cards. The men are paid off weekly. The week ends on Wednesday night, and payment is made on Saturday. At the close of a week, the time cards are taken out of the file and extended as to total time made and amount due the payee. After the extensions are made on the weekly time card, the payrolls are made there from showing the total time made for the week, and the extensions. After the payrolls are completed, they are turned over to the voucher department for verification. This is done by comptometer operators, and the totals carried by the time cards, checked back against the payroll, after which the payrolls are put on the adding machines, and totals brought down. The payrolls and weekly time cards in support thereof, are then turned over to the contractors for payment. The system of the contractors, is to pay off by envelopes, and as soon as the payrolls are received by them, they make up envelopes for each individual appearing on the roll, draw off a change list, get the money from the bank, and place same in the envelopes. After this is done, and the individual amounts and change list balanced with the total of the payroll, they are ready for payment. It has been found preferable to commence paying off as late as time will permit to finish by 6 P. M. in order to hold the workmen on the job. The system of the contractors in paying off, is to use automobiles, taking the pay of the men to them while working on the job. This is accomplished by having the envelopes arranged in numerical sequence running one thousand to the block. Each car is placarded for the numbers it carries, the first car carrying from one to one thousand, the second car from one thousand to two thousand, etc. In this way the workmen know by looking at the placards just what car carries his envelope to correspond with his time check, and presents himself to this car, showing his time check as his identification. The workman then receipts the time card, and is given his envelope. Accompanying each one of the pay cars is an armed guard furnished by the Camp Guard Commander. After the payments are made on the first day, there are usually a great many stragglers coming in later for their pay. This necessitates the contractors holding the pay roll open in their office for two or three days. About Wednesday of each week, the contractors will close the payroll, draw off a list of unclaimed amounts, and make voucher for reimbursement of the actual amount paid out on the rolls. The rolls are then turned over to the Field Auditor with vouchers attached, together with the list of unpaid accounts, and the contractors' figures are

verified, if found correct, the voucher is approved by the Field Auditor, and a check drawn, for the total payments, signed by the Constructing Quartermaster, and the receipt of the contractors taken therefor. After the payrolls have been returned to the Field Auditor by the Contractors, and reimbursement made, should a workman call for his time, reference will be made to the payroll, and the unclaimed sheet, and if it is found that he failed to draw his pay while the rolls were in the hands of the contractors, a discharge will be issued to him in the form of a ticket, showing the amount due him, and referring to the payroll and line number on which he appears. This discharge ticket will be taken by the workman to the paymaster of the Contractors, and on proper identification, he will receive his money, giving his receipt on the discharge ticket therefor. At stated intervals, usually once a week, these discharge tickets are listed by the contractor, and voucher made for the total amount paid, during the week, and sent over to the Field Auditor for verification and payment. If found correct, payment is made as in the handling of payrolls. The Contractors have no interest or responsibility in the keeping of the time, except that their foremen are required to keep a book record of all the men on the job under their supervision. The time is checked by the representative of the Field Auditor, designated as Field Time Checkers. The Time Checker visits each foreman twice each day, and actually checks each man by his time check. After completing this, he goes to the foreman and compares his list of men on the job with the book record of the foreman, and if any are missing, they are found before he leaves, and are checked.

The general system of auditing and paying vendors' bills is as follows:- Upon receipt by the Contractors of the vendor's bill, same is turned over to the Recording Department of the Field Auditor's Office for verification as to unit rate, etc. with the purchase order. When this has been done, the bill is turned over to the Material Division, in order that the amount of material called for on the bill can be verified from the Field Material Checker's report. The report together with the bill is then returned to the Recording Department. The Recording Department forwards the original bill to the Contractors, and turns over the triplicate together with the supporting report of the Material Checker, to the Voucher Department. Of course the Recording Department approves this bill before returning to Contractors, providing same is found to be correct. The Contractors then proceed to pay the bill and obtain from the vendor a receipt therefor. The Contractors then prepare a voucher and hand same to the Field Auditor together with the receipted bill and any other supporting papers for reimbursement. After this bill has been compared with the triplicate copy which has been turned over to the Voucher Department by the Recording Department, the Field Auditor approves the voucher for reimbursement to the Contractors. The check is then drawn and after the voucher has been certified to by the Constructing Quartermaster, the Disbursing Officer signs the check. The Contractors then receive this check, receipting for same, and the Voucher Clerk proceeds to enter the amount of this voucher in what is known as the Voucher Register. This register is an abstract of all the payments made to the Contractors, and not only furnishes this complete record, but also is a guide in determining the amount of fees due Contractors for any particular month.

In order that a separate unit cost be kept on each job, the Cost Engineer's Department has a large distribution sheet for each job, showing a schedule of the material necessary for each class of work, such as framing, sheathing, etc. Under these different classes are sub-headings, Quantity, Labor Cost, and Unit Cost. The Field Cost Engineer makes a report each day as to the quantity of work done under the various classes. This report is turned into the Cost Engineer's Department, and from it the quantity of work done is posted to the cost sheet under the "Quantity" column, and the Labor Cost is taken from the foreman's report, after being classified, and is then posted on the cost sheet under the "Labor Cost" column; the quantity is divided into the labor cost, the result being the Unit Cost. From this sheet the information is obtained to make up and forward to Washington weekly cards (forms No. 1902 and 1903.) The Unit Cost is being handled in combination with the weekly cost reports No. 15 and 16, and is under the supervision of the Field Auditor, and is handled and kept in such a manner that the Constructing Quartermaster can tell each day by referring to the record kept by the Cost Engineer, just what progress is being made from day to day, as well as the unit costs of the different classes of work performed on the various projects.

