

● psf: CF: War Dept. , 1933-40

WAR DEPARTMENT
WASHINGTON, D. C.

October 27, 1933.

~~CONFIDENTIAL~~

The President,
The White House.

Dear Mr. President:

I am enclosing a memorandum entitled "The Washington-Alaska Military Cable and Telegraph System" which includes a brief history of this communication system from the time of its inception in 1900 to the present time and a statement of the change in conditions which prompt the War Department to request a transfer of the system to some other Department of the Government.

As indicated in the memorandum, the Army was sent into Alaska shortly after the Klondike gold rush in 1896 to preserve law and order. Existing means of communication were slow and uncertain. The Alaska System was therefore born of a military necessity for a quick and positive means of communication for purposes of administration and control of the widely scattered garrisons. The transmission of commercial messages authorized by Act of Congress was initially incidental to military communications.

With the passage of time conditions became stabilized and the Army units were gradually withdrawn, only two companies of infantry now being stationed in Alaska. Nevertheless the Alaska System, pursuant to Acts of Congress, has been expanded to meet the demands of commercial interests and civil departments of the Government. About seven million words of commercial and nearly four million words of Government business were handled during the fiscal year 1933. The cash receipts for commercial traffic in the fiscal year 1933, in amount \$222,000, considerably exceeded the non-military maintenance expenditures which were \$200,173. However, military traffic has shrunk to a point where its annual equivalent value is only about \$2,000, while the expenditures from military funds for pay and allowances of military personnel approximate \$325,000 annually. It is for this reason and in order to permit assignment of the military personnel to military duties, for which they are urgently needed, that I recommend transfer of "The Washington-Alaska Military Cable and Telegraph System" to a civil department of the Government.

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DECLASSIFIED

DOD DIR. 5200.9 (9/27/58)

Date- 2/11/59

Signature- Carl d. Spicer

X 25
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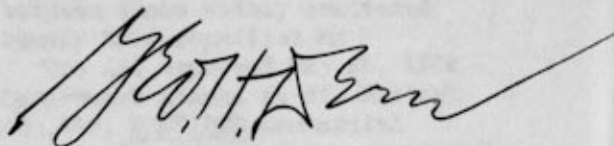
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If the foregoing recommendation is adopted, it is suggested that the paragraph in the Executive Order directing the transfer be worded substantially as follows:

"The Washington-Alaska Military Cable and Telegraph System, together with all civilian employees, records, technical equipment, and property pertaining thereto, is hereby transferred to _____ . All military personnel assigned to duty in connection with the operation and administration of said System will be assigned to such military duties as may be directed by the Secretary of War."

Respectfully yours,



Secretary of War.

Inclosure:

Memo. for Sec. of War,
dated Oct. 23, 1933,
with 4 inclosures.

DECLASSIFIED

DDO DRL 1100.4 (4/77/00)

Date: 2/11/59

Signature: Carl J. [illegible]

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WAR DEPARTMENT
OFFICE OF THE CHIEF SIGNAL OFFICER
WASHINGTON

October 23, 1933.

Memorandum for the Secretary of War.

THE WASHINGTON-ALASKA MILITARY CABLE & TELEGRAPH SYSTEM

1. Gold was discovered in the Klondike in 1896. The years immediately following 1896 were marked by an unprecedented rush of humanity into the territory of Alaska. The Civil Government organized originally only to meet the needs of a small population thinly distributed over a vast area found it increasingly difficult to maintain law and order. Disputes over land claims and other disorders resulted in the Army being called upon to meet the situation. New Army posts were built and garrisoned at:

Fort Davis near Nome.
Fort St. Michael near the mouth of the Yukon.
Fort Gibbon at junction of Yukon and Tanana Rivers.
Fort Egbert on Yukon near Canadian border.
Fort Wm. H. Seward (now called Chilkoot Barracks) near Skagway.

2. Existing means of communication between these widely scattered garrisons were slow and unreliable and to remedy this condition an appropriation was requested from Congress. The Act approved May 26, 1900 provided "for connecting the Headquarters Department Alaska at St. Michael with other military positions in Alaska, \$450,550, PROVIDED commercial business may be done over these military lines." The Signal Corps, assisted by details of Infantry, built the lines. The installation was completed June 30, 1903.

A submarine cable, 138 miles in length, was laid in 1900 between Nome and St. Michael as part of the System. Since ice caused interruptions in this cable it was soon replaced by a radio installation.

3. Thus far communication had been established between points within Alaska only. To provide communication with the United States the Canadian Government extended its lines to the international boundary between Dawson and Fort Egbert where they were joined by Signal Corps lines of the Alaska System. Direct communication with the United States was thus established via Canadian lines in September, 1901.

4. The undesirability of placing dependence on foreign controlled telegraph lines for military communication was obvious. Furthermore the construction of the connecting lines was light and subject to interruption.

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DOD DIR. 5200.9 (9/27/58)

Date- 2/11/59

Signature- Carl L. Spicer

~~CONFIDENTIAL~~

Congress recognized the need for direct communication with Alaska and in the Act approved March 2, 1903, appropriated \$485,000.00 for purchase and installation of a cable between Seattle, Washington, Juneau, Alaska, and subsequently in the Act of April 23, 1904 appropriated \$321,580 for extending this cable to Fort Liscum, near Valdez, Alaska. The installation of 1608 miles of cable connecting the Alaskan System with Seattle over United States Government lines was completed in October, 1904.

5. Between 1904 and 1923, the cable system, with the exception of a number of short extensions, remained substantially the same. Telegraph land lines, however, were gradually replaced by radio routes, so that in 1923 only 370 miles of telegraph lines remained.

6. In 1924 approximately \$200,000 cash commercial business was transacted. The Signal Corps system had become the commercial communication system of Alaska, the Territory being practically dependent on it for contact with the outside world. Recognizing this fact Congress appropriated in the Acts approved March 2, 1923 and June 7, 1924, a sum of \$1,500,000 to replace the old submarine cable. The new cable was installed in 1925, and today is in good condition.

7. However, from 1925 to 1930, such substantial advances had been made in the radio art that in 1930 it was considered advisable, in the interest of economy, to substitute radio for the submarine cable connections between Seattle and Alaska. Accordingly in the Acts of Congress approved May 28, 1930 and February 23, 1931, Congress increased the maintenance appropriations by a total of approximately \$250,000 to provide for purchase of radio equipment. The installation of this equipment enabled the System to dispose of the cableship "DELLWOOD" involving a net saving in maintenance and operation of nearly \$150,000 per annum.

8. The system now comprises the following (see attached map, Exhibit "D"):

(a) Signal Corps installations

1. Radio Stations

Anchorage	Kotzebue
Point Barrow	Livengood x
Bethel	Nome
Candle x	Nulato
Circle x	Petersburg
Cordova	Ruby x
Craig	Seward
Eagle x	Sitka
Fairbanks	Skagway
Flat	St. Michael x

Haines (Chilkoot Barracks)	Tacotna x
Holy Cross x	Teller x
Hot Springs X	Tanana x
Juneau	Valdez
Kanakanaak	Wiseman x
Ketchikan	Wrangell
Kodiak	Ft. Yukon x
	Seattle

x To be closed not later than September 30, 1934.

2. The following cables (which are to be abandoned):

- (a) Seattle-Ketchikan-Seward-Cordova.
- (b) Ketchikan-Wrangell-Petersburg-Juneau-Skagway.

- (b) Approximately 18 radio stations of other Government agencies, tributary to the Signal Corps stations.
- (c) Approximately 83 commercial (principally cannery company) radio stations, tributary to the Signal Corps stations.
- (d) Merchant and government coastwise shipping, tributary to the Signal Corps radio stations.
- (e) Various telephone and telegraph lines of Government and Commercial agencies, all tributary to the Signal Corps radio stations.

- 9. (a) The larger Signal Corps stations are equipped with both high and intermediate frequency radio (code) transmitters. The smaller stations have, in general, only low power intermediate frequency radio (code) transmitters.
- (b) Radiotelephone transmitters are being installed by the Signal Corps at key points with a view to furnishing radiotelephone service to certain outlying towns. When this has been accomplished the citizens of these outlying towns or trading companies located therein will purchase and install low-powered radiotelephone transmitters and the Signal Corps stations thereat (marked x on list of stations given in Par. 8 above) will be closed. With the closing of these 13 stations there will remain only 21 Alaskan stations, which are located near important communities or render service of special value.

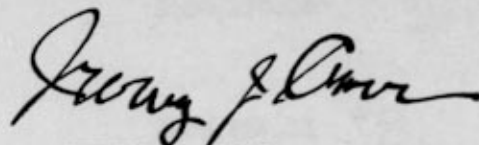
10. The military personnel employed in operating and maintaining the system consists of 4 officers, 1 warrant officer and 185 enlisted men. In addition 41 civilians are employed.

11. At present there are only two companies of infantry in Alaska, both stationed at Chilkoot Barracks. The original purpose of the Alaska System, namely to provide military communication, has become subordinated to the business of handling commercial messages and messages of other government departments.

Exhibit "A", attached hereto, is a summary showing the non-military appropriation made and commercial and Government traffic handled for the past fiscal year 1933, as well as expenditures for the system during the same fiscal year. The expenditures under "Non-military appropriation" are paid out of the annual non-military appropriation for the Washington-Alaska Military Cable and Telegraph System. Inasmuch as this appropriation is made from commercial cash receipts paid into the Treasury, no actual expense to the Government is involved under this heading (See Exhibit "B", list of Acts of Congress pertaining to WAMCATS). All "military funds," however, are paid out of appropriations for military purposes. The War Department, therefore, expended approximately \$325,000 in 1933 (military funds) to obtain military services valued at approximately \$2,000.00.

12. Transfer to another Government Department would involve an expenditure of \$334,520 for additional civilian payroll (See Exhibit "C"). In addition an amount equivalent to the present non-military appropriation of \$150,000 would be required for operation and maintenance, necessitating a total appropriation of approximately \$485,000. Deducting commercial receipts deposited in the U. S. Treasury for 1933, which were approximately \$225,000, the annual net cost of this system to a civil department would be approximately \$260,000.

The cost of transfer of military personnel engaged in operating and maintaining the Alaska System to military duties is estimated to be approximately \$15,000.



IRVING J. CARR,
Major General,
Chief Signal Officer of the Army.

Inclosures:

- Exhibit A - Consolidated Statement
of Operation.
- Exhibit B - Acts of Congress.
- Exhibit C - Civilian Personnel.
- Exhibit D - Map, Alaska System.

EXHIBIT "A"

"Consolidated Statement of Operation Washington and
Alaska Military Cable and Telegraph System"

TRAFFIC AND RECEIPTS:

	1933 Words	Receipts*
Commercial	7,132,299	\$223,592.39
Government **	3,860,451	
Total	10,992,750	\$223,592.39

* Commercial receipts deposited to credit of U. S.
Treasury.

** War Department traffic is approximately 2%
of total Government traffic.

APPROPRIATION \$161,285.00

EXPENDITURES:

	1933
Non-military appropriation:	
Supplies and betterments and other operating expenses	\$140,127.92
Pay of civilian employees	<u>60,045.13</u>
	\$200,173.05

Military funds:

Pay & allowances, military personnel	\$306,828.11
Medical and dental treatment heat, light, water, transportation & incidentals	<u>19,164.11</u>
	\$325,992.22

Grand Total \$526,165.27

EXHIBIT "B"

Acts of Congress pertaining to the Washington and Alaska
Military Cable and Telegraph System.

<u>Date</u>	<u>Act</u>
May 26, 1900	providing for an extensive system of military telegraph and cable lines in Alaska connecting Army posts with commanding general of department, \$450,550.
March 2, 1901	providing for extension to June 30, 1902 for expenditures under Act of May 26, 1900.
June 30, 1902	providing for extension from June 30, 1902 to June 30, 1903 for expenditures under Act of May 26, 1900.
March 2, 1903	providing for connection by cable of Seattle with southeastern Alaska where military posts of Skagway and Haines Mission were located and connected to northern Alaska by Canadian lines. (1300 miles) \$485,000.
Feb. 18, 1904	Deficiency appropriation for F.Y. 1904 providing "For construction, maintenance and repair of military telegraph lines \$2,500.
Apr. 23, 1904	War Department Appropriation Act, Fiscal Year 1905, \$321,580 for Signal Service of the Army (includes WAMCATS cable from Sitka, Alaska to Fort Liscum).
March 2, 1905	W.D.A.A., F.Y. 1906 for "Repair of Deep Sea Cables \$50,000." "For continuing cable from Valdez to Seward, Alaska \$95,000".
June 12, 1906	W.D.A.A., F.Y. 1907 for defraying the cost of such extensions and betterments operation and maintenance etc. of the WAMCATS as may be approved by the Secretary of War to be available until the close of the fiscal year 1907, from the receipts of the WAMCATS which have been covered into the Treasury of the U.S. the extent of such extensions and betterments and the cost thereof to be reported to the Congress by the Secretary of War, (\$179,000).
March 2, 1907	W.D.A.A., F.Y. 1908 for "extensions and betterments operation and maintenance etc., \$190,000." Also, "hereafter detailed estimates shall be submitted to Congress for any further extension of the cable or telegraph lines in district of Alaska".

(Exhibit "B" cont'd.)

<u>Date</u>	<u>Act</u>
May 11, 1908	W.D.A.A., F.Y. 1909 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1910, \$200,000". "Extra pay enlisted men WAMCATS \$36,000".
March 3, 1909	W.D.A.A., F.Y. 1910 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1911, \$100,000". "Extra pay to enlisted men of line and S.C. with WAMCATS not less than ten days \$36,000".
March 23, 1910	W.D.A.A., F.Y. 1911 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1912, \$75,000". "Extra pay enlisted men WAMCATS, \$36,000".
March 3, 1911	W.D.A.A., F.Y. 1912 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1913, \$125,000". "Extra pay enlisted men WAMCATS, \$36,000".
August 24, 1912	W.D.A.A., F.Y. 1913 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1914, \$50,000". "Extra pay enlisted men WAMCATS, \$32,000".
March 2, 1913	W.D.A.A., F.Y. 1914 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1915, \$50,000". "Extra pay enlisted men WAMCATS, \$32,000". "for protection of Signal Corps Building and Terminal grounds of the WAMCATS \$55,000".
June 23, 1913	Act for sundry civil expenses F.Y. 1914 and other purposes. "Purchase of site cable office Seward in connection with operation of WAMCATS, \$400.".
April 27, 1914	W.D.A.A., F.Y. 1915 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1915, \$50,000". "Extra pay enlisted men WAMCATS \$32,000".
March 4, 1915	W.D.A.A., F.Y. 1916 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1916, \$50,000". "Extra pay enlisted men WAMCATS \$30,744".
August 29, 1916	W.D.A.A., F.Y. 1917 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1917, \$50,000". "Extra pay enlisted men WAMCATS \$30,660".

(Exhibit "B" cont'd.)

<u>Date</u>	<u>Act</u>
May 12, 1917	W.D.A.A., F.Y. 1918 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1919, \$50,000." "Extra pay enlisted men WAMCATS \$30,660."
July 9, 1918	W.D.A.A., F.Y. 1919 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1920, \$147,445." "Extra pay enlisted men WAMCATS \$30,660."
July 11, 1919	W.D.A.A., F.Y. 1920 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1921, \$140,000." "Extra pay enlisted men WAMCATS \$38,430."
June 5, 1920	W.D.A.A., F.Y. 1921 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1922, \$140,000."
June 30, 1921	W.D.A.A., F.Y. 1922 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1923, \$140,000."
June 30, 1922	W.D.A.A., F.Y. 1923 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1924, \$140,000."
March 2, 1923	W.D.A.A., F.Y. 1924 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1925, \$140,000." "For replacing worn out portion of the WAMCATS, \$750,000 to remain available until expended: Provided, that the Secretary of War is authorized to enter into contracts or otherwise incur obligations for the purpose above mentioned in this item, not to exceed \$750,000 in addition to the appropriation herein made."
June 7, 1924	W.D.A.A., F.Y. 1925 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1925, \$140,000." "For replacing worn out portions of the WAMCATS \$750,000 to remain available until expended and to cover liquidation of all obligations incurred under the contract authority of \$750,000 contained in the War Department Appropriations Act for the F.Y. 1924; Provided, that this sum together with the \$750,000 heretofore appropriated for the fiscal year 1924 shall be applicable to all travel and transportation charges and expenses connected with the purchase and installation of the said cable."

(Exhibit "B" cont'd.)

<u>Date</u>	<u>Act</u>
February 12, 1925	W.D.A.A., F.Y. 1926 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1927, \$150,900."
April 15, 1926	W.D.A.A., F.Y. 1927 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1928, \$157,167".
May 20, 1926	An Act to authorize payment of expenses of the WAMCATS out of receipts of such system as an operating expense - "hereafter such amount of money as may be authorized by the Secretary of War may be withheld temporarily from the receipts of the WAMCATS by the auditor of said system as a working balance from which to make payments of <u>money transfer</u> from and to Alaska and between points within Alaska, to be accounted for accordingly; and the expenses of procuring necessary official bonds, as determined by the Secretary of War, of enlisted men employed in connection with such money transfers, shall be paid out of the receipts of such system as an operating expense."
February 23, 1927	W.D.A.A., F.Y. 1928 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1929, \$168,080."
March 23, 1928	W.D.A.A., F.Y. 1929 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1930 \$159,080."
February 28, 1929	W.D.A.A., F.Y. 1930 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1931, \$171,930."
May 28, 1930	W.D.A.A., F.Y. 1931 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1932, \$300,000."
February 23, 1931	W.D.A.A., F.Y. 1932 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1933, \$298,560."
July 14, 1932	W.D.A.A., F.Y. 1933 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1934, \$161,285."
March 4, 1933	W.D.A.A., F.Y. 1934 "for extensions and betterments operation and maintenance etc., to be available until close of F.Y. 1935, \$160,772."

EXHIBIT "C"

Table of Civilian Personnel Required to Replace Military
Personnel (13 Stations of System Closed)

<u>Station</u>	<u>Personnel required</u>	<u>Salaries</u>
Anchorage	1 Radio traffic supervisor	\$3,200.00
	1 Assistant radio engineer	2,600.00
	3 Chief radio operators	6,000.00
	21 Senior radio operators	46,800.00
	1 Clerk	1,800.00
	1 Machinist	1,680.00
	2 Electricians	3,360.00
	1 Chauffeur	1,200.00
	1 Janitor	1,080.00
	1 Laborer	1,080.00
Pt. Barrow	1 Chief radio operator	\$2,000.00
Bethel	1 Senior radio operator	\$1,800.00
Cordova	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Craig	1 Senior radio operator	\$1,800.00
Fairbanks	1 Chief radio operator	\$2,000.00
	5 Senior radio operators	9,000.00
	1 Assistant Clerk	1,620.00
	1 Junior messenger	600.00
Flat	1 Senior radio operator	\$1,800.00
Haines	2 Senior radio operators	\$3,600.00
Juneau	1 Chief radio operator	\$2,000.00
	11 Senior radio operators	19,800.00
	1 Clerk	1,800.00
	2 Assistant Clerks	3,240.00
	1 Chauffeur	1,200.00
Kanakanak	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00

(Exhibit "C" cont'd)

<u>Station</u>	<u>Personnel required</u>	<u>Salaries</u>
Ketchikan	1 radio traffic supervisor	\$3,200.00
	1 Assistant radio engineer	2,600.00
	3 Chief radio operators	6,000.00
	13 Senior radio operators	23,400.00
	1 Senior Clerk	2,000.00
	1 Clerk	1,800.00
	1 Janitor	1,080.00
	1 Electrician	1,680.00
Kodiak	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Kotzebue	1 Senior radio operator	\$1,800.00
Nome	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Nulato	2 Senior radio operators	\$3,600.00
Petersburg	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Seward	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Sitka	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Skagway	2 Senior radio operators	\$3,600.00
Valdez	2 Senior radio operators	\$3,600.00
Wrangell	1 Chief radio operator	\$2,000.00
	2 Senior radio operators	3,600.00
Seattle	1 Assistant radio engineer	\$2,600.00
	3 Chief radio operators	6,000.00
	31 Senior radio operators	55,800.00
	3 Clerks	5,400.00
	3 Assistant Clerks	4,860.00
	2 Electricians	3,360.00
	1 Chauffeur	1,200.00
	1 Machinist	1,680.00
	2 Unskilled laborers	3,160.00

(Exhibit "C" cont'd.)

<u>Station</u>	<u>Personnel required</u>	<u>Salaries</u>
Seattle Headquarters	1 Principal administrative officer	\$5,600.00
	1 Junior Administrative officer	3,500.00
	1 Associate Radio Engineer	3,200.00
	3 Clerks	6,000.00
	4 Assistant clerks	6,480.00
	1 Assistant Engineer draftsman	1,620.00
	3 Machinists	5,040.00
Total		\$ 334,520.00

Personnel cost has been computed on basis of replacing existing military personnel with civilian personnel capable of same duties, and assuming that 13 stations will be closed.

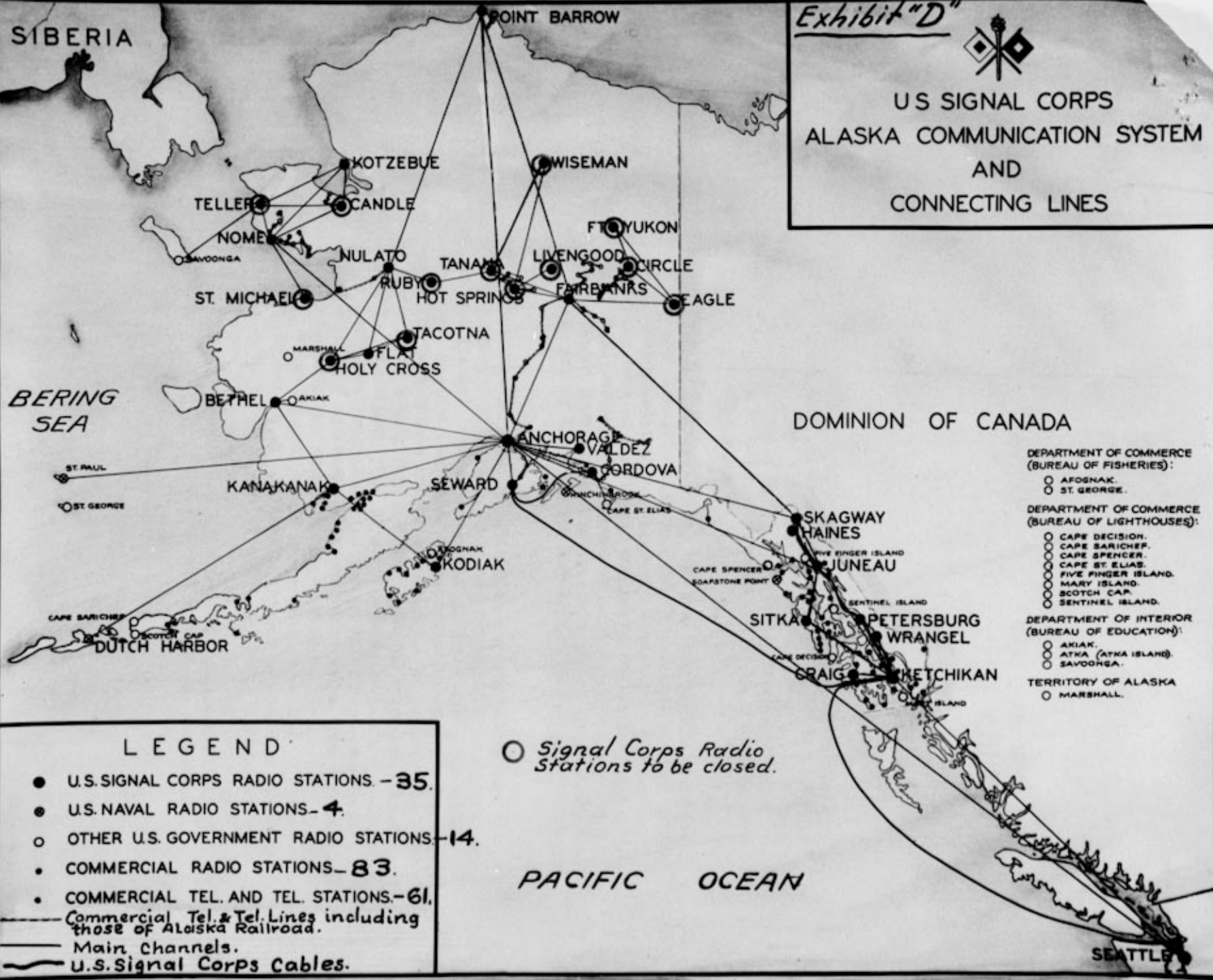
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POINT BARROW

Exhibit "D"



U S SIGNAL CORPS
ALASKA COMMUNICATION SYSTEM
AND
CONNECTING LINES



LEGEND

- U.S. SIGNAL CORPS RADIO STATIONS. - 35.
- U.S. NAVAL RADIO STATIONS. - 4.
- OTHER U.S. GOVERNMENT RADIO STATIONS. - 14.
- COMMERCIAL RADIO STATIONS. - 83.
- COMMERCIAL TEL. AND TEL. STATIONS. - 61.
- Commercial Tel. & Tel. Lines including those of Alaska Railroad.
- Main Channels.
- U.S. Signal Corps Cables.

○ Signal Corps Radio Stations to be closed.

DEPARTMENT OF COMMERCE (BUREAU OF FISHERIES):

- AFOSHAK.
- ST. GEORGE.

DEPARTMENT OF COMMERCE (BUREAU OF LIGHTHOUSES):

- CAPE DECISION.
- CAPE SARICHER.
- CAPE SPENCER.
- CAPE ST. ELIAS.
- FIVE FINGER ISLAND.
- MARY ISLAND.
- SCOTCH CAP.
- SENTINEL ISLAND.

DEPARTMENT OF INTERIOR (BUREAU OF EDUCATION):

- AKIAK.
- ATKA (ATKA ISLAND).
- SAVOONGA.

TERRITORY OF ALASKA

- MARSHALL.

PACIFIC OCEAN

SEATTLE

3/2/34
March 2, 1934

Honorable Marvin H. McIntyre,
Secretary to the President,
The White House.

Dear Mr. McIntyre:

Attached hereto is a report which I was directed by the President to submit to him personally during a conference in his Office on February 28th.

In connection therewith, you are advised that I learned to-day that rumors of alleged sabotage and interference with the Army Air Corps Air Mail Operations have reached the ears of local Press men through some unknown source.

It is my understanding that the President desires the attached information to be released by him if and when he deems necessary.

In view of the fact that the local Press is endeavoring to secure information on the matter, it is believed that the President should have the attached data without delay.

Very truly yours,

B. D. FOULOIS,
Major General, Air Corps,
Chief of the Air Corps.

x 25 U
x 25

[Regraded Unclassified]
Order Sed Army by Tag per 311309]

~~CONFIDENTIAL~~

7/10/53

On or about February 16, 1934, information of a confidential nature but from a reliable source was received to the effect that a meeting was to be held in New York, attended by representatives of commercial aviation, for the purpose of deciding on ways and means by which to embarrass the Army Air Corps while flying the mail. This information was transmitted the following morning to Senator Black for his information and to the Chief Inspector of the Post Office Department who was requested to investigate same.

The three Zone Commanders directly in charge of Air Mail Operations were also promptly instructed by code messages to be extremely careful in guarding against sabotage and allied actions. Mr. K. F. Aldrich, the Chief of Postal Inspectors, took immediate steps to investigate the New York meeting but states that their agents had very little success in getting any concrete evidence. He stated further that he doubted the actuality of such a meeting among commercial companies, but that one company did hold a meeting, the exact nature of which has not been determined.

On February 15, 1934, an informal message was received by an officer on duty in this Office to the effect that a naval aviation officer stopping overnight at the Municipal Airport at Greensboro, North Carolina, on starting to leave, discovered several leaks in his gas tank, his rudder control jammed and his compass 60 degrees off. This was also promptly reported to the Chief of Postal Inspectors and the matter is still under investigation.

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[Regraded Unclassified
Order Sec Army by Tag per
311309 - 9/10/53]

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Another case is covered in the following quoted and decoded radio:

"QA619 168 NL Govt - Atlanta, Ga. 26 1934 Feb 26 PM 9 11

Chief Post Office Inspector,
Washington, D.C.

Commanding Officer, Fourth Corps Area, Fort McPherson, Atlanta, today turned over to me envelope postmarked Nashville, Tenn., Feb. 24, containing anonymous letter reading, quote: There is a plot being hatched or is already in use to disable as many Army air planes as possible so a bad showing will be made. The American Airways office here at Sky Harbor is taking active part in this. The man behind this plot is a blond, thirty to thirty-five years of age, fair complexion, six feet tall, or more, and is a regular employee of the American Airways. This is not the only firm whose mail contract was canceled which is trying to disgrace the Army. It is nation-wide. The plan is to do something to the plane so it will cruise from fifty to one hundred miles and then crash. It is also planned to damage the instruments so that the planes will lose their direction, etc. This is a phase of commercial crookedness which should be brought to the attention of the Postmaster General. Unquote. Letter and envelope being mailed to Inspector in Charge, Chattanooga, today.

WARD, Acting"

This case is now in the process of investigation by the Postal Inspectors but to date no report thereon has been received.