The Cost Accounting organization consists of the following- Cost Engineer, who supervises all work in the Cost Department, and compiles all data as to Unit Costs; Field Cost Engineer, who personally visits all projects under construction each day, and figures out the quantity of each class of work completed, as well as inspecting the foreman's daily time report to see that he properly classifies on same just what class of labor his men have performed; Cost Clerk, whose duties are to prepare all data which pertains to the compiling and forwarding of weekly cost reports No. 15 and 16; two clerks who assist the Cost Engineer in consolidating the labor cost as shown on the foreman's daily report, in order that same be posted to the Unit Cost sheet for each project. Organization can be expanded as the amount of work required by the employment of assistants for the heads of the various departments.

In regard to actual construction details, it is recommended that all mess shacks be covered on the outside with tar paper because the rough boards used in the construction allow flies to get into the building, and in the winter it is much more economical to heat same. This, although not originally authorized, was later ordered to be done in this camp. The regimental storehouses should have their floors designed to withstand a heavier load than those specified, namely- 150 lbs. per square foot, as in several instances it was necessary to brace this flooring in order to store various ordnance property. It is suggested that the floors be designed to carry a load of 200 to 250 lbs. per square foot instead of the 150 originally planned. Another point in connection with the construction of the mess shacks, is that the mess tables should be made with three or four boards, the middle ones of which are removable in order to keep the table clean; this was done by the organizations themselves in this camp upon orders from the Sanitary Inspector.

The Constructing Quartermaster should have the authority to hire employees as he requires the services of same at a salary, the maximum ofwhich is fixed in the manual instead of having to secure the approval of the Civil Service Commission, because when work of this character is

20 In selecting a site for a camp, the question of railroad facilities for the receiving and transporting of troops, and the bringing in of supplies and equipment is a very important one. This was given due consideration, and not only did the Southern Railway run along the edge of the reservation, but an electric railway ran through same. The next point which should receive consideration before any construction work is performed is the matter of improved roads; not only should the roads be improved within the camp, but also to the nearest town or city. The camp population should have convenient access to a large town or city because of the fact that in a training camp most of the men have recently come from civilian life, and should have some form of recreation to break the monotonyof camp life. Likewise, many supplies must be transported from the City near by, and an improved road means a great saving in the wear and tear on motor transportation. This matter of improved roads apparently was not given early consideration, and it is recommended very strongly in the future that same should be one of the first construction problems.

The emergency form of contract proved to be a very successful and economical one when consideration is given to the fact that the construction work must be rushed to completion. In order to insure success in work of this kind the Constructing Quartermaster should strive for a perfect co-operation between his force and that of the Contractors, impressing upon the contractors and their force that all are working for the interest of the Government.

In order that the Constructing Quartermaster can keep in touch with the work from a standpoint of economy, it is believed that an accurate cost accounting system should be adopted. In this way, he can ascertain whether a certain force of men are producing the amount of work of which they are capable, or whether they are working at a disadvantage, in which case he can take steps to remove the cause. The original orders covering accounting specified that an accurate cost account should be kept of the different types of building, separating labor and materials, but later these instructions were cancelled. In September, however, of 1918, detailed instructions were given for the keeping of an accurate cost account, and below is outlined the system used in this office as developed from same.

Each foreman on the job is supplied daily with a card (form 1901) upon which he enters the number of each man employed, the number of hours worked, and the class of labor performed. Before this card is turned into the Time Keeping Office, the Field Cost Engineer makes a thorough inspection of them to see that each Foreman has properly shown the class of work performed by each man, such as framing, sheathing, etc. This card is then turned into the Time Keeping Department, where the time shown is posted to the pay roll. Before this is done, the time reported on the card is checked against the Government Time Checker's report, in order to correct any error in time, as well as to verify the fact that the numbers as reported on the foreman's report, were actually at work on the day reported. These cards after being posted to the pay roll are then figured out as to the number of hours, and rate, and balanced with the pay roll each day, showing on each card the total cost for the labor performed. They are then forwarded to the Cost Engineer's Department, where, with his assistants, the number of hours shown performed under the various classes of work on each job, are

being done throughout the country and assistants are difficult to obtain, and if the Civil Service furnishes same in most instances, the applicant is not capable and experienced. If the Constructing Quartermaster is allowed to select his own assistants, he is then able to get together a successful organization.

21 The Constructing Quartermaster for the period from July 15th, 1917 until December 10th, 1917, and later from February 4th, 1918 to June 26th, 1918, was John D. Kilpatrick, Major U. S. N. C. (later Lieut. Colonel). Lieut. Colonel Kilpatrick, during the first period mentioned, was also Disbursing and Property Officer, and had for his assistants in the building work, Major George N. Cole, N. G. Conn., Capt. Charles W. Stark, National Guard, N. J., and First Lieut. R. E. Karston, Engr. R. C. During the latter period, 1st Lieut. Louis D. Koop, Engr. (later Captain, Q. M. C.) was assistant on Building Construction, and Captain Francis C. Dale, Q. M. C., N. Y. was Disbursing and Property Officer; in May, 1918, Captain Dale was relieved by Captain Fred L. Ackerson, who also acted as Assistant on building construction. From August, 1917, to December, 1917, Charles Neville was Division Auditor, with T. E. Glaze, the Field Auditor. During December, 1917 and January, 1918, there was no Field Auditor, but in January H. G. Clark was Chief Clerk, and acted in the capacity of Field Auditor. When C l. Kilpatrick was again placed on duty, Mr. Howard G. Clark was appointed Field Auditor, and acted in thatcapacity until the completion of the work.

During the period from December 10th, 1917 to February 4th, 1918, Major H. E. Grinstead, the Camp Quartermaster assumed the duties of Constructing Quartermaster, and 1st Lieut. Louis D. Koop had charge of the construction, and Captain Fred L. Ackerson was Disbursing and Property Officer.