Still another case is that in which Mr. Thomas B. Doe, President of the Eastern Air Transport, in a telegram addressed to the Chief of Staff, United States Army, offered every assistance possible to assist the Army Air Corps in carrying the mail, including pilots and other facilities. The offer was very liberal and gratefully acknowledged. However, his offer should be compared to a statement made by Mr. David L. Behncke, President of the Air Line Pilots Association, to the effect that Mr. Doe had advised

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commercial pilots that they could not expect to be reemployed by Eastern Air Transport if they (these pilots) went to work for the Government. Mr. Behncke made this statement in the presence of Mr. Harllee Branch, Second Assistant Postmaster General; Mr. Eugene Vidal, Director of Aeronautics, Department of Commerce, and Major General Benjamin D. Foulois, Chief of the Army Air Corps, at about 3:00 P.M., February 17, 1934, in the Office of Mr. Branch.

Another similar case is that in which Mr. Croil Hunter, Vice-President and General Manager of the Northwestern Airways, Inc., offered the personnel and facilities of that organization to the Air Corps. However, Air Corps officers received news to the effect that this organization had threatened Reserve officers who were not on active duty but employed by the Northwestern Airways, Inc., that they would be demoted or would forfeit any chance of future jobs if they accepted active duty with the Army Air Corps to fly the mail.

The following information was received this morning, March 2, 1934, from an employee of one of the major wire news gathering services:

- a. That any employee of this agency who writes one word in a press release detrimental to commercial aviation operating companies will be at once discharged.
- b. That persons directly and indirectly connected with commercial aviation have a very complete organization which is issuing vicious propaganda containing distorted facts to the discredit not only of the administration in connection with the air mail

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but against the Army Air Corps while carrying the mail. Further, this propaganda organization has, thru distortion of facts and other ruthless means, influenced newspaper editorial writers, managing editors, and even higher officials of the Press to harass and hamper the administration and the Air Corps in carrying the air mail.

- c. That certain persons indirectly connected with commercial aviation will, in his opinion, use any means, no matter how degraded, to hamper the Air Corps in its carrying the mail.
- d. The informant made an investigation of the air mail about three years ago for a newspaper syndicate. During this investigation he was approached by an affiliate of the commercial aviation companies and offered a three-year contract and a thousand dollars a month if he would drop the investigation, turn over the report to the commercial aviation companies and go to work for them. He stated that he refused the contract and was viciously maligned and threatened. He has recently been taken off of aviation writing in Washington by the company for which he works.

~~CONFIDENTIAL~~

THE WHITE HOUSE
WASHINGTON

July 18, 1935.

MEMORANDUM FOR

THE SECRETARY OF WAR

I entirely approve the general arrangement you suggest in your memorandum in relation to your trip to the Philippines and in relation to the change in the office of Chief of Staff.

I see no reason why you should not tell General MacArthur that the plan meets with my approval so that he can make his plans accordingly.

F. D. R.

WAR DEPARTMENT
WASHINGTON

file
CONFIDENTIAL

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MEMORANDUM FOR THE PRESIDENT:

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6.7.
War
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X 400 P. J.

[1935]
Leaving Manila on November 15th and returning by way of Indo-China, Java, and Australia, I will arrive in Washington approximately December the 15th. It is essential that General MacArthur leave for Manila early in October in order that the new Commonwealth President can have the benefit of his fundamental advice in presenting to his legislature a National Defense Act for enactment. Mr. Quezon has specifically requested that he be permitted to leave at that time as otherwise he would be gravely embarrassed in handling the situation which will confront him. There is no necessity, however, to relieve him as Chief of Staff at that precise time. It is suggested, therefore, that General MacArthur be relieved as Chief of Staff on December the 15th by which time I will recommend to you his successor, probably General Craig. The advantage of not inducting a new Chief of Staff until my return is so great as to make me very earnestly recommend this procedure.

The Chief of Staff is a detailed position and does not require confirmation by the Senate. The present Chief of Staff and his predecessor requested the President to submit their names to the Senate for confirmation, which was done. The rank and emoluments, however, go with the President's order and a Chief of Staff can be made or unmade at any time solely by the President's order. Confirmation, if desired by the new Chief of Staff, can be readily accomplished in the new Session. The actual set-up is entirely normal, as the War Department plans provide for the Chief of Staff taking the field and the Deputy Chief of Staff administering the War Department activities. This is the primary function of the Deputy Chief of Staff and there could, therefore, be no misunderstanding on the part of the Deputy with regard to this arrangement.

In order that definite plans can be made, I recommend that you approve this general arrangement.

Franklin D. Roosevelt Library

DECLASSIFIED

DOD DIR. 5200.9 (9/27/58)

Date- 2/11/59

Signature- *Carl L. Spicer*

[Signature]
Secretary of War.

file

WAR DEPARTMENT
WASHINGTON

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PSF

August 22, 1935.

WHITE HOUSE
AUG 22 1935

MEMORANDUM for the President:

C. F. War

Some time ago you asked me for data relative to the aircraft production capacity of the United States. I caused a study to be made and I now have the honor to submit a report entitled, "A Survey of the American Aircraft Industry."

x25 U

This survey shows that with its present floor space and working three shifts, the commercial aircraft industry can produce 7,238 planes of all kinds and 18,885 engines per year.

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The present demand for Governmental and civilian purposes is far below this capacity. In case of a major war, it is estimated that the Army and Navy will require 32,437 planes and 57,978 engines the first year. It would therefore be necessary to convert allied industries into airplane factories, in order to meet the increased demand, which could be done with an inevitable delay.

I extract the following summary from the survey:

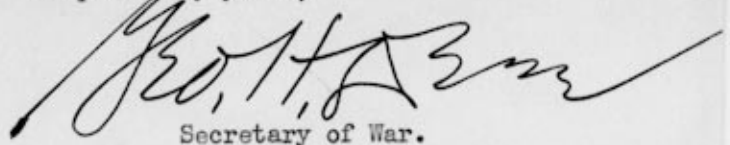
1. The commercial aircraft industry can produce more planes and engines than it can sell at this time.
2. It can produce aircraft and accessories equal or superior in performance to those of other countries.
3. It has not produced aircraft by mass production methods nor in great numbers since the World War.
4. It uses materials largely of domestic origin, which will be available in an emergency.
5. To meet a war emergency, the aircraft industry must be expanded and allied industries must be converted to the manufacture of aircraft to carry the load.
6. The trend is towards all-metal construction, which is favorable to mass production methods.
7. Once the aircraft industry and allied industries are mobilized and in production, the capacity to produce aircraft will be enormous.

8. A considerable delay is certain to ensue before this can be achieved.
9. A number of airplanes can be purchased now by utilizing options in army contracts.

For your further information I enclose copy of my letter of August fifteenth to the House Military Affairs Committee, relative to the War Department's policy and practices in the procurement of airplanes. You will note that our policy insures competition, both as to prices and design, and is resulting in greatly improved planes from year to year.

In view of the data disclosed by the enclosed survey, and by my letter to the Committee, it is evident that the airplane is still in the developmental stage and is not yet a standardized article.

Respectfully yours,



Secretary of War.

The President,

The White House.

2 encl.

AUG 15 1935

Honorable J. J. McSwain,^x
Chairman, Committee on Military Affairs,
House of Representatives. ^{x 419}

Dear Mr. McSwain:

At the time of the adoption of the present War Department policy for the procurement of aircraft the Assistant Secretary of War took the position that the policy would have to be in operation at least two years before sufficiently definite results could be obtained to render final judgment upon its efficacy. Although this policy has been in effect only one year I feel that sufficient progress has been made to warrant a report to your Committee at this time and I am therefore setting forth below the results obtained to date and my opinion of what may reasonably be expected in the future.

Briefly the policy calls for the placing of contracts for quantity procurement of airplanes as a result of competitive bids submitted by the industry. Advertisements submitted to the trade are on a performance specification basis and require each competing manufacturer to submit with his bid a sample airplane complete and ready to fly. A period of from eight to twelve months is allowed between the issuance of the advertisements and the opening of the bids to give the manufacturers adequate time in which to design, construct and submit the sample airplanes for test. Award is made on the basis of a predetermined method of evaluation of which the bidders are made cognizant in the advertisement. This evaluation places a premium upon improvement in performance and award thereunder is made to the highest evaluated airplane thereby assuring the government obtaining the finest available aircraft. The advertisement further contains certain minimum performance requirements which are based upon the maximum performance of the finest known airplane at the time of issuance of the particular advertisement and provides that no consideration will be given to any airplane that does not at least come up to these requirements.

This policy gives full rein to the inventive genius and engineering ability of the manufacturer and permits the incorporation in the sample to be submitted of all worthwhile developments

practically up to the actual date of opening. For example a certain manufacturer arrived at Dayton, Ohio, with the airplane which he proposes to submit on a particular proposal about a month prior to the date of opening of bids. After arrival at Dayton he apparently decided that the plane could be additionally improved and consequently has had a crew working upon it consistently since its arrival. If advertising had been based upon detailed specifications and drawings with no incentive for turning out the finest possible type of airplane, it is fair to assume that proposals would have been received offering airplanes meeting only these detailed specifications and drawings and not including therein the engineering developments which have taken place since their issuance many months before.

The making of awards under this system on the basis of a tested article rather than on a "paper promise to perform" has an additional marked advantage. It enables the War Department to make contracts for quantity procurement with the knowledge that the manufacturer has actually demonstrated his ability to construct the finest available type of airplane, thereby eliminating the service test of an article which would be necessary if samples were not required. This factor alone reduces by at least a year the elapsed time between the inception of a design and delivery of airplanes in quantity to troops in the field and eliminates to a great extent past criticism to the effect that airplanes are becoming obsolescent by the time they reach the hands of tactical organizations.

The War Department is gratified at the response of the industry to the new procurement policy. On standard equipment competition has been keen and has resulted in a great deal of engineering work on the part of manufacturers. It is fair to say that progress in the art has been materially advanced, moving ahead according to the belief of some people intimately connected with the industry as much as three to five years. Furthermore manufacturers are offering airplanes whose performance exceeds expectations. For instance a basic training airplane now in service has a top speed of about 125 miles per hour while the basic trainers contracted for under the present system have a top speed of over 200 miles per hour. It appears reasonable to assume that no such advance would have been made at one stroke without the incentive of competition and the assurance that award would be made to the manufacturer offering the most advanced airplane.

When the present policy was originally adopted it was felt in some quarters that it would result in reducing the available sources of supply for the different types of airplanes. It was the opinion of the War Department that a competitive policy of procurement would give the opposite results and I am gratified to be able to state that

such is apparently the case. For example six manufacturers offered basic training airplanes in the last competition while four manufacturers entered observation airplanes. I am informed that three manufacturers will offer bombardment airplanes in that competition, bids on which are to be opened the 22d of this month. Reliable press reports indicate that each of these three companies has built and has ready for test a bombardment airplane which will far exceed the performance of any bombardment plane now known, with speeds ranging over 200 miles per hour, cruising range exceeding 3,000 miles and with greater useful loads than have heretofore been thought possible. Press reports further indicate that the Glenn L. Martin Company, which is now manufacturing a quantity of bombers for the Army, is offering a newly designed airplane in the competition under discussion. It is fair to assume that had procurement continued along the lines previously followed this Company probably would have offered for this years consideration the present type of Martin bomber with certain refinements and improvements rather than an airplane of completely new design and development.

In addition to quantity procurement competitions the War Department is holding design competitions on many types of aircraft. These competitions were opened May 6, 1935, and resulted in seventeen manufacturers entering the competition for Pursuit Airplanes and an average of three manufacturers in each of the other competitions. The necessity of giving preference to the work involving contracts for quantity procurement because of present shortage of airplanes in the Army and the amount of detail work necessary to evaluate the design competition have precluded any final determinations to date. It is expected to announce the winners of the design competitions at an early date and it is hoped that the designs submitted will be sufficiently advanced to warrant the manufacture of experimental airplanes in accordance therewith.

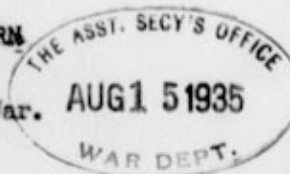
I regret that the present procurement policy has not been in effect sufficiently long to enable me to furnish your Committee more concrete information but I feel certain that the progress and development outlined above are sufficient to enable you to conclude with me that the success of this policy is most promising and that nothing should be placed in the way of continuing the present method for a sufficient period to determine definitely its net worth.

Sincerely yours,

(Signed) GEO. H. DERN

Secretary of War.

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A Survey of the American Aircraft Industry.

I. Historical.

The important date in the world's lighter than air development is 1783, when the Montgolfier Brothers flew their hot air balloon. They were paper-bag manufacturers and made their own balloons of paper, and later, of linen, lined with paper. The subsequent use of hydrogen, instead of hot air, and the introduction of rubberized cloth, followed swiftly, as did the invention of the rip cord and valve. Free ballooning was then possible as a sport, but the dirigible balloon, or airship, was forced to await the development of the internal combustion engine. McClellan used captive balloons in the Civil War, to observe the Confederates' movements, and here Count Zeppelin, then a Captain in the German Army and a military observer, found his inspiration which led to the large airships which bear his name, and which have given Germany the leadership in rigid airships.

Heavier than air development did not come so rapidly, as the early pioneers based their efforts on the flight of birds, which led to attempts to build an ornithopter, or wing-flapping device. This presents so many mechanical difficulties, that it is not yet successful. As early as about 1500, Leonardo da Vinci expressed some of the ideas now current, and invented the helicopter and the air screw, which, accordingly, preceded the invention of the screw propeller for surface craft. But little progress was made until gliding was undertaken seriously by scientific men. The greatest of these was Lilienthal (1848 to 1896), but even he built his series of gliders, and flew them, to gather data from which to build an ornithopter.

There were two problems which gave trouble after gliding had demonstrated its possibilities. One was mechanical control in the air to eliminate the shifting of the weight of the pilot, and the other propelling power. The Wright Brothers solved the first one by warping the wings, and the second by building an internal combustion engine. The aileron, introduced by Curtiss, followed, and the essentials of flight were known. Gliding served also to teach the art of flying, before the engine was improved. In every case, the early experimenters were their own builders, and no industry, as such, existed.

In 1908 the American Army purchased an airplane from the Wright Brothers for military purposes. This was the first such purchase

made, and marks the beginning of the manufacture and sale of airplanes to the Government. Shortly before this, and for some time afterward, airplanes were built by hand methods, and sold to a few daring individuals, who flew them for exhibition purposes. The builder usually taught the buyer to fly the plane purchased. Each plane was likely to be different from any other one, but, in general, each was an improvement over the one before. The progress was orderly and fairly rapid, as experience was gained by flying, until the World War.

The need for aircraft of all kinds for war purposes, and unlimited money, made available by the governments concerned, gave the small aircraft industry in each country its opportunity. The demands from the pilots at the front for more speed, faster climb, and greater maneuverability served to stimulate the designers. Designs and ideas were exchanged between allied nations and between competing builders in a way not possible in peace. The growth of the industry was very rapid, and, in this, the United States shared somewhat, before its entry into the World War. Contracts for airplanes, especially training planes, were let here, and, in the year before our entry, eight hundred airplanes were built by an industry capitalized at less than \$15,000,000. Two-thirds of this investment consisted of the Wright-Martin and Curtiss companies.

The materials used in airplane construction during this period were continued practically unchanged throughout the World War. The so-called stick and wire system of construction was used, calling for spruce, fir, and ash for airplanes, hardwoods of certain kinds for propellers, and linen, later changed to long-staple cotton, for covering wings and fuselages. This airplane cloth was treated with a nitrocellulose dope to shrink it, making it tight and waterproof. Balloons and airships were of rubberized long-staple cotton fabric. All of these materials, except rubber, were available within the United States, although the large amounts required called for special efforts to meet the needs.

The program adopted for the war effort in aircraft of the United States began with one thousand planes for the first year, initiated by the Signal Corps, and increased to twenty-two thousand airplanes. With spares, this meant nearly forty thousand planes must be manufactured, though not all need be assembled. Of these, twelve thousand were for active service in France, and the remainder training planes, or for home defense. As a nucleus on which to build, there were sixty-five officers in the Aviation Section of the Signal Corps, one thousand three hundred and thirty enlisted men, two flying fields,

and fifty-five airplanes, of which it was said that fifty-one were obsolete. There were two free balloons on hand.

While the selection of service types of airplanes was dependent upon recommendations from the front, the production of training planes began, and foreign planes and engines were purchased. In return raw materials were sent abroad. It was decided to manufacture the De Havilland, the Spad, and the Handley-Page from abroad, adapting them to take American engines. Many others that were successful were of American design, including the Loening, Thomas-Morse, and Martin. The industry which produced these planes consisted of certain of the small pre-war factories, supplemented by others started by men engaged in allied industries, and reinforced by the conversion of factories which had made similar products, like automobile bodies and furniture.

The patent situation threatened to delay production at the beginning. In the year 1916 there were two principal groups of patents relating to airplanes, one of which was owned by the Wright-Martin Company and the other by the Curtiss Airplane and Motor Company. These two companies were involved in suits against each other for infringement and neither of them held such a controlling measure of patent rights that it could build an airplane without trespassing upon the other. No other manufacturer could construct an airplane without procuring a license from both and the status of the litigation between the two companies was such that few outsiders dared venture into the industry. In this state of affairs Franklin D. Roosevelt, Acting Secretary of the Navy, addressed a letter to the National Advisory Committee for Aeronautics on January 13, 1917, requesting that Committee to suggest some line of action to relieve the situation. After several months investigation the National Advisory Committee for Aeronautics recommended the formation of an association of aircraft manufacturers with a form of cross-licensing agreement. Accordingly, on July 24, 1917, the Manufacturers Aircraft Association was formed and incorporated under the laws of the State of New York. A general agreement for the granting of cross-licenses and the collection of royalties was entered into by all members of the association. There were no further patent troubles.

The production of balloons was intrusted to the rubber manufacturers, and Akron, Ohio, became the center of this industry. A French type was adopted, and six hundred and forty-two observation balloons were produced during 1918. Engine manufacture was largely in the hands of the automobile engine makers, but some were made by new factories started for that purpose. The Liberty engine, which

was an outstanding American contribution to the War, was built by Packard, Lincoln, Ford, Marmon, Buick, and Cadillac. Our industry was in production on training engines when the War started, but even here it was necessary to convert larger and older industrial organizations to assist in carrying the larger load. The Union Switch and Signal Company, General Vehicle Company, General Motors, and others collaborated in this larger endeavor.

As the War progressed and the importance of aviation increased, the production of aircraft became a major task for industry. The Bureau of Aircraft Production was created to guide this effort. The spruce producers were placed under a semi-military control, under the Spruce Production Division of the Signal Corps, later transferred to the Bureau of Aircraft Production.

The results produced by the commercial aircraft industry, with considerable assistance from allied industries, are difficult to evaluate, because of the lack of knowledge of what was needed, the need for haste, and the rapid changes in design then taking place. However, Mr. Crowell reports that the American industry produced, during the War months of 1917 and 1918, the following:

Training airplanes	5,952)	
Advanced training airplanes	2,615)	11,754 airplanes.
Service airplanes	3,187)	
Liberty engines	15,572)	32,420 engines.
Other engines, including training	16,848)	

It should be noted that the greatest production occurred in the last few months, with 5,297 engines produced in October, 1918, and 1,097 De Havilland airplanes in the same month.

After the War, the converted factories returned to their peace time pursuits, and the aircraft industry was left in a difficult situation. The military forces had a supply of planes and engines on hand, to last them five years, and was then not used up, but made obsolete by new developments. The industry turned to the development of commercial aircraft, but here had to meet, in part, the competition of the surplus planes and engines left over from the War. The surplus engines, especially, played an important part in the development of new airplanes, as they were very cheap, and enabled any young designer to power his home-made airplane at little cost. The aircraft industry, as such, almost went out of existence. The number of private flyers, who made a living by making exhibition

flights and taking up passengers, increased tremendously for a short time.

The commercial development, after the War, began with the design of airplanes to use the cheap surplus war-time engines, and the rebuilding of war-time planes to better fit them for commercial use. This was the period of the three-place, open cockpit plane, used for carrying a pilot and two passengers and for training. There was, at this time, a migration of foreign designers to this country, and these men had a considerable influence on American designs. The best known are Fowker from Holland, Seversky and Sikorsky from Russia, Roché from France, Barling from England, and many others not so well known. Aircraft factories were glad to secure repair and rebuilding contracts, and some military airplanes were thus changed from a wooden fusilage to a welded steel tube fuselage.

The Army and the Navy recognized that an active and prosperous aircraft industry was essential to the national defense, and adopted a policy of having their aircraft designed by the commercial industry, rather than by themselves, and built by the industry. Performance specifications were written, and tests followed the construction of the first airplane. The design rights of the successful manufacturer were recognized, and these sound policies have produced a strong and successful group of aircraft designers in the industry, who are in large part responsible for the advanced position held by this nation.

The withdrawal of the Government from airmail carrying, and the payment of liberal rates to civilian contractors have permitted these contractors to secure larger and better aircraft from the industry, and have carried a large share of the development expense, while they were building up the business of carrying passengers and express. There was no subsidy to the industry, but rather one to the users of aircraft.

This same assistance permitted the extension of the commercial airlines to the south, encircling South America. This helped the market of the industry in that continent, as well as the national defense. The need for pilots and mechanics on these airlines, both foreign and domestic, has given the Nation the large numbers of licensed technicians which are listed in an appendix to this study. The statistics of the airlines over a period of years are also to be found in an appendix, as are the production and export of airplanes and engines.

The boom in the period up to and including 1929 had its effect

in the aircraft industry, as well as in other industries. There was a period when financing was easy, and it resulted in the increase of plant capacity of many of the established aircraft companies, the starting of several new companies, and the sale of stock to the public. Some of this stock was of doubtful value, while some was sound. This plant expansion resulted in the largest production since the War, and for 1929 the country built six thousand airplanes and seven thousand engines. The depression which followed forced the unsound companies out of business, but the use of the airlines for mail, passengers, and express continued to increase until 1934. In fact, the industry fought the depression by producing improvements in the design of both planes and engines, and the progress of the art seems not to have been retarded in the last few years. There has also been greater recognition abroad, during the depression, of the excellence of America's engines and commercial transports. The export figures for 1929 have been considerably exceeded since then for both planes and engines. The excellence of American ingenuity has surmounted the obstacles of depression and with reasonable encouragement the industry will forge ahead.

II. The Present Status of the Aircraft Industry.

It is significant that stocks of the aircraft industry are recommended by investment advisers to be purchased in only limited amounts for speculative purposes. Their failure to show any earnings with one exception, and, in many cases, their showing of losses, indicates that the aircraft industry is still not well established. This is in spite of the fact that the aircraft operating companies, who are the best civilian customers of the industry, are performing a real national service, and are being used more and more by the public. For the first four months of 1935, including both domestic and foreign routes, the number of passengers carried increased sixty-one per cent over the same period last year. Express was sixty-two per cent over the same period, and mail poundage was up two hundred and nineteen per cent. Mileage flown was up only thirty-five per cent, which indicates an increased use of the existing facilities. The average passenger flight was four hundred and four miles in 1934, as compared to three hundred and thirty-six miles in 1933, and two hundred and eighty-four miles in 1932. For contrast, passengers carried on Class I railroads declined forty per cent from 1928 to 1934, yet airlines carried only one-tenth of one per cent of the travelers carried by the railroads in 1934.

In 1934, for the first time in five years, the commercial plane and engine business exceeded the military sales. For some time before this the dollar total of the sales to the Government has averaged sixty per cent of the total. Since 1929 the larger units of the industry have had to depend largely upon governmental orders, but recent legislation restricts profit on naval contracts, and also requires that ten per cent be built at the Naval Aircraft Factory at Philadelphia. Very close pricing is indicated for all government buying. It is to be expected that the larger industrial units, which maintain the largest and best staff of designers, will secure the Government's business, since great emphasis is being placed on performance, to keep abreast or ahead of other nations.

The continued small demand from private buyers, and the increasing use by the public of the airlines, makes the manufacture of large commercial planes the greatest source of non-military business. Here, again, the best staffs of production and design engineers will secure the business for their companies, as the airlines must emphasize performance, including speed, safety, and economy of operation and maintenance. In 1934 civilian transport aircraft rep-

resented over three-fourths of the total non-military business. The Douglas Company has secured the largest part of this business, because of the excellent performance of their transport planes, both here and abroad. The airlines have over five hundred planes on hand at this time, and over sixty per cent are less than two years old. It is apparent that their planes are not permitted to wear out, but are made obsolete by new developments. However, no large amount of new business is to be expected from this source in the next few years, unless improvements are rapid, for about three hundred planes can do the work now required of the airlines.

Private buying of aircraft, for sport or business use, which constitutes the remainder of the domestic commercial market, has been quiet since 1929. The Bureau of Air Commerce has attempted to stimulate this market by encouraging the design of planes with a low first cost, and by ordering such planes for their own use. Such planes also stress low operating costs, and safety of operation, so that they can be used for sport or business by a larger number of people. This type of business for the industry can be expected to grow in the future, but the growth will no doubt be slow.

The exports of planes, engines, and parts have averaged about one-fourth of the production for some years, and lately are increasing. Charts showing total amounts and principal countries buying these products are attached. The increasing growth of the strong nationalistic ideas now characteristic of the nations of the world may be expected to reduce this trade with those countries which have an aircraft industry. However, as long as the American industry can continue to produce aircraft which excel those of other countries in performance, this trade should continue, and will always continue with the countries which do not have the fuel or resources to establish an industry of their own. This should be true with all of the South American nations, since they seem destined to be producers of raw materials and buyers of manufactured products.

The aircraft industry has never produced aircraft by mass production methods, as compared to what has been shown to be possible by the automobile industry. At present, the emphasis is placed on engineering, to produce improved performance, rather than on production methods, to produce large numbers of a standardized product. This explains the high cost of modern aircraft. The rapid change in types, and the small numbers of each type produced, have prevented modern tooling for mass production. It may be expected that the rapid progress in aeronautical design will some day slow down, and thus reduce the present rapid rate of obsolescence. The labor costs of modern aircraft are about two-thirds of the total manufac-

turing expense. Special skill is required, and labor is generally well paid. Average wages in 1929 were seventy and six-tenths cents per hour in engine manufacture, and sixty-six and nine-tenths cents per hour in airplane manufacture. Wage earners in the aircraft industry numbered 14,710 in 1929, but had dropped to 9,870 in 1931. \$22,000,000 were paid in wages in 1929 and \$15,500,000 in 1931.

Attached herewith is a list of the companies producing aircraft, and a list of those producing accessories, fuels, lubricants, etc. This latter list is, of course, only of those now regarded as permanent. During recent years many companies have taken contracts to make aircraft parts and accessories to keep their workers busy and hold their organizations together, without intending to remain a part of the aircraft industry.

Attached herewith is a chart, showing the total potential capacity of the industry to produce military aircraft in the event of a major war, without expansion of facilities. The figures are compiled by the production men, in the industry itself, who have studied the designs, and estimated what their factories can accomplish under war conditions. In most cases their estimates are supported by factory plans, showing in detail how the war-time production will be accomplished. These figures are compiled by the Army Air Corps, under the supervision of The Assistant Secretary of War, as a part of his plans to mobilize industry in case of war.

III. Future Trends.

At this time there is marked competition in aircraft building, as in other industries, between the use of non-ferrous metals, especially aluminum alloys and magnesium alloys, and alloy steels, especially the so-called "stainless steels", containing chromium and nickel. It is interesting to note that, of the first two streamlined trains, one was built of alloy steel and the other was of non-ferrous metal. Great strength, with increased lightness, is possible with either group of metals. The winner of this competition in aircraft building is difficult to predict, but the contest will probably be compromised, and the future will show that the parts carrying great stresses will be of alloy steels, while surfaces and forming parts will be of non-ferrous metals. The amounts of aluminum and magnesium alloys now used are increasing faster than alloy steels, as shown on the attached curves. In any case, the trend is definitely towards all-metal construction in aircraft, with wood almost completely eliminated. This is very desirable from the national defense viewpoint, as metal construction lends itself to the American method of mass production, and the Nation's war needs of aircraft can best be met by mass production. The cost of the materials used is important in commercial aircraft, and both aluminum and magnesium production are essentially monopolies. If new methods of producing these metals are successful, it may be expected that their cost will be lower, and their use increase. Attempts are being made to produce both metals by new methods. Raw materials for both exist in this country in great quantities.

The trend in types of aircraft is towards greater specialization for the use intended. "All purpose" aircraft are no longer discussed by designers, for either military or commercial use. Commercial transports are increasing in size, speed, and comfort, because air traffic is increasing, and economy is secured by having the same crew carry more passengers and freight. Speed has been stressed, to show the advantage of airlines over competing forms of transportation, but the future may show greater emphasis on safety and comfort. In any case, the limit of speed at which the human body can change direction has apparently been reached, and future planes, if faster, may have to slow down to turn, for the comfort of their passengers. High speeds have been limited by necessity of keeping landing speeds fairly low, for the landing speed has been roughly one-third of the high speed, but special devices for reducing the landing speed are now available. Greater streamlining is now possible, as the result of wind tunnel tests, and engines of less weight per horsepower are constantly being de-

veloped. The Wright Brothers first flew with an engine weighing fifteen and nine-tenths pounds per horsepower, but engines are now available weighing approximately one pound per horsepower. In engines the trend is still definitely towards aircooling, to eliminate weight, although the radial aircooled engine does not streamline as well as a liquid cooled engine, and very large engines are still difficult to cool with air. In the United States the air-cooled engine production of sizes large enough to be used in service types of military aircraft is in the hands of only two companies, Pratt-Whitney and Curtiss-Wright, and large liquid cooled engines are produced regularly only by the latter company.