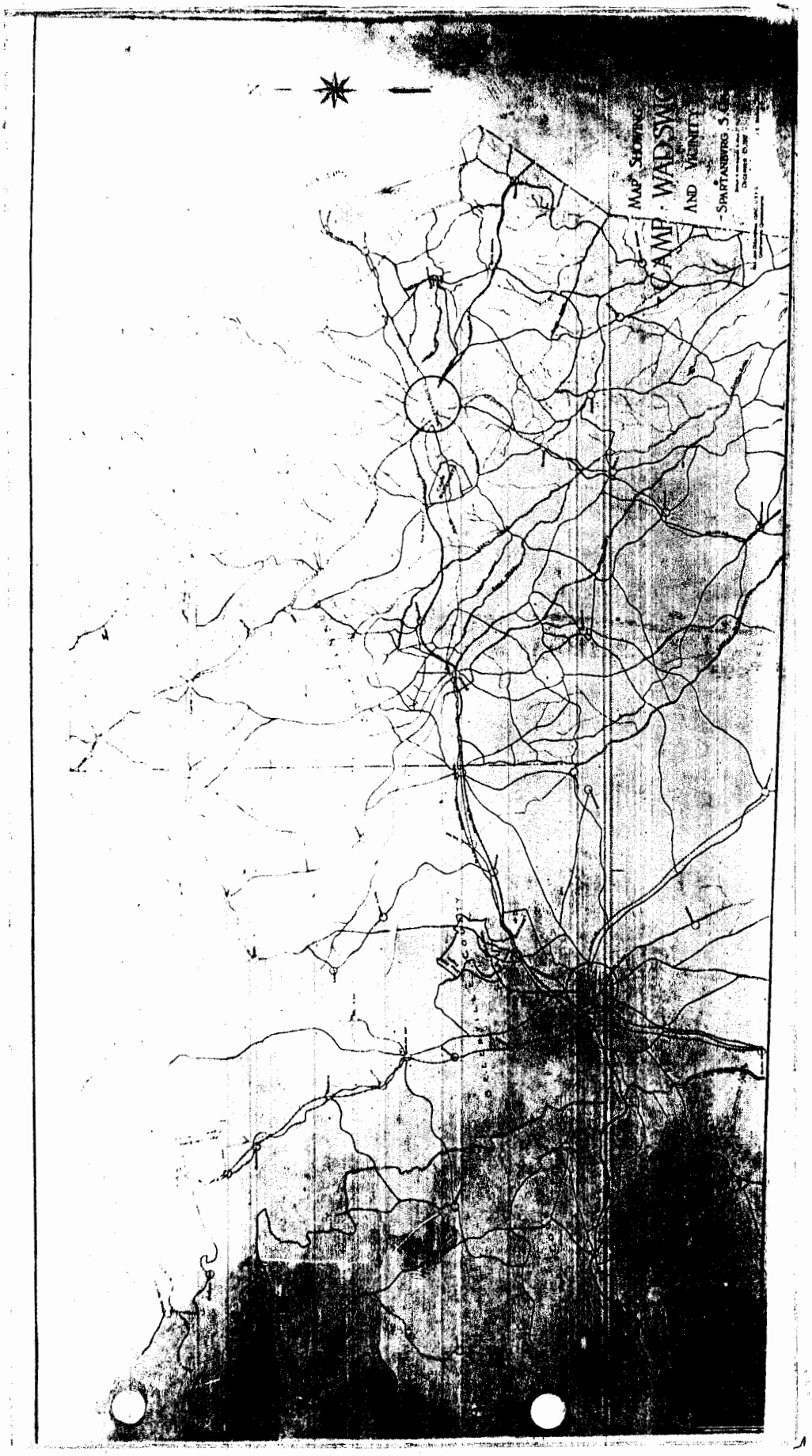
From June 26th, 1918 to September, 15th, 1918, Captain Louis D. Koop was Constructing Quartermaster with Captain Ackerson as Assistant Constructing Quartermaster, Disbursing and Property Officer.

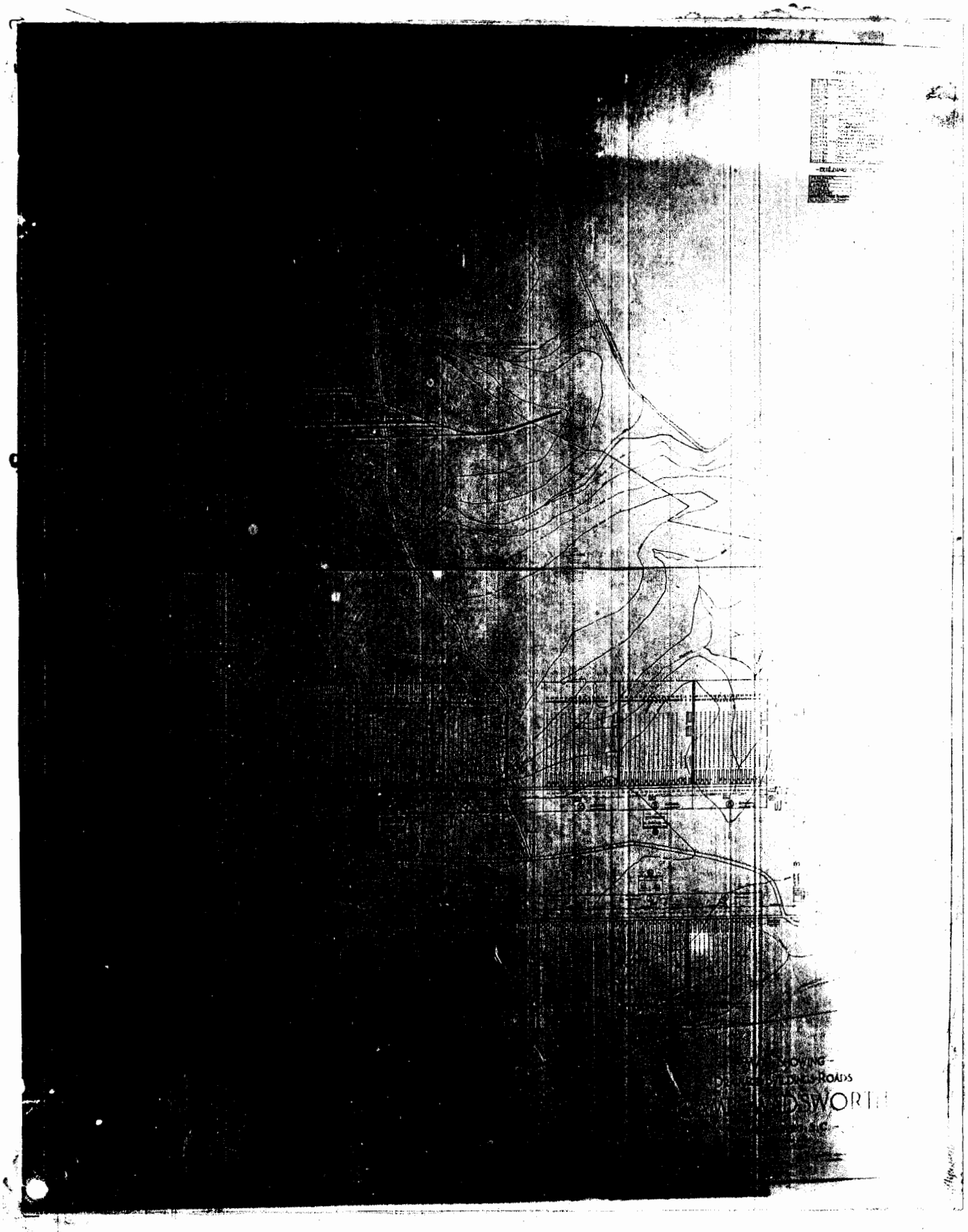
On September, 16th, Captain Fred L. Ackerson assumed the duties of Constructing Quartermaster, and in addition thereto as Disbursing and Property Officer, Captain Clarence F. True, Infantry, was detailed as Assistant Constructing Quartermaster, and was assigned to building construction. In November, Howard G. Clark, the Field Auditor, a man who had been connected with this office since the beginning of the construction work, was commissioned a Captain, Q. M. C., and was assigned as Assistant to Constructing Quartermaster. In November, 2nd Lieut. Carl Sonnendinger, U. S. C., reported for duty as Assistant, and was assigned to road, sewer and water works construction.