The accessories for aircraft are constantly increasing in effectiveness and complexity. The pilots, even now, can of necessity have only a cursory knowledge of the many articles of equipment they must use, and the maintenance and repair of this equipment must be in the hands of specialists. The radio equipment is now an essential aid to navigation, used for following a beam, and for making blind landings, as well as for the sending and receiving of messages. Landing gear which folds up out of the wind stream has come to stay, since the cruising speed is increased by its use. Adjustable pitch propellers, which permit one setting for the take-off, and another for cruising, are now available, and these add to economy of operation. Superchargers for the engine, to maintain its horsepower at high altitudes, by giving it the air it needs, are standard for aircraft seeking high altitudes, and must be accompanied by oxygen apparatus for the pilot and passengers. In all of these devices the American aircraft industry excels, and its products are in demand abroad. Much of the early research work on these devices was done by the military services, in their search for effectiveness in air defense.

The history of the industry has been somewhat similar to that of the automobile industry, where, from a large number of small concerns, the less well financed were forced out of business, leaving a smaller number of larger companies. This trend is not yet so clearly indicated, as is that of the automobile industry, because the aircraft industry is younger, and is still in the period of development where an excellent designer can start a new plant with good chances of success. Also, since special machine tools are not yet developed for aircraft construction, any good machine shop, with skilled labor available, can begin to build aircraft, and do almost as well as the regular companies. The purchase and consolidation of both producers and operators into large holding companies, which was characteristic of 1928 and 1929, seems to have ceased, and some of these combinations have separated again. There

is nothing at present in the aircraft industry to approximate General Motors in the automobile industry, and competition between the more successful aircraft companies is very active. In general, the company with the best design staff wins and gets the business, both military and commercial, as evidenced by Martin bombers and Douglas transports.

The governmental policy needed to develop the aircraft industry has been discussed by many committees and boards appointed for that purpose. That a flourishing industry is necessary for national defense purposes is evident, but it is not likely to be large enough to equip the fighting forces with the needed aircraft for some time to come. Dependence must be placed, in part, on companies which manufacture articles of a similar nature, using similar materials, and already equipped with machine tools which can be adapted to the work. This suggests automobile engine manufacturers for the production of aircraft engines, and automobile body makers for all-metal planes. Plans for such conversion are prepared by the War Department, as part of its Industrial Mobilization Planning.

It is believed that the use of aircraft by the general public will continue to increase, and that the industry will continue to grow to meet this need. Especially in the small, safe, and inexpensive types of airplanes is there a great potential market. When this market is developed, the industrial capacity to meet it will be available for defense purposes, to produce equipment for the fighting forces. In general, the same materials are used for both civil and military aircraft, so that a large civil production does more than prepare the factory capacity for defense purposes. It makes available the raw and semifinished materials, trains the skilled labor, and enables the rapid production of military equipment.

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Date- 1-24-59

~~SECRET~~Signature- *Carl S. Spicer*IV. Potential Air Power of the United States.

In case of a major war, it will be necessary to procure for the Army about 3,900 large planes, 15,000 medium sized planes, and 1,680 small planes in the first year. This total of 20,580 planes will require 40,180 engines of various sizes. The Navy will need 1,758 large, 7,269 medium sized, and 2,830 small planes, or a total of 11,857 planes, requiring 17,790 engines. The grand totals for the armed forces are 32,437 planes and 57,978 engines. To meet this need, it is estimated that the present industry, without expansion, can produce only 7,238 planes of all kinds, and 18,885 engines the first year. A list of the companies, and the amounts they can produce, is attached.

The remaining amounts must be secured from the conversion of similar industries, as previously discussed. For this production, a delay must be expected, since aircraft is not the usual product. But the production can be secured, and can be as large as needed. It is to be noted that the raw materials entering into aircraft construction, except for certain of the alloying elements entering into steel production, and certain tropical materials like rubber, are from domestic sources, and are available in large amounts. It must be recognized that the potential ability of the United States to produce aircraft, under emergency conditions, is enormous, and is greater than that of any other nation. This, however, means that a delay is to be expected at the beginning, and is only true after industry is mobilized. Our industry, in normal times, uses about half the raw materials of the world, can produce about half the steel, and has the necessary fuel and labor.

For national security this is important, since, because of our distance from any other powerful nation, airplanes are defensive weapons for the United States. The radius of action of the airplanes of other major nations does not permit them, at present, to reach our shores directly, without auxiliary airdromes or carrier bases, while from our shores airplanes can reach out to destroy approaching forces.

The procurement of military aircraft in peace takes a long time. It is usually over two years between the preparation of a type specification, showing what the user wants, and the beginning of the delivery of the finished articles. This delay includes the difficulty in deciding what is wanted and what is possible, the publishing of this decision to the aircraft industry as a type specification, the designing and building of a test plane by the industry,

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the testing and evaluating of the planes submitted, the preparing and approving of contracts for the winning plane, the ordering and securing of raw materials, constructing the first article on the contract, its testing and approving, and, thereafter, delivery of the other planes on the contract. After the contract is secured, the successful bidder wishes to produce the airplanes without expansion of facilities, for, if he expands, and finishes the contract quickly, he may then have no more work and must close his plant.

The contracts let by the Army Air Corps contain options which permit them to increase the number of planes to be delivered by a stated amount, if taken advantage of before a stated date. A study of the present contracts, for the fiscal years 1935 and 1936 shows that, if all these options were utilized before the dates of expiration, 837 more airplanes could be secured, for about \$40,000,000. These data are given in detail in an attached chart. The number of planes given is that which would be furnished if the prices for the larger amounts were as large as those in the present contracts. This would not be the case, so that a somewhat larger number would be secured. All of these planes, if ordered, could not be delivered in the fiscal year 1936, but the money could be obligated at once.

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V. Summary.

1. The commercial aircraft industry can produce more planes and engines than it can sell at this time, and the industry, as a whole, is not operating at a profit.
2. It can produce aircraft and accessories equal or superior in performance to those of other countries.
3. It has not produced aircraft by mass production methods nor in great numbers since the World War.
4. It uses materials largely of domestic origin, which will be available in an emergency.
5. To meet a war emergency, the aircraft industry must be expanded and allied industries must be converted to the manufacture of aircraft to carry the load.
6. The trend is towards all-metal construction, which is favorable to mass production methods.
7. Once the aircraft industry and allied industries are mobilized and in production, the capacity to produce aircraft will be enormous.
8. A considerable delay is certain to ensue before this can be achieved.
9. A number of airplanes can be purchased now by utilizing options in army contracts.

Planning Branch,
O.A.S.W.
August 6, 1936.

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Airplanes Complete, with Plane and Engine Spares, which can be Secured
by using Options in 1935 and 1936 Fiscal Year Contracts.

	Contract or <u>Circular</u>	Number on <u>Order</u>	<u>Options</u>	Additional Airplanes <u>Complete</u>	Time to Exercise <u>Options</u>	Total Unit Price Including Spare <u>Engines-All Spares</u>	<u>Total</u>
<u>1935 Airplanes</u>							
Two-Place Pursuit	AC-7220	50	50%	25	Dec. 1, 1936	56,200	1,405,000
Attack	AC-7326	110	25	30	Sept. 1936	40,300	1,209,000
C. A. Observation	AC-7342	71	To 88 & 25%	39	Aug. 1936	42,150	1,644,000
Basic Training	AC-7348	30	To 70 & 25%	57	Sept. 1935	27,000	1,539,000
Bombardment	AC-6861	103		12	June 30, 1936	67,500	810,000
 <u>1936 Airplanes</u>							
Basic Training	35-25	42	To 139 & 25%	132	Oct. 15, 1935	31,250	4,125,000
Primary Training	35-27	25	To 104 & 25%	105	Dec. 1935	18,500	1,942,500
Attack	35-28	117	To 139 & 25%	57	Jan. 1936	40,800	2,325,600
Cargo	35-29	36	To 87 & 25%	73	Oct. 1, 1936	49,900	3,642,700
C. A. Observation	35-42	38	To 43 & 25%	15	Dec. 1, 1936	35,500	332,500
Pursuit	35-49	77	To 174 & 25%	140	Nov. 1, 1936	46,800	6,552,000
Bombardment	35-26	88	To 192 & 25%	152	Feb. 1, 1936	92,500	14,060,000
				837			39,787,300

O.A.S.W.
8-3-35.

List of Manufacturers of Aircraft Accessories.

<u>Name</u>	<u>Product</u>
Aero Supply Manufacturing Company, Inc., Corry, Pa.	Accessories.
Air Associates, Inc., Garden City, N. Y.	Flying clothes.
Aircraft Radio Corporation, Boonton, N. J.	Radio equipment.
Aluminum Company of America, New York.	Aluminum and aluminum alloy materials.
American Gas Accumulator Company, Elizabeth, N. J.	Airport lighting equipment.
American Telephone and Telegraph Co., Inc., New York.	Teletypewriter circuits.
Bendix Products Corporation, South Bend, Ind.	Brakes and wheels.
Berry Brothers, Inc. Detroit, Mich.	Dopes and varnishes.
The B. G. Corporation, New York.	Spark plugs.
Breeze Corporations, Newark, N. J.	Electrical equipment.
Brewster Aeronautical Corporation, Long Island City, N. Y.	Aircraft accessories.
Champion Spark Plug Company, Toledo, O.	Aircraft spark plug.
The Cleveland Pneumatic Tool Co., Cleveland, O.	Aerol Strut.
Curtiss Aeroplane & Motor Company, Buffalo, N. Y.	Controllable pitch propellers.
Eclipse Aviation Corporation, East Orange, N. J.	Variable pitch propeller.
Edo Aircraft Corporation, College Point, Long Island, N.Y.	Edo floats.
The Egyptian Lacquer Manufacturing Co. New York.	Dopes, solvents, and lacquers.
Fairchild Aerial Camera Corporation, Woodside, Long Island, N. Y.	Aerial cameras.
General Electric Company, Inc., Schenectady, N. Y.	Superchargers.
General Tire & Rubber Company, Akron, O.	Streamline Airplane tires.
The B. F. Goodrich Company, Akron, O.	Airplane tires.
Goodyear Tire & Rubber Company, Akron, O.	Hydraulic brakes and low pressure tires.

<u>Name</u>
Gulf Refining Company, Inc., Pittsburgh, Pa.
Hamilton Standard Propeller Company, East Hartford, Conn.
The Stewart Hartshorn Company, Inc., New York.
Hurley-Townsend Corporation, New York.
International Flare-Signal Company, Tippecanoe City, O.
Irving Air Chute Company, Inc., Buffalo, N. Y.
Kendall Refining Company, Inc., Bradford, Pa.
Kollsman Instrument Company, Inc., Brooklyn, N. Y.
Leece-Neville Company, Cleveland, O.
Lycoming Manufacturing Company, Williamsport, Pa.
Macwhyte Company, Kenosha, Wisconsin.
Norman-Hoffman Bearings Corporation, Stamford, Conn.
Pacific Aeromotive Corporation, Ltd., Burbank, Calif.
Parker Appliance Company, Cleveland, O.
Pioneer Instrument Company, Inc., Brooklyn, N. Y.
Pittsburgh Screw & Bolt Corporation, Pittsburgh, Pa.
The Pyle-National Company, Chicago.
R.C.A. Manufacturing Company, Inc., Camden, N. J.
Richfield Oil Company of California, Los Angeles, Calif.
John A. Roebling's Sons Company, Trenton, N. J.
Scintilla Magneto Company, Inc., Sidney, N. Y.
Shell Petroleum Corporation, St. Louis, Mo.
Sinclair Refining Company, New York.

<u>Product</u>
Aviation gasoline & lubricants.
Controllable pitch propeller.
Streamline wire tie rods.
Copper-cooled spark plugs.
Parachute flares.
Parachutes.
Lubricants.
Aircraft instruments.
Generators.
Lycoming-Smith controllable propeller.
Streamline sections.
Bearings.
Parts and special apparatus.
Aircraft piping equipment.
Aircraft instruments.
Hollow steel propellers.
Airport and aircraft lighting apparatus.
Airport radios.
Special aviation fuels.
Special control cables.
Aircraft ignition.
Aviation gasoline.
Lubricants.

<u>Name</u>	<u>Product</u>
Socony-Vacuum Corporation, New York.	Lubricants and fuels.
Solar Aircraft Company, Ltd., San Diego, Calif.	Aircraft parts and accessories.
Sperry Gyroscope Company, Inc., Brooklyn, New York.	Sperry gyro instruments.
Stanavo Specification Board Inc., New York.	Improvement of fuels and lubricants.
Steel Products Engineering Company, Inc., Springfield, O.	Special machinery and aircraft parts.
Superior Tube Company, Norristown, Pa.	Tubing for aircraft.
The Texas Company, New York.	Aviation fuels.
Thompson Products, Inc., Cleveland, O.	Engine valves.
Thurston Cutting Corporation, New York.	Airplane fabric.
The Vellumoid Company, Worcester, Mass.	Gasket assemblies.
Western Electric Company, Inc., New York.	Aviation communication equipment.
Westinghouse Electric & Manufacturing Co., Cleveland, O.	Equipment for airport lighting.

Value of Aeronautical Exports to Countries Which
Bought Over \$100,000 in 1934.

<u>Country of Destination</u>	<u>1934 Value</u>	<u>1933 Value</u>	<u>1932 Value</u>
China	\$ 3,778,262	\$ 1,762,247	\$ 157,515
Russia	3,276,490	380,222	406,677
Germany	1,761,607	349,090	192,501
Colombia	1,615,778	636,081	290,388
Peru	1,018,426	384,141	337,664
Mexico	598,133	297,058	233,800
Brazil	528,668	1,459,745	2,680,418
Siam	522,745	108,714	2,135
Argentina	519,961	677,437	271,087
Netherlands	410,431	319,803	179,628
Turkey	327,143	11,498	672,378
Japan	320,562	338,908	366,950
Bolivia	303,609	259,840	362,046
Sweden	262,085	45,617	113,954
Switzerland	259,063	2,669	1,629
France	196,935	16,952	54,305
Canada	188,928	64,088	178,108
Poland and Danzig	172,904	147,711	2,227
Panama	145,967	232,616	42,866
United Kingdom	137,361	84,913	57,972
Italy	107,245	21,003	3,696
Australia	105,447	43,625	24,237
Rumania	101,092	24,726	5,735

O.A.S.W.
7-31-35.

SUMMARY OF AIR TRANSPORT OPERATIONS
Air Lines of the United States

<u>Year</u>	<u>Oper- ators</u>	<u>Planes in Service</u>	<u>Miles Flown</u>	<u>Passengers</u>	<u>Express (pounds)</u>	<u>Mail (pounds)</u>
1926	19	95	4,608,880	5,782	6,467	433,649
1927	24	144	5,242,839	12,594	12,495	1,222,843
1928	32	294	10,472,024	52,934	35,376	3,632,059
1929	27	619	20,242,891	165,263	197,538	7,772,014
1930	35	685	28,833,967	385,910	286,798	8,513,675
1931	41	720	43,395,478	457,753	885,164	9,351,195
1932	33	655	48,344,358	504,575	1,324,428	7,658,332
1933	28	615	50,800,705	546,235	1,884,545	7,644,646
1934	25	550	42,622,619	537,637	2,946,460	7,155,281

GOVERNMENT FLYING OPERATIONS
Miles Flown

<u>Fiscal Year</u>	<u>U. S. Army</u>	<u>U. S. Navy</u>	<u>U. S. Coast Guard</u>	<u>U. S. Dept. Commerce</u>
1926	16,764,540	8,352,800	16,300	
1927	14,871,870	10,452,720	28,960	
1928	19,546,450	14,135,490	83,083	900,000
1929	27,405,790	19,513,095	48,254	1,000,000
1930	32,500,000	26,478,700	67,655	1,427,000
1931	44,000,000	28,889,835	53,440	969,000
1932	42,914,655	26,508,715	93,750	975,500
1933	56,077,344	22,989,300	184,965	1,364,200
1934	51,506,888	28,001,250	219,572	932,420

LICENSES AND RATINGS, 1934.