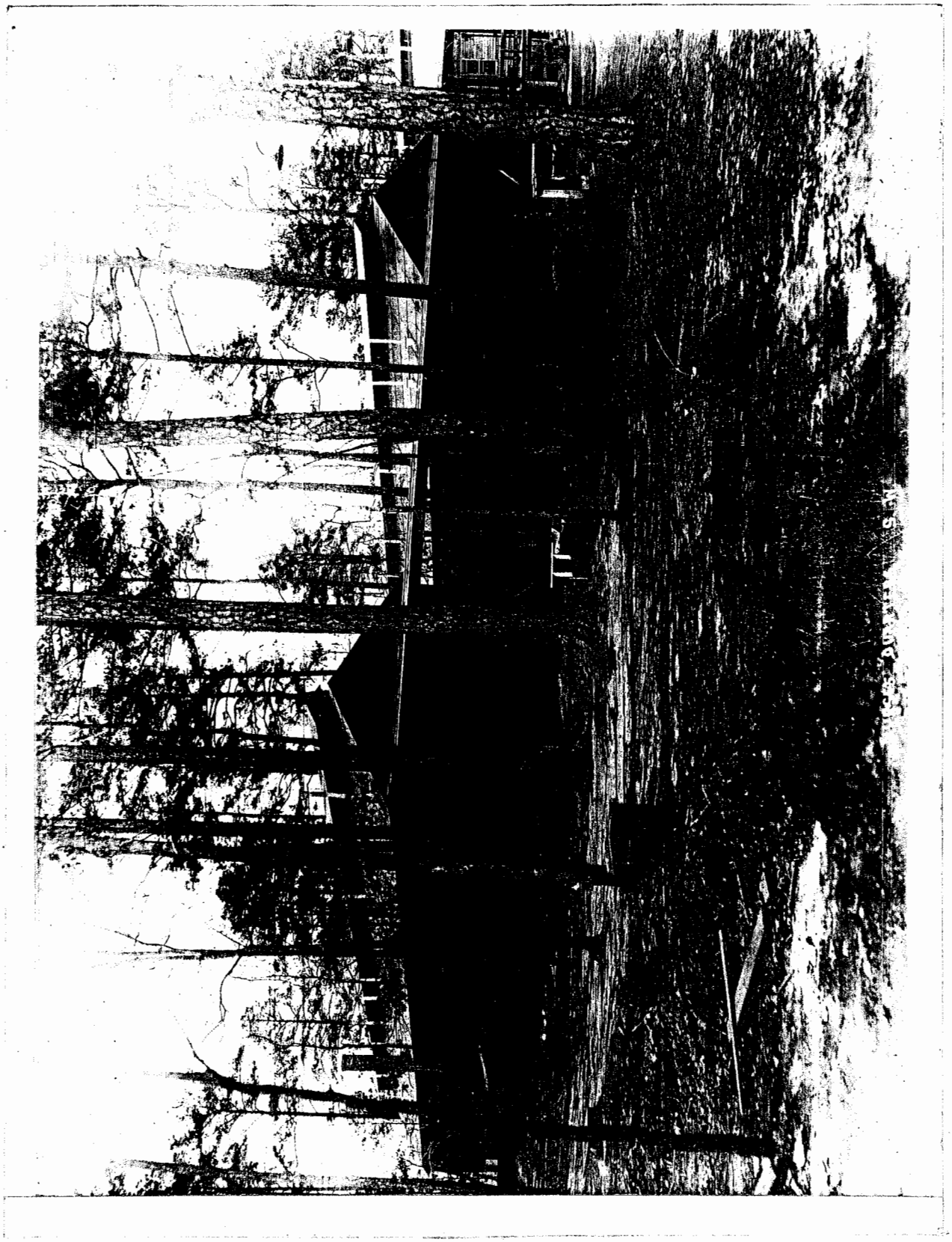
22 The maps, photographs, etc., will be found in the back of this report.