Pilot licenses, active	14,177
Scheduled air transport pilot ratings, active ..	691
Student licenses, active	19,251
Glider pilot licenses, active	111
Student glider pilot permits, active	263
Mechanic licenses, active	8,347
Parachute rigger licenses, active	370
Aircraft licenses, active	6,972
Aircraft unlicensed, active	1,911
Glider licenses, active	43
Gliders unlicensed, active	439

O.A.S.W.
7-29-35.

COMMERCIAL AIRCRAFT MANUFACTURED BY COMPANIES
WHICH PRODUCED MORE THAN TEN PLANES, 1934.

	Year <u>1934</u>	Year <u>1933</u>
Waco Aircraft Company	119	90
Stinson Aircraft Corporation	115	95
Kreider-Reisner Aircraft Co., Inc. (Including Fairchild)	76	51
Taylor Aircraft Company	73	20
Aeronautical Corporation of America	60	53
Douglas Aircraft Company, Inc.	58	1
Lambert Aircraft Corporation (Including Monocoupe)	33	11
Kinner Airplane & Motor Corporation, Ltd.	29	18
Curtiss-Wright Airplane Company, Inc.	19	23
Beech Aircraft Company	16	1
International Aircraft Corporation	14	32
Boeing Airplane Company	13	61
The Northrop Corporation	13	2
Airplane Development Corporation	12	1
Lockheed Aircraft Corporation	10	16
Pietonpel, B. R.	10	19

O.A.S.W.
7-29-35.

July 11, 1935.

AERONAUTICAL ORGANIZATIONS OF THE UNITED STATES.

AERONAUTICAL CHAMBER OF COMMERCE OF AMERICA, INC., Shoreham Bldg., Wash., D.C.

President: Thomas A. Morgan.
Secretary: G. M. Bellanca.
Treasurer: Chas. L. Lawrance.

AIR LINE PILOTS' ASSOCIATION, 3145 West Sixty-third Street, Chicago, Ill.

President: David L. Behncke.
Secretary: Homer F. Cole.
Treasurer: Harold L. Knoop.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, AERONAUTIC DIVISION, 29 West Thirty-ninth Street, New York, N. Y.

Chairman: James Doolittle.
Secretary: Jerome Lederer.

THE EARLY BIRDS, Carlton Hotel, Washington, District of Columbia.

President: Commander J. L. Callan.
Treasurer: Beckwith Havens.
Secretary: Ernest Jones.

MANUFACTURERS' AIRCRAFT ASSOCIATION, INC., 30 Rockefeller Center, New York, N.Y.

President: Frank H. Russell.
Vice-Presidents: Glenn L. Martin, Eugene E. Wilson, Sherman Fairchild.
Treasurer: Clayton J. Brukener.
Secretary: John M. Rogers.
Gen. Manager: S. S. Bradley.

NATIONAL AERONAUTIC ASSOCIATION OF THE UNITED STATES OF AMERICA, INC., Dupont Circle, Washington, District of Columbia.

President: Wm. G. McAdoo.
Vice-President: James H. Doolittle.
Treasurer: John F. Victory.
Secretary: Louise Thaden.
Executive Assistant: Charles F. Horner.

THE SOARING SOCIETY OF AMERICA, INC., Federation Building, Elmira, New York

President: R. S. Barnaby.
Secretary: Dr. Wolfgang Klemperer.
Gen. Manager: Earl Southes.

THE SOCIETY OF AUTOMOTIVE ENGINEERS, INC., AERONAUTIC DIVISION, 29 West Thirty-ninth Street, New York, N. Y.

President: Wm. B. Stout.
Vice-Presidents: C. H. Chatfield, P. B. Taylor, C. L. Cummins.
Secretary and General Manager: John A. C. Warner.

INSTITUTION OF AERONAUTICAL SCIENCES, INC., 30 Rockefeller Plaza, New York,
N. Y.

President: Donald W. Douglas.

Vice-Presidents: Geo. W. Lewis, Lassiter C. Milburn.

Treasurer: Edwin E. Aldrin.

Secretary: Lester D. Gardner.

INDEPENDENT AVIATION OPERATORS OF THE UNITED STATES,

President: Oliver L. Parks, Parks Airport, East St. Louis, Ill.

Executive Secretary: Louis R. Inwood.

WOMEN'S NATIONAL AERONAUTICAL ASSOCIATION.

President: Mrs. Daisy Green, 32 North Main Street, Dayton, Ohio.

Margaret Heron, 229 North Ludlow Street, Dayton, Ohio.

Production of Airplanes and Engines.

<u>Year</u>	<u>Number Airplanes</u>	<u>Value Airplanes & Parts</u>	<u>Number Engines</u>	<u>Value Engines & Parts</u>	<u>Total Value</u>
1926	1,186	\$12,784,807	842	\$4,080,571	\$16,865,378
1927	1,995	14,504,999	1,397	4,783,748	\$19,288,747
1928	4,346	43,411,812	3,496	19,915,624	63,327,436
1929	6,193	51,508,120	7,378	10,960,553	62,468,673
1930	3,437	34,545,728	4,356	22,396,054	56,941,782
1931	2,800	33,348,451	4,039	19,387,737	52,736,188
1932	1,396	19,519,284	1,959	13,844,385	33,363,669
1933	1,324	22,143,321	1,830	11,935,989	34,079,310
1934	1,615	18,794,111	2,736	15,433,210	34,227,321

Average Airplane Production (9 years) 2,699
 Average Value Airplanes & P. (9 years) \$27,840,070
 Average Engine Production (9 years) 3,114
 Average Value Engines and (9 years) \$13,637,541
 parts

Exports of Airplanes and Engines.

<u>Year</u>	<u>Number Airplanes</u>	<u>Value Airplanes & Parts</u>	<u>Number Engines</u>	<u>Value Engines & Parts</u>	<u>Total Value</u>
1926	50	\$303,149	297	\$724,061	\$1,027,210
1927	63	848,568	84	1,054,992	1,903,560
1928	162	1,759,653	179	1,905,070	3,664,723
1929	354	5,574,484	321	3,627,900	9,202,384
1930	321	4,819,669	377	3,986,727	8,806,396
1931	140	1,812,827	318	2,996,613	4,809,440
1932	280	4,358,967	2,356	3,274,103	7,633,070
1933	396	5,389,739	2,901	3,678,621	9,068,360
1934	490	8,258,484	1,007	9,191,231	17,449,715

Average Airplane Exports (9 years) 250
 Average Value Airplane Exports (9 years) \$3,680,615
 Average Engine Exports (9 years) 871
 Average Value Engine & Parts (9 years) \$3,382,146
 Exports

July 11, 1935.

LIST OF AIRCRAFT AND AIRCRAFT ENGINE MANUFACTURERS

WITH NAMES OF OFFICERS

AERONAUTICAL CORPORATION OF AMERICA, Lunken Airport, Cincinnati, Ohio.

President: Taylor Stanley.

Vice-President & Treasurer: H. V. Fetick.

Secretary: Robt. A. Taft.

AIRCRAFT MECHANICS, INC., Colorado Springs, Colorado.

President: P. W. Nichols.

Vice-President: W. F. Theis.

Secretary-Treasurer: V. A. Chuver.

AIRPLANE DEVELOPMENT CORPORATION, 1044 Airway Drive, Glendale, California.

President: Don P. Smith.

Vice-President: Gerard E. Vultee.

Secretary-Treasurer: R. S. Pruitt.

ALLISON ENGINEERING COMPANY, P. O. Box 894, Indianapolis, Indiana.

President: N. H. Gilman.

Vice-President: J. B. Jackson.

Secretary: T. S. Merrill.

Treasurer: M. L. Prentis.

ARROW AIRCRAFT & MOTORS CORPORATION, 4133 North 56th St., Lincoln, Nebraska.

President: George Woods.

Vice-President: Mark Woods.

Vice-President: Pace Woods.

Secretary & Treasurer: Wm. Johnson.

THE BEECH AIRCRAFT COMPANY, Wichita, Kansas.

President: Walter H. Beech.

Vice-President: R. K. Beech.

Secretary & Treasurer: Olive Ann Beech.

BELLANCA AIRCRAFT CORPORATION, New Castle, Delaware.

President: G. M. Bellanca.

Secretary: Andrew Bellanca.

Asst. Treasurer: Willard R. Yarnall.

BOEING AIRCRAFT COMPANY, 220 W. Michigan, Seattle, Washington.

President: C. L. Egtvedt.

Vice-President: G. W. Carr.

Vice-President: C. N. Monteith.

Vice-President: J. P. Murray.

Secretary-Treasurer: H. E. Bowman.

Vice-President: Erik H. Nelson.

Appendix No. 9.

CESSNA AIRCRAFT COMPANY, INC., Wichita, Kansas.

President: C. V. Cessna.

Vice-President: Roscoe Vaughan.

Secretary-Treasurer: D. S. Wallace.

CONSOLIDATED AIRCRAFT CORPORATION, 2050 Elmwood Ave., Buffalo, N. Y.

President: R. H. Fleet.

Vice-President: Lawrence D. Bell.

Vice-President: R. P. Whitman.

Vice-President: George Newman.

Secretary-Treasurer: R. S. Madison.

CONTINENTAL AIRCRAFT ENGINE COMPANY, 12801 E. Jefferson Ave., Detroit, Mich.

President: W. R. Angell.

Vice-President: Roger Sherman.

Treasurer: B. F. Tobin, Jr.

Secretary & Asst. Treasurer: Craig Keith.

CURTISS WRIGHT AIRPLANE COMPANY, Robertson, Mo.

President: Ralph S. Damon.

Vice-President: G. J. Brandeweide.

Treasurer: George M. Ebert.

Secretary: R. R. Reger.

DAVIS AIRCRAFT CORPORATION, Richmond, Indiana.

President: Walter C. Davis.

Vice-President: George W. Davis.

Secretary-Treasurer: H. G. Davis.

DOUGLAS AIRCRAFT COMPANY, INC., Santa Monica, California.

President: Donald W. Douglas.

Vice-President & General Manager: Harry H. Wetzell.

Secretary: T. C. McMahon.

Treasurer: H. P. Grube.

FAIRCHILD AVIATION CORPORATION, 62-10 Woodside Ave., Woodside, L.I., N.Y.

President: Sherman M. Fairchild.

Vice-President: Ernest Robinson.

Secretary-Treasurer: W. H. Schwebel.

GOODYEAR-ZEPPELIN CORPORATION, 1144 E. Market St., Akron, Ohio.

President & Gen'l Manager: P. W. Litchfield.

Chge. of Engr.-Vice President: Karl Arnstein.

Secretary: W. D. Shilts.

Asst. Secretary: F. R. Wahl.

Asst. Secretary: W. M. Mettler.

Treasurer: P. E. H. Leroy.

Asst. Treasurer: Zimri C. Oseland.

Comptroller: Charles H. Brook.

Asst. Comptroller: C. L. Weberg.

Asst. Comptroller: H. D. Hoskin.

GREAT LAKES AIRCRAFT CORPORATION, 16800 St. Clair Ave., Cleveland, Ohio.

President: Chas. F. Barndt.

Vice-President in Chge. of Engr: P. B. Rogers.

Secretary-Treasurer: B. D. Morse.

GRUMMAN AIRCRAFT ENGINEERING CORPORATION, Farmingdale, Long Island, N. Y.

President: L. R. Grumman.

L. A. Swirbul.

J. A. Stamm.

Edmund W. Poor.

HAMMOND AIRCRAFT CORPORATION, Ypsilanti, Michigan.

President: Dean B. Hammond.

Vice-President: B. D. Hammond.

Secretary-Treasurer: B. F. Hammond.

INTERNATIONAL AIRCRAFT CORPORATION, Niles, Michigan.

President: W. A. Clinnin.

Vice-President & Treasurer: J. F. Morrison.

JACOBS AIRCRAFT ENGINE COMPANY, 750 Queen St., Pottstown, Penna.

President: J. Story Smith.

Vice-President: Albert R. Jacobs.

Vice-President: Henry M. McFadgen.

Secretary-Treasurer: H. Alvin Cressman.

KELLETT AUTOGIRO CORPORATION, Island Road, Philadelphia, Pa.

President: W. Wallace Kellett.

Vice-President: C. T. Ludington.

Secretary-Treasurer: R. G. Kellett.

KINNER AIRPLANE & MOTOR CORPORATION, LTD., 635 W. Colorado Blvd.,

President: Robert Porter.

Glendale, California.

Secretary-Treasurer: Roy D. Bayly.

Vice-President: B. L. Graves.

Asst. Secretary-Treasurer: Victor E. Semrau.

E. M. LAIRD AIRPLANE COMPANY, 5301 W. 65th St., Chicago, Ill.

President: E. M. Laird.

Vice-President: Lee Hammond.

Secretary: Chas. Arens.

LAMBERT AIRCRAFT CORPORATION, Lambert Field, Robertson, Mo.

President & Gen'l Manager: Clare W. Bunch.

LAMBERT ENGINE & MACHINE COMPANY, Moline, Illinois.

President: P. R. Beasley.

Vice-President: H. H. Knight.

Secretary-Treasurer: Tom Towle.

LAWRANCE ENGINEERING & RESEARCH CORPORATION, Linden, N. J.

President: Charles L. Lawrance.
Vice-President: E. M. G. Lawrance.
Treasurer: Charles L. Lawrance.
Secretary: Frederick H. Stokes.
Asst. Treasurer: George Adams Ellis.
Asst. Treasurer: Richard Uhl.

LOCKHEED AIRCRAFT CORPORATION, P. O. Box 1117, Burbank, California.

President: Robert E. Gross.
Vice-President: Carl B. Squier.
Treasurer: Robert E. Gross.
Asst. Treasurer: Ronald P. King.
Secretary: Cyril Chappellet.
Vice-President: Hall L. Hibbard.

GROVER LOENING AIRCRAFT COMPANY, INC., Roosevelt Field, Garden City, L.I., N.Y.

President: Grover Loening.
Treasurer: Grover Loening.
Secretary: Alvin E. Moffett.

LUSCOMBE AIRCRAFT COMPANY, 834 Richards Road, Kansas City, Missouri.

Owner: D. A. Luscombe.

LYCOMING MANUFACTURING COMPANY, Williamsport, Penna.