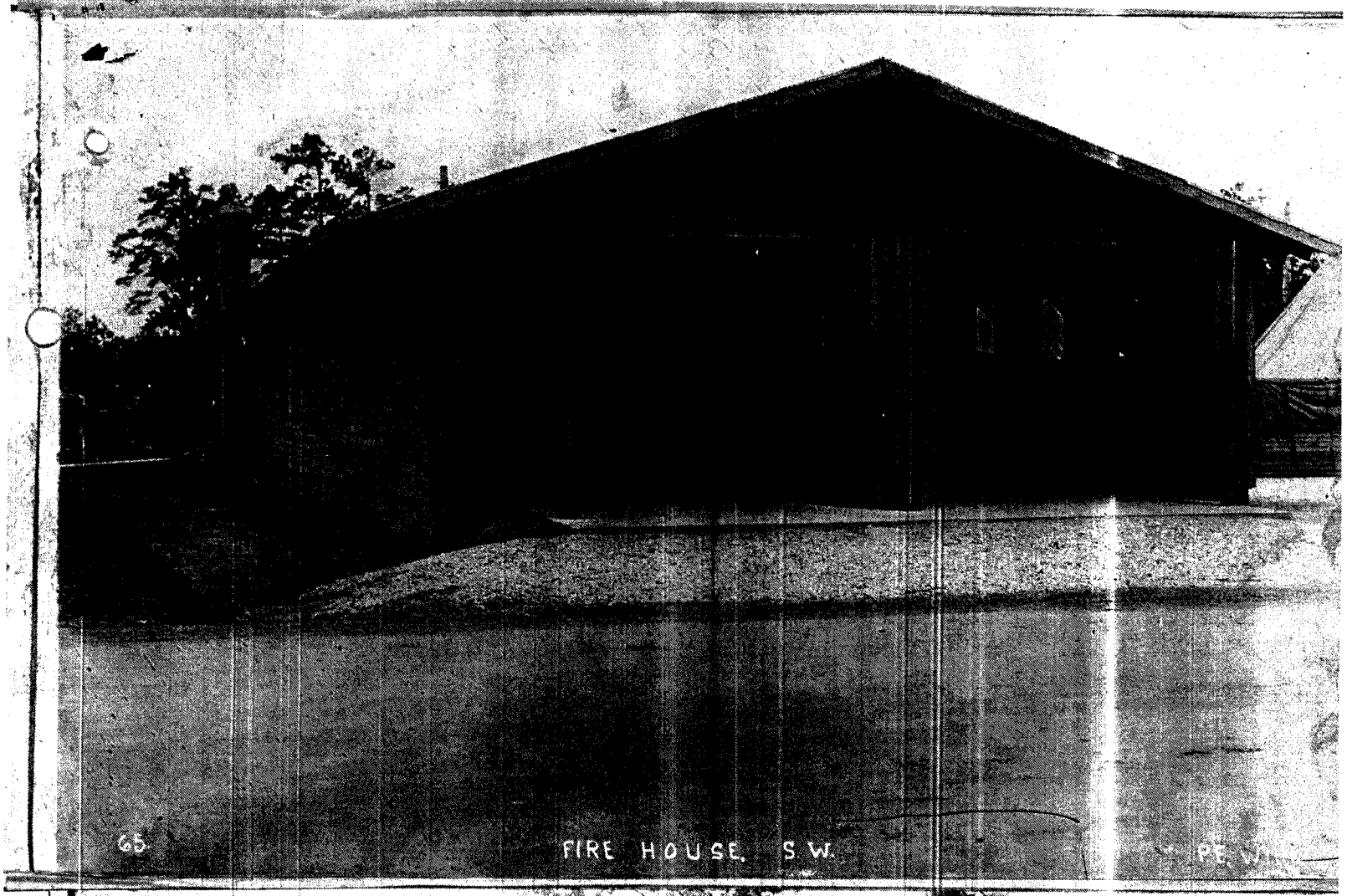
Fred L. Ackerson

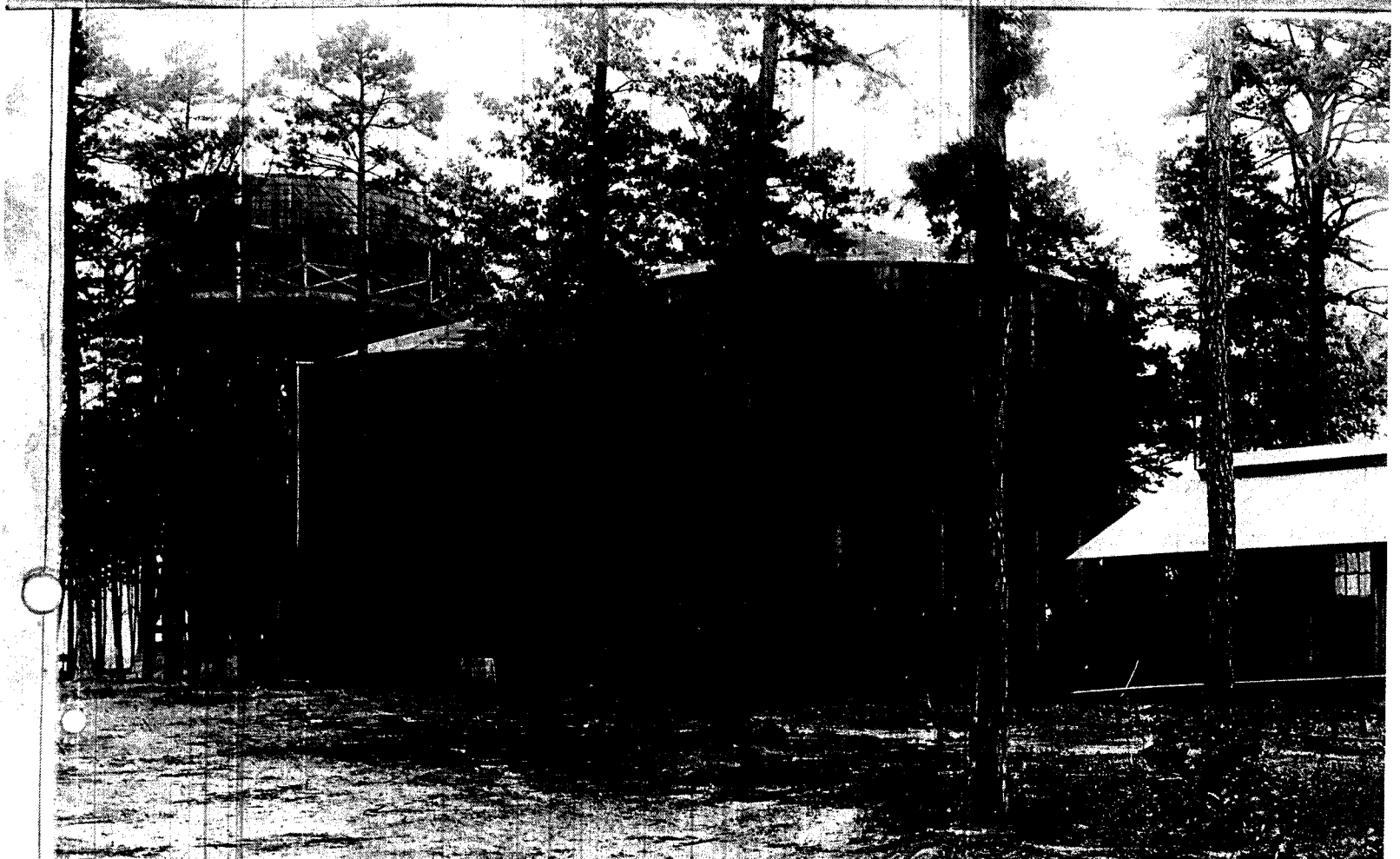
Fred L. Ackerson,
Captain, Q.M.C.,
CONSTRUCTING QUARTERMASTER

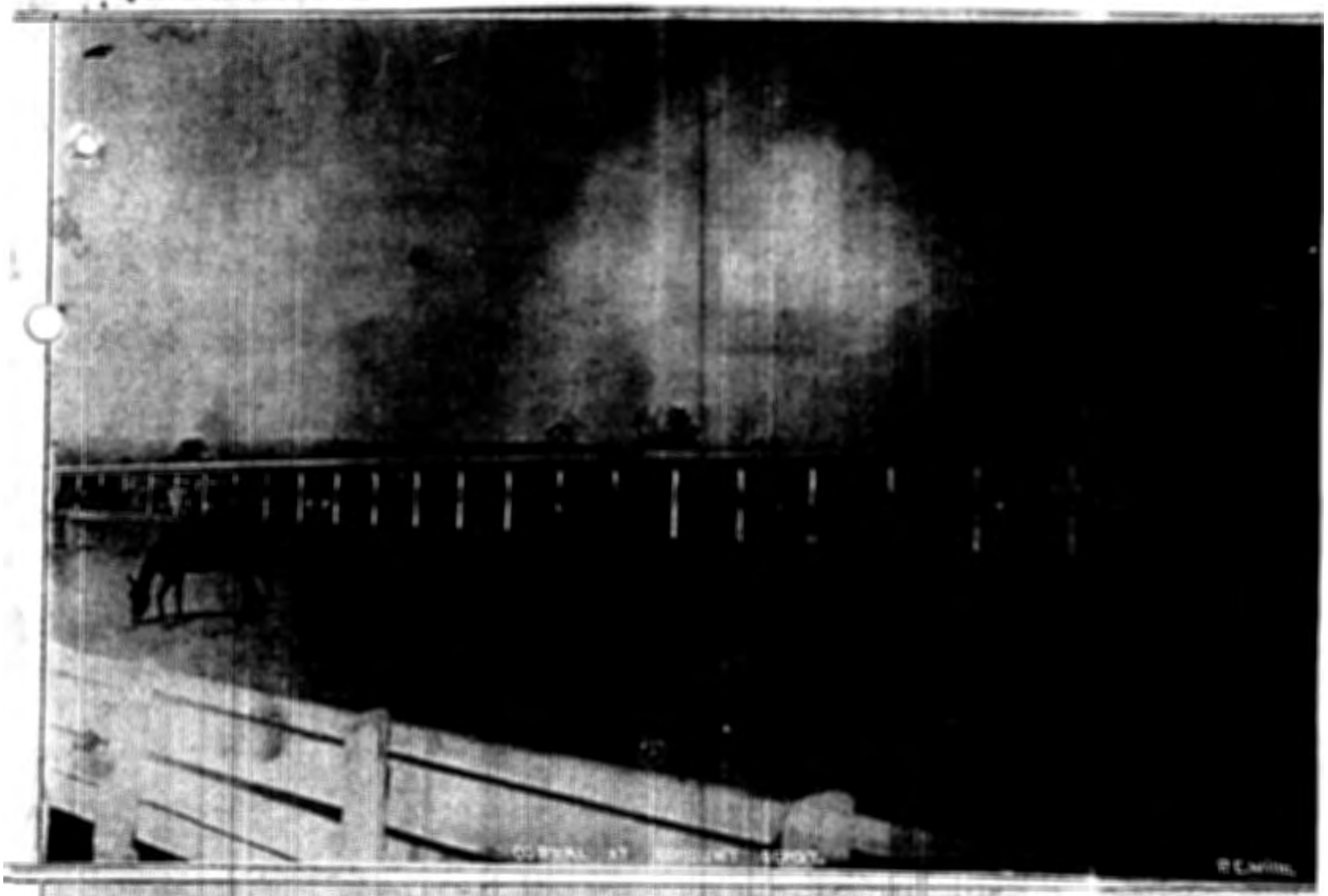


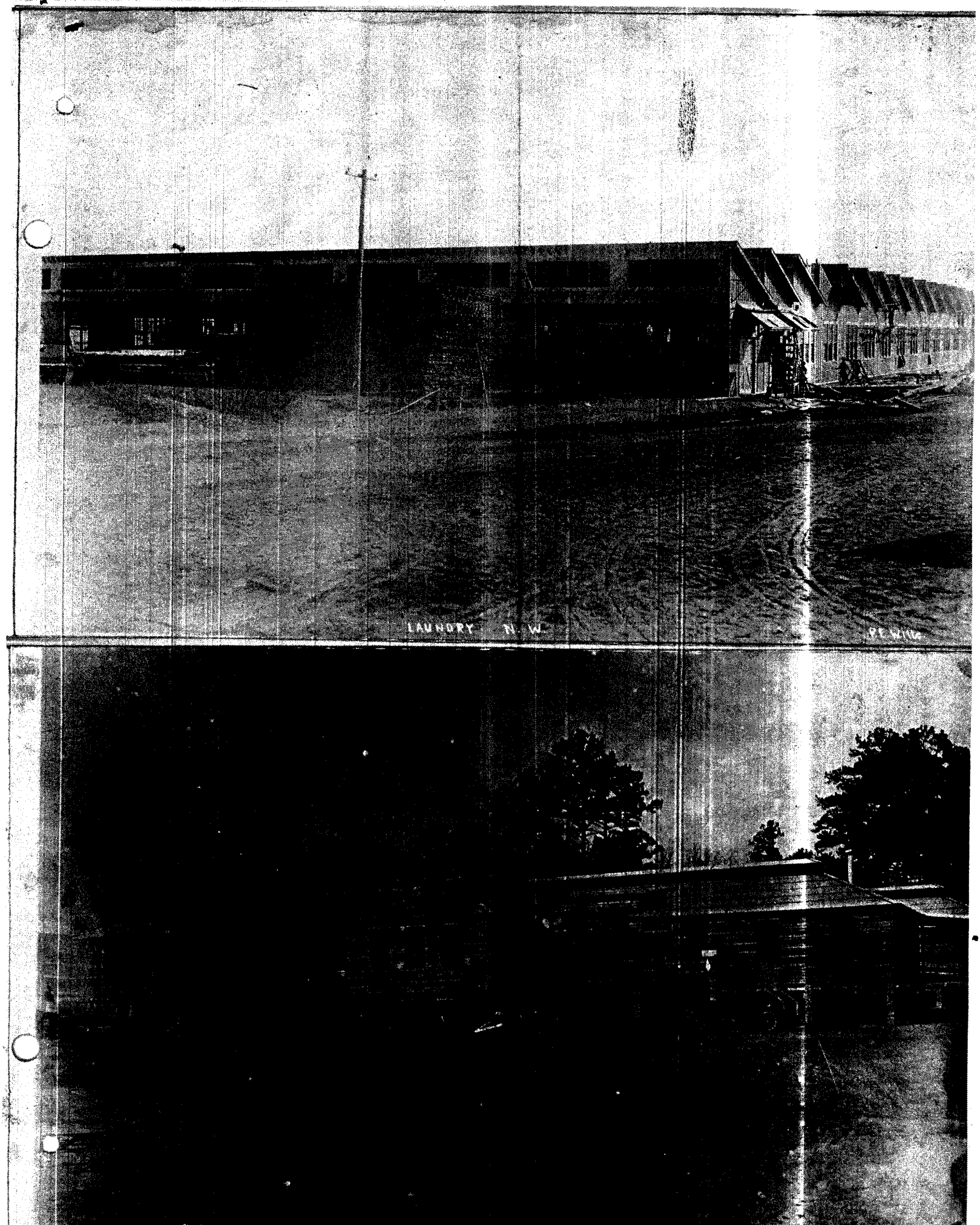