Chairman: E. L. Cord.
President: W. H. Beal.
Vice-President & Gen'l Manager: F. M. Bender.
Treasurer: H. V. Beach.
Secretary: R. S. Pruitt.

GLENN L. MARTIN COMPANY, Baltimore, Md.

President: G. L. Martin.
1st Vice-President: C. A. Van Dusen.
2nd Vice-President: L. C. Mulburn.
Secretary: T. H. Jones.
Asst. Secretary: W. A. Crenning.
Treasurer: M. G. Shook.

MENASCO MANUFACTURING COMPANY, 6714 McKinley Ave., Los Angeles, California.

President: A. S. Menasco.
Vice-President: R. H. Parkin.
Secretary: Charles F. McReynolds.

MERCURY AIRCRAFT, INC., Hammondsport, N. Y.

President & General Manager: Jos. F. Meade.
Vice-President & Secretary-Treasurer: H. C. Mummert.

MILWAUKEE PARTS CORPORATION, 607 S. 6th St., Milwaukee, Wisconsin.

President: John L. Michalski.
Vice-President: Alfred J. Tank.
Treasurer: Louis Schieble.
Secretary: William E. Unger.

NICHOLAS-BEAZLEY AIRPLANE COMPANY, Marshall, Missouri.

President: Russell Nicholas.
Vice-President: C. M. Buckner, Jr.
Secretary: Howard Beazley.
Treasurer: Carl Huston.

NORTH AMERICAN AVIATION, INC., Dundalk, Maryland.

President: J. H. Kindelberger.
Vice-President: C. A. Gerlach.
Treasurer: John C. Felli.
Secretary: L. R. Beardslee.

THE NORTHROP CORPORATION, Inglewood, California.

President: John K. Northrop.
Vice-President & Treasurer: W. K. Jay.
Secretary: T. C. McMahon.

PITCAIRN AUTOGIRO COMPANY, Willow Grove, Penna.

President & Treasurer: Harold F. Pitcairn.
Vice-President: Raymond Pitcairn.
Secretary: K. C. Acton.
Asst. Treasurer: R. R. Bachman.

PORTERFIELD AIRCRAFT CORPORATION, 1328 Locust St., Kansas City, Missouri.

President: E. F. Porterfield, Jr.
Vice-President & Treasurer: M. S. Porterfield.
Secretary: N. R. Hockaday.

REARWIN AIRPLANES, INC., Fairfax Airport, Kansas City, Kansas.

President: R. A. Rearwin.
Vice-President: Albert R. Jones.
Secretary: Royce Rearwin.

RYAN AERONAUTICAL COMPANY, Lindbergh Field, San Diego, California.

Owner: T. Claude Ryan.

SECURITY NATIONAL AIRCRAFT CORPORATION, P. O. Box 458, Van Nuys, California.

President: W. B. Kinner.
Vice-President: A. C. Essig.
Secretary: H. Park Arnold.
Asst. Treasurer: W. B. Kinner, Jr.

SPARTAN AIRCRAFT COMPANY, Box 2649, Tulsa, Oklahoma.

Vice-President & Gen'l Manager: E. W. Hudlow.
Secretary-Treasurer: Charles H. Reynolds.

STATES AIRCRAFT COMPANY, 1632 Wentworth St., Chicago, Illinois.

Vice-President: Joe Isvolt.
Secretary-Treasurer: J. B. Sanders.

SEVERSKY AIRCRAFT CORP., 570 Lexington Avenue, New York, N. Y.

President, Alexander P. de Seversky.
Chief Engineer; J. F. Wallace.

STEARMAN AIRCRAFT COMPANY, Wichita, Kansas.

President & Gen'l Manager: J. E. Schaefer.

Vice-President: Mac Short.

Secretary-Treasurer: Clif Barron.

STINSON AIRCRAFT CORPORATION, Wayne, Michigan.

President: B. D. DeWeese.

Treasurer: O. E. Stocks.

Vice-President: W. A. Mara.

Secretary: R. S. Pruitt.

SWALLOW AIRPLANE COMPANY, Swallow Airport, Wichita, Kansas.

President & Owner: E. B. Christopher.

TAYLOR AIRCRAFT COMPANY, Harri Emery Airport, Bradford, Penna.

President: C. G. Taylor.

Secretary-Treasurer: W. T. Piper.

UNITED AIRCRAFT MANUFACTURING CORPORATION, East Hartford, Conn.

Pratt & Whitney Aircraft Division.

Hamilton Standard Propellers Division.

Chance Vought Aircraft Division.

Sikorsky Aircraft Division.

President: Don L. Brown.

Vice-President: Eugene E. Wilson.

Vice-President: C. W. Deeds.

Vice-President: George S. Wheat.

Vice-President: Raycroft Walsh.

Vice-President: F. W. Neilson.

Comptroller-Secretary: Joseph F. McCarthy.

VIKING FLYING BOAT COMPANY, New Haven, Conn.

President: Robert E. Gross.

Secretary: Robert Proctor.

Treasurer: Courtlandt S. Gross.

Asst. Treasurer & Gen'l Manager: Jacob L. Freed.

THE WACO AIRCRAFT COMPANY, Troy, Ohio.

President: Clayton J. Brukner.

Vice-President & Treasurer: Lee N. Brutus.

Secretary: L. E. St. John.

THE WARNER AIRCRAFT CORPORATION, 20263 Hoover Ave., Detroit, Michigan.

President & Gen'l Manager: W. O. Warner.

Vice-President: Ralph R. Irwin.

Secretary-Treasurer: W. J. Jarvie.

WRIGHT AERONAUTICAL CORPORATION, 1120 East 19th St., Paterson, N. J.

President: G. W. Vaughan.

Vice-President - Engineering: A. Nutt.

Treasurer: J. J. Donahue.

Asst. Secretary: C. C. King.

Vice-President & Asst. Gen'l Manager: M. B. Gordon.

Vice-President - Sales: E. G. Leighton.

Secretary: R. R. Reger.

ESTIMATED PRODUCTION OF EXISTING AIRCRAFT PLANTS
BASED ON PRESENT FLOOR SPACE AND OPERATING THREE SHIFTS.

<u>Firm Name & Address</u>	<u>Type</u>	<u>Total Production First Year</u>
<u>CLASS I</u> (Heavy)		
G. L. Martin Co., Baltimore, Md.	B-10	327
Great Lakes Air. Corp., Cleveland, Ohio.	B-10	134
Sikorsky Air. Corp., Bridgeport, Conn.	Navy VPB	14
Douglas Airc. Co., Inc., Santa Monica, Cal.	"YOA-5 or XP-3D	<u>333</u>
Total Class I		808
<u>CLASS II</u> (Medium)		
Seversky Airc. Corp., Farmingdale, N.Y.	BT-8	144
Curtiss A & M Co., Buffalo, N.Y.	A-14	356
Consolidated Airc. Corp., San Diego, Cal.	PB-2A	170
Bellanca Air. Corp., New Castle, Del.	C-27A	268
Fairchild Air. Corp., Hagerstown, Md.	XC-31	240
Airplane Dev. Corp., Glendale, Cal.	V1A light transport	95
Northrop Corp., Inglewood, Cal.	A-17	500
Chance Vought Corp., E. Hartford, Conn.	SBU-1	565
Lockheed Air. Corp., Burbank, Cal.	Electra 10-C transport	260
Stinson Air. Corp., Wayne, Mich.	Transports- 10 place	300
Grumman Air. Engr. Co., Farmingdale, N.Y.	Navy Single Seater Fighter	300
North American Aviation, Inc., Dundalk, Md.	Basic training	150
Boeing Aircraft Co., Seattle, Wash.	P-26A	700
Curtiss-Wright Air. Co., Robertson, Mo.	Observation	<u>818</u>
Total Class II		4,866
<u>CLASS III</u> (Light)		
Kinner Air. & Motor Corp., Ltd., Glendale.	Primary tr.	64
Stearman Aircraft Co., Wichita, Kansas.	Primary tr.	300
Beech Aircraft Co., Wichita, Kansas.	Primary tr.	600
Waco Aircraft Co., Troy, Ohio.	Primary tr.	<u>600</u>
Total Class III		1,564

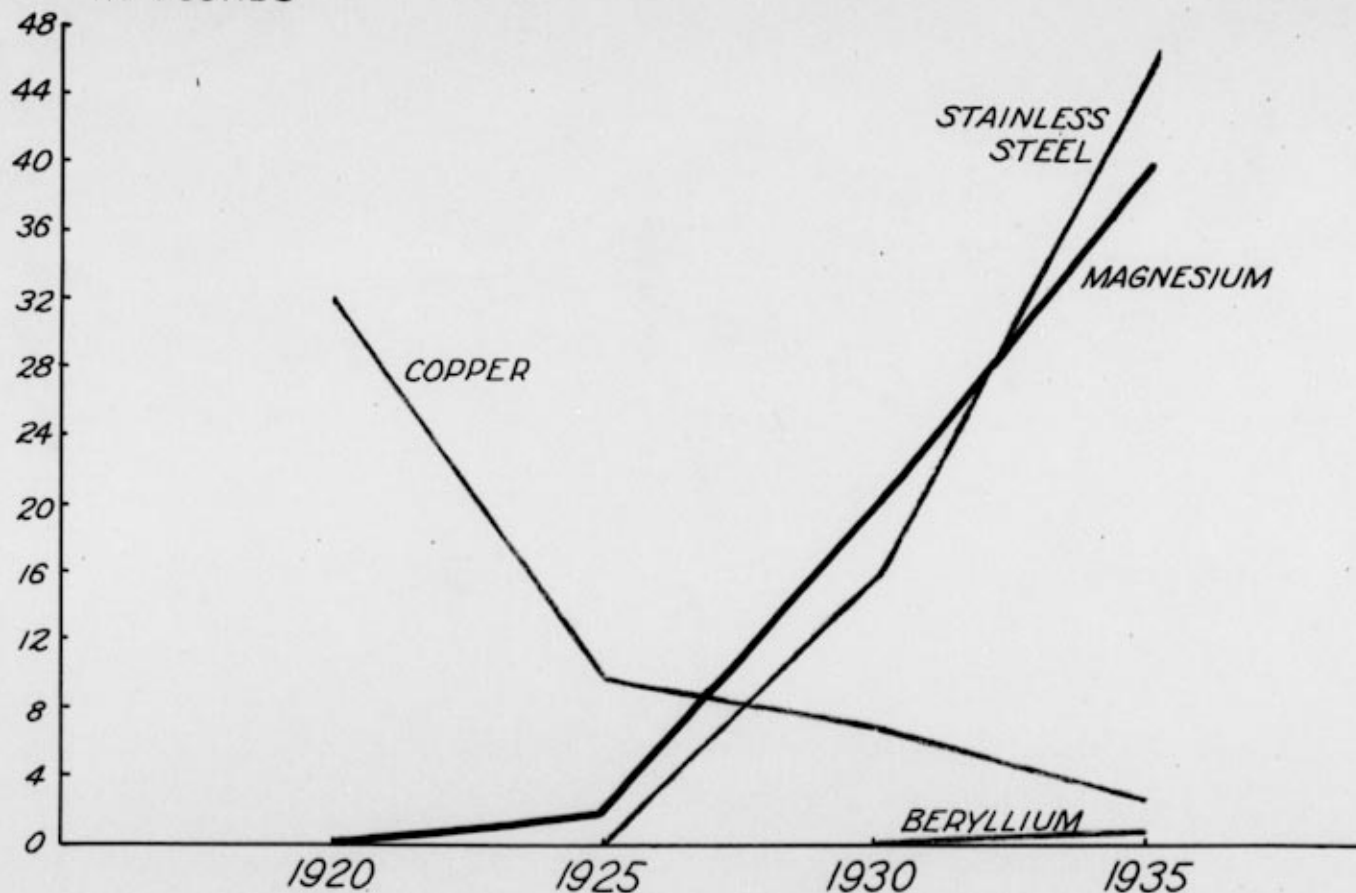
GRAND TOTAL ALL CLASSES

7,238

ESTIMATED PRODUCTION OF EXISTING ENGINE PLANTS
BASED ON PRESENT FLOOR SPACE AND OPERATING THREE SHIFTS.

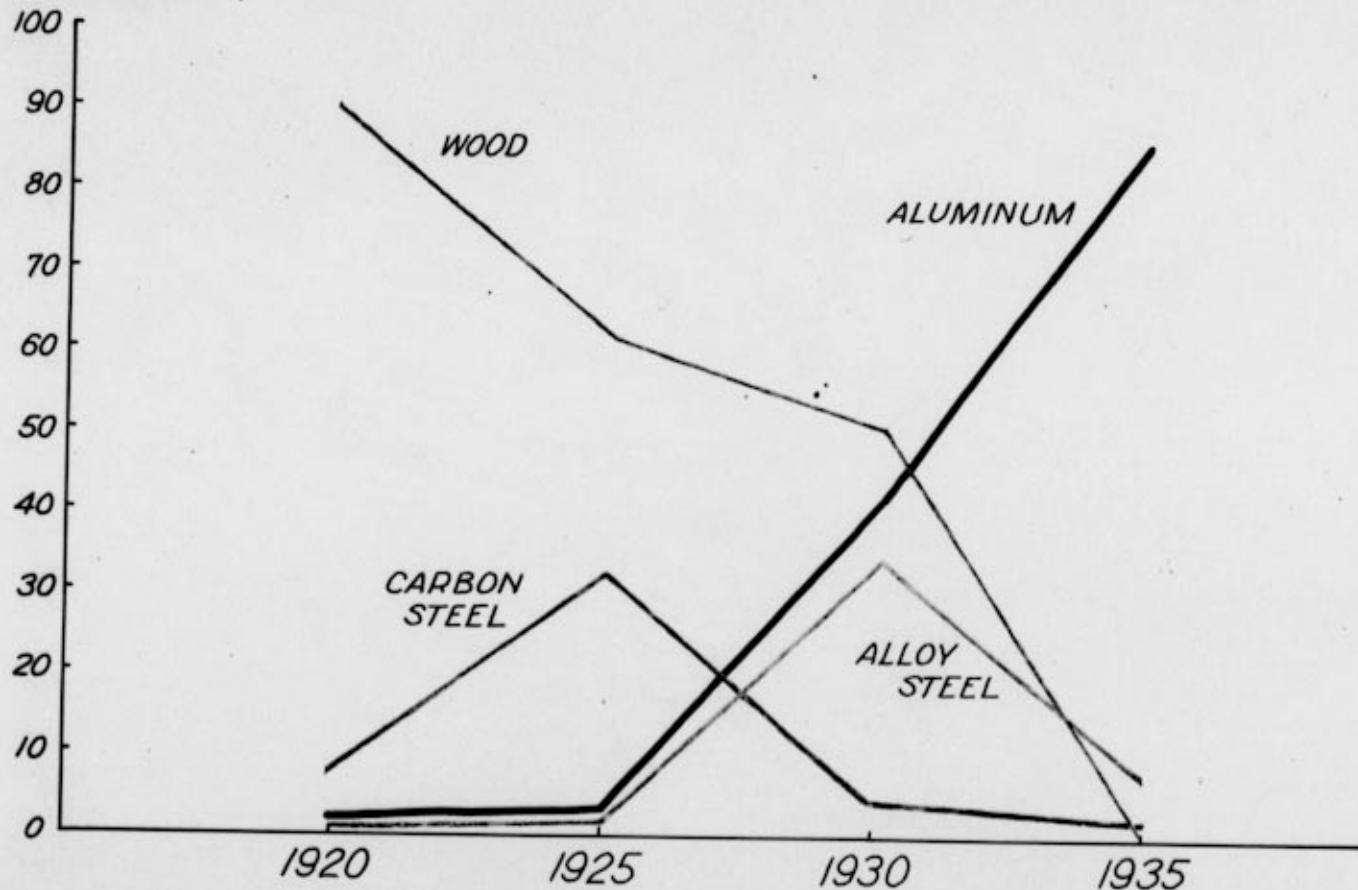
<u>Firm Name & Address</u>	<u>Type</u>	<u>Total Production First Year</u>
Lycoming Mfg. Co., Williamsport, Pa.	R-680-3	2,735
Wright Aero. Corp., Paterson, N.Y.	R-1820)	5,175
	V-1570)	<u>1,350</u> 6,525
Pratt & Whitney Airc.Co., E.Hartford, Conn.	R-1340	4,650
Continental Airc.Eng.Co., Detroit, Mich.	R-670	<u>4,975</u>
Total Engine Production		18,885

AVERAGE WEIGHT
PER AIRPLANE
IN POUNDS



SPECIAL METALS USED IN AVIATION

PERCENTAGE
STRUCTURAL
WEIGHT



BASIC STRUCTURAL MATERIALS USED IN AIRCRAFT

PSF

C. F. - War

WAR DEPARTMENT

Washington

November 11, 1936.