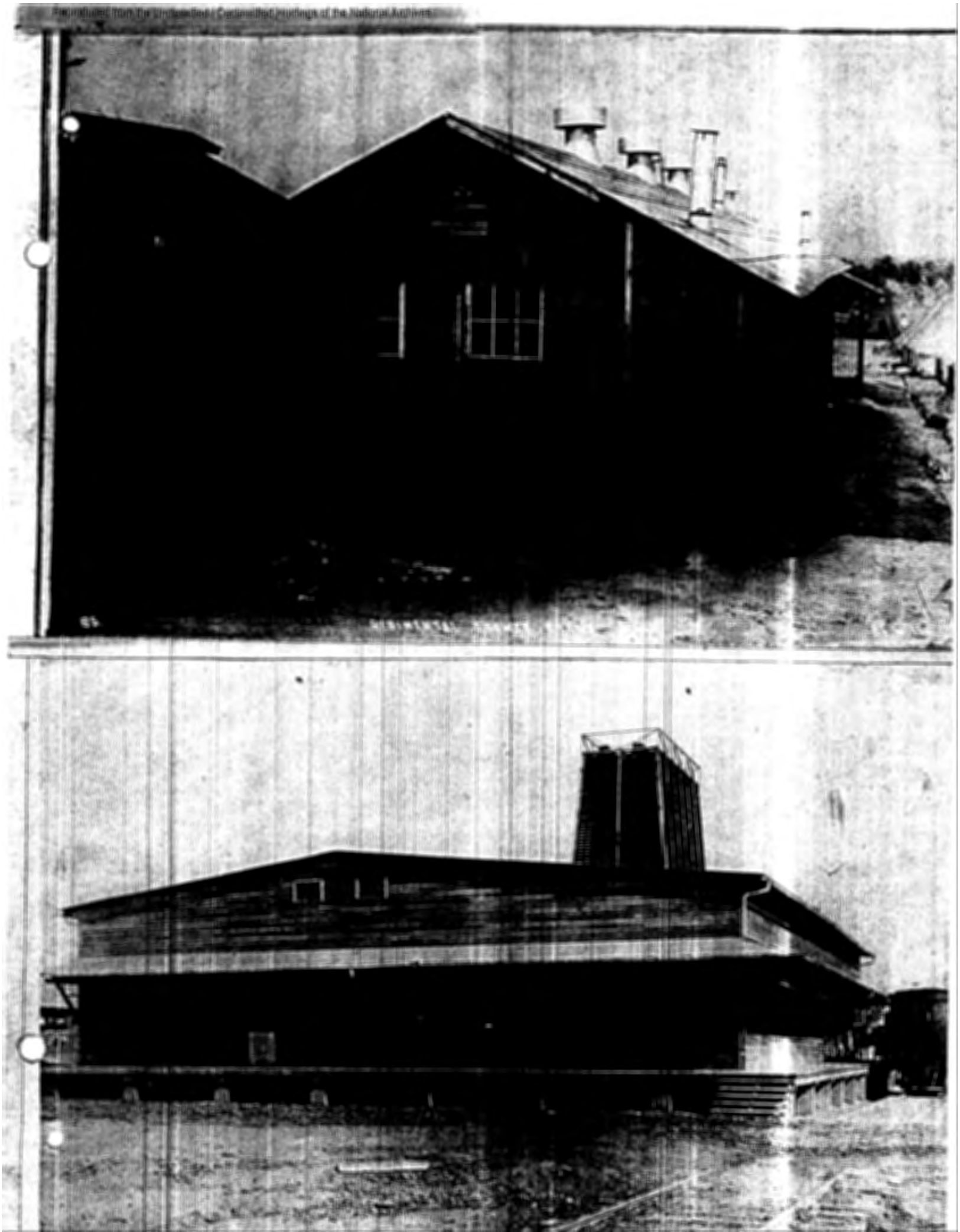


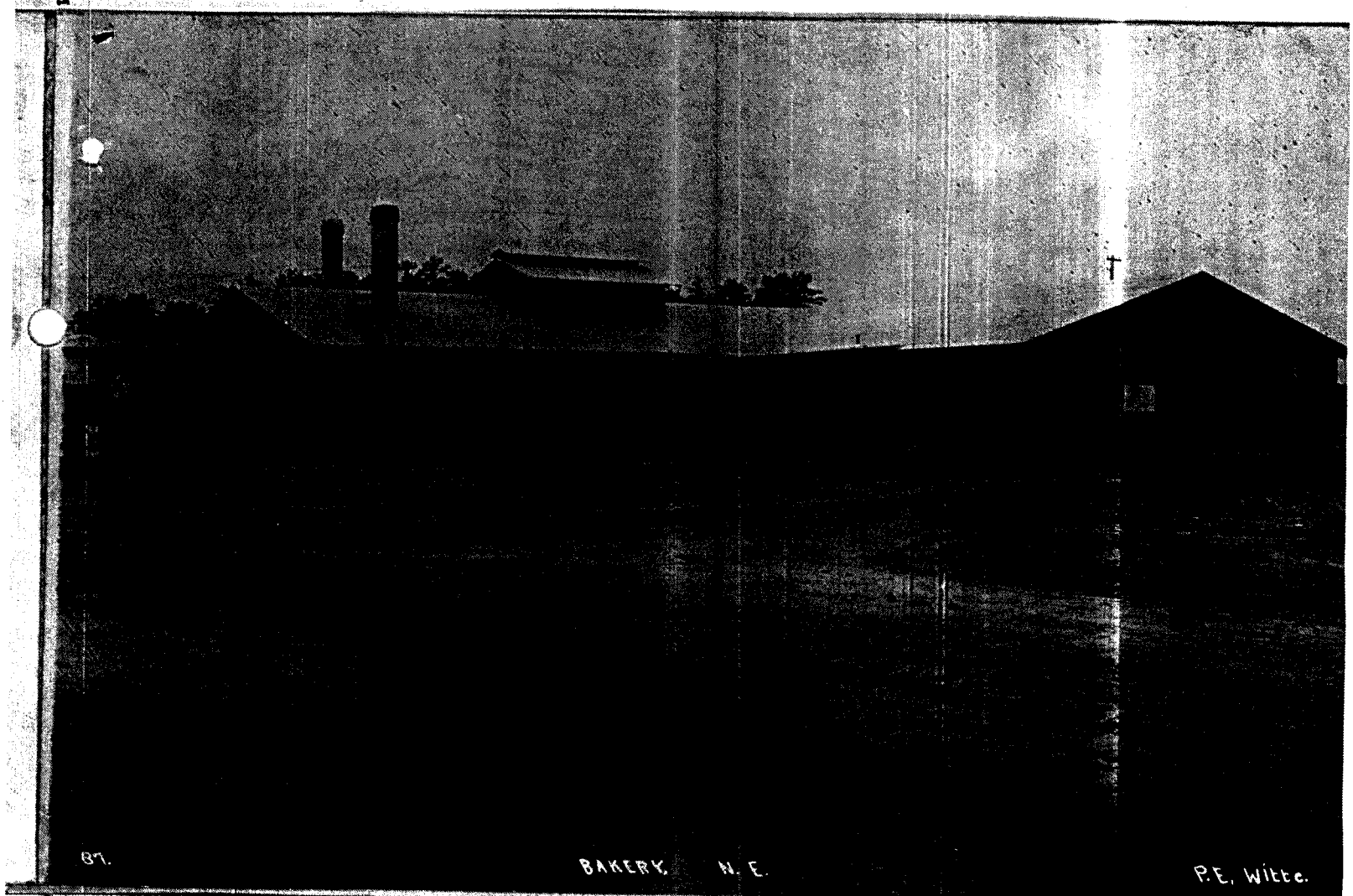












87. BAKERY. N. E. P.E. Witte.

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