The President called into consultation at the White House yesterday the Acting Secretary of State, the Secretary of War, the Secretary of the Navy, and the Acting Attorney General. The subject discussed was the restriction on the exportation of arms, ammunition and implements of war--with particular reference to airplanes -- under the provisions of the Espionage Act of June 15, 1917.

It is our understanding that the President definitely decided:

1. That the War and Navy Departments should henceforth adopt in full the War Department's interpretation of the pertinent section of the Espionage Act and should follow the War Department's procedure in dealing with proposed exportations; specifically:

(a) That the War and Navy Departments should not express objection to the exportation of any article which does not fall within the

the categories adopted by the War Department as follows:

(a) Articles, the whole or any features of which have been or are being developed or manufactured by or for the War Department or the Navy Department or with the participation of either of those Departments; and

(b) Articles, the whole or any features of which, have been used or are being used by the War Department or the Navy Department or which either Department has contracted to procure.

(b) That when the War and Navy Departments express objection to the exportation of articles relating to the National Defense, they should do so only on the ground of military secrecy.

2. That the Department of State should issue an export license pursuant to the pending application of the Douglas Aircraft Corporation for a license to export DF flying boats to the Union of Soviet Socialist Republics.

3. That for the time being all new types of military planes should be considered as military secrets for at least a period of one year after the delivery of the second plane of such new types; that the

War

My dear Mr. President:

This is written with reference to your conference of 10 November on the foreign sale of aircraft, at which the Acting Secretary of State, the Secretary of War, the Acting Attorney General and myself were present. The enclosed memorandum is a copy of one prepared in the State and War Departments as being the recollections of their representatives as to decisions made by you at that time.

The Navy Department will, of course, conform in all respects to your decisions on the subject of foreign sale of aircraft. The export of the Douglas DF flying boat to the Union of Soviet Socialist Republics, however, involves so vitally the value of military aviation in this country with relation to the air strength of foreign nations that I feel it my duty to advise you as to the prospective effect of your decision on this point.

The Douglas DF flying boat is not an independent commercial development. It is a contemporaneous commercial development of the latest Navy patrol plane built by the Douglas Aircraft Company. Such differences as exist between the naval and commercial version are not major and are largely confined to alterations for removal of strictly military details, with incorporation of commercial details in their place, and various minor improvements in the design of the plane as a whole. It can readily be reproduced as a military airplane equal in performance to that of our own latest patrol planes.

Its export to Russia, because of the State Department's universal release policy which necessitates release for sale to any foreign nation once sale has been permitted to one foreign nation, would immediately and directly result in its export to Japan. The Douglas Aircraft Company now has DF flying boats built or building for this specific purpose in accordance with a contract already made for their sale to Japan.

The first of our latest naval patrol planes, to which the DF flying boat is equal in performance, has only been delivered within the past few weeks, and delivery of the very large number now on order will not be completed by the Consolidated Aircraft Corporation for at least eighteen months.

The United States now has a very definite leadership in design and performance in the flying boat field, particularly with respect to

Japan. With the DF flying boat as a basis, Japan can readily be abreast of us in naval patrol plane equipment by about the time our own deliveries are completed.

The purpose of paragraph 3 of the enclosed memorandum of your decisions, requiring all new types of military planes to be considered as military secrets for at least one year after delivery of the second plane of such new types, is apparently to maintain, by avoidance of premature release of new types, the superiority of this country's aviation with respect to that of other foreign powers. But this intention is automatically vitiated if Japan is enabled, as she will be by purchase of the DF flying boat, to equal the range and speed of our own naval patrol planes while they are still being newly commissioned in this country, thus destroying our leadership in this highly important branch of naval aviation.

In addition, the Consolidated Aircraft Corporation, now actually building our latest patrol planes, is interested, like Douglas, in the possibility of foreign sale of a commercial version of their naval patrol plane. In equity, favorable action on their proposals could hardly be refused if the DF flying boat is exported. The Consolidated patrol plane, with the incorporation of latest developments, could be made definitely superior to its naval version and the effects of its release would be even more detrimental to this country's military aviation than release of the Douglas plane.

Furthermore, I must point out that issuance of an export license for the DF flying boat can hardly fail to have far-reaching and most unfavorable effect on the adequacy of United States military aviation as a whole. Briefly, with this precedent I fear that the Government cannot in future well oppose the premature foreign sale of any commercial version of any military airplane. Manifestly, this will gravely jeopardize our continued superiority in the entire field of military aviation.

In conclusion, I cannot avoid suggesting that the whole situation would, even as it now stands, be greatly simplified and its prospects of inimicality to our national interests be largely eliminated if the present policy of universal release were modified. Specific release instead of general release would make it possible to control suitably the distribution of newer types to undesirable destinations. It would, in the case of the Douglas DF flying boat, remove my major objection to this release at the present time. It would in all cases serve as a means for protecting the interests of the United States while permitting our aircraft industry comparative freedom with respect to foreign sales in the great majority of cases, where national defense would not be involved.

It would practically eliminate the friction and argument that are bound to result as long as no release can be considered except as a general release, with the resultant necessity that the worst effect of release must be weighed before decision is made.

Sincerely yours,

The President
The White House.

***** COPIES FOR SECNAV.

BUREAU OF THE BUDGET

WASHINGTON

file

MAY 23 1938

C.F.

war

MEMORANDUM FOR THE PRESIDENT:

The attached papers are returned,
as requested in your memorandum of May 19.
I have retained copies for my files.

Law Bree
Acting Director.

Inclosures

THE WHITE HOUSE
WASHINGTON

May 19, 1938.

MEMORANDUM FOR

THE ACTING DIRECTOR OF THE BUDGET ^{x19}

FOR YOUR INFORMATION AND
RETURN.

F. D. R.

Memo from the Assistant Secretary of War, 5/18/38 for the President in re Munitions Preparedness. Accompanying this memorandum are letter from Bernard M. Baruch, 597 Madison Ave., NYC, 4/29/38 to Miss LeHand, with attached memorandum for the President 4/29/38 stating that the British government's purchases of food stuffs shows that war has been more imminent than generally supposed. A copy of the memo from Asst. Secretary of War has been retained in our files.

Leah
THE WHITE HOUSE
WASHINGTON

May 13, 1938. *7*

MEMORANDUM FOR

THE ASSISTANT SECRETARY OF WAR *x25*

Will you give me a memorandum on this?

F. D. R.

Here
x 177-88
Note from Bernard M. Baruch, 597 Madison Ave., N.Y.C.,
4/29/38 to Miss LeHand, with enclosed memorandum
for the President, referring to the British govern-
ment's purchase of food stuffs, which, Mr. Baruch
says, shows that war has been more imminent than
generally supposed.

x 892

x 178
x 48
x 48-A

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D. C.

May 18, 1938.

THE WHITE HOUSE
MAY 18 3 14 PM '38
RECEIVED

MEMORANDUM FOR THE PRESIDENT.

Subject: Munitions Preparedness.

1. In commenting upon the memorandum to you from Mr. B. M. Baruch, dated May 13, 1938, it is noted that he suggests that "if we want to be safe" there should be provided in addition to the emergency Navy program an emergency Army program of approximately \$500,000,000. Mr. Baruch expresses concern over existing shortages in supplies of strategic materials, special machinery, antiaircraft and antitank guns, and airplanes. These items have been made the subject of War Department studies, plans, requests for funds and suggested enabling legislation.
2. In my memorandum to you on Munitions Preparedness, dated March 26, 1938, I inclosed a recommended program prepared in my office which showed that to secure supply preparedness, including War Reserves and industrial measures, would entail an expenditure of approximately \$574,000,000. The present Army Appropriation Bill as passed by the Senate makes provision to cover some of these shortages but there still remains a very serious situation. Deducting the appropriations and contract authorizations contained in this bill, leaves a requirement of \$495,220,000 additional to carry out this program as shown in the following paragraphs. The provision of any lesser amount would be highly beneficial to national defense.
3. WAR RESERVES. The first objective for War Reserves is for the Initial Protective Force of approximately 400,000 men to be available in 30 days, consisting of the Regular Army and the National Guard, expanded. \$110,100,000 are needed to fill shortages in critical equipment for this force. The second objective is for a force of 1,000,000 men, which since 1924 has been recognized by Congress as the proper basis for the War Reserve. The amount needed for this force is \$353,100,000.
4. STRATEGIC MATERIALS. At the recent request of Senator Thomas of Utah, Chairman of a subcommittee of the Senate Committee on Military Affairs considering strategic and critical materials, representatives of the State, War, Navy, Interior and Commerce Departments have cooperated in drafting a bill authorizing the accumulation of stock pile reserves. This bill (S. 4012) was introduced by Senator Thomas on May 12. The importance of such legislation has been of serious concern to the War Department. The bill proposes an authorization of \$25,000,000 per year for four years to supply the needs of the armed forces and the civilian population for a two-year period. The Senate Committee has requested that departmental reports on this bill be expedited, and a War Department report on the bill strongly indorsing its provisions was on May 14 submitted to the Bureau of the Budget.

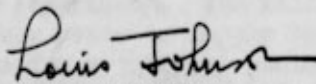
5. INDUSTRIAL PREPAREDNESS. The program for industrial preparedness is divided into three categories, explained below:

a. Educational Orders, resulting in production studies, gages, dies, jigs and fixtures. Private industry has been surveyed and tasks have been assigned to some 10,000 plants and these plants have indicated their willingness and ability to perform the tasks assigned. However, many of the plants have never manufactured the materials assigned to them and have not solved the production problems involved nor prepared the necessary gages, dies, jigs, and fixtures. In some cases six to eight months would be required to perform this preliminary work before real production could start. To shorten this preparatory period, authority for educational orders is recommended. Companion bills (S. 3902 and H.R. 6246) have been favorably reported by the Senate and House Military Affairs Committees authorizing such orders. An authorization of \$2,000,000 per year for five years is proposed. The Bureau of the Budget recommended \$1,000,000 per year from current appropriations. The War Department advocates an appropriation of \$22,000,000 for a 2-year program. However, if additional funds are not available, enactment of the pending bills would materially assist this program.

b. Special Machinery. In war time the manufacture of smokeless powder, high explosives and similar items will require entire new industries to be built. Much of the equipment therefor is special in character and requires months to produce. It is essential that a nucleus be fabricated and stored in time of peace. For this purpose \$8,120,000 is recommended in addition to \$7,880,000 included in the present Army Appropriation Bill. In this \$7,880,000 is included \$3,080,000 for smokeless powder machinery mentioned by Mr. Baruch.

c. Machine Tools. Although existing government arsenals will not produce more than 10% of the munitions required for a major emergency, the early production which they must accomplish is vitally important. Much of their existing machinery is antiquated and should be replaced if they are to function efficiently. \$12,000,000 is needed for this purpose.

6. It is apparent that the less fully the War Reserve requirements are supplied the more important become the industrial preparedness features of this program. These features must be emphasized. I, therefore, strongly recommend that at least provision be made for the industrial preparedness items submitted herein, in paragraph 5 a, b and c aggregating \$42,120,000.


LOUIS JOHNSON,

The Assistant Secretary of War.

BERNARD M. BARUCH
597 MADISON AVENUE
NEW YORK

April 29, 1938.

My dear Miss LeHand:

I shall be greatly
indebted to you if you will see that the
President gets the enclosed memorandum
when he has the opportunity to read it.

Sincerely yours,

B. M. Baruch

Miss Marguerite LeHand,
The White House,
Washington, D. C.

4.29.38

Memo for the President

I think we The British government's purchases of food stuffs shows that war has been more imminent than generally supposed.

America must have on hand a war reserve of strategic materials. The Army estimates requirements for manganese, chrome, tin and tungsten for two years of war would cost approximately \$22,000,000. This does not take into consideration rubber or monozite.

The increased British budget shows that England had neglected for years to keep up her armaments and had to do in a short time, and therefore in an expensive manner, what is demanded in the present circumstances. Doubtless Hitler's and Mussolini's demands were met because England and France were not ready.

The action of Mexico, which she has a right to do, in expropriating the oil generally owned by Americans and Englishmen brings near to our shores the questions of war, Nazism and Fascism. If Germany, Italy and Japan had available the necessary tankers they could take the oil from Mexico and supply in return, manufactured goods of all kinds, displacing American made goods. This movement if started south of the Rio Grande will spread to the tip of Patagonia. This is bad enough but when you take into consideration that this will open the way for Germany, Italy and Japan to get a hold not alone on the commerce but a foothold on the shores of Mexico, by increasing the number of those settling there to do business, it becomes a real danger to the United States.

I think we can outwit them commercially but we must move wisely and carefully. Now we have more to offer than the others. Later on, we may not.

The navy of Italy plus that which Germany is now building will be a real menace to the American navy in the Atlantic. With them in the Atlantic and Japan in the Pacific, the control of Mexico by Nazi, Fascist and imperialistic countries would not be an impossible problem. Not alone does this threaten American assets, but American markets and prestige south of the Rio Grande and above all, America itself.

You are aware of the condition of the American Navy and of the Army. Everyone knows what it is, except the American people, for surely the foreign governments know.

I am wondering whether we cannot purchase with some of the money that is not earmarked, the necessary raw materials to take care of the most important shortages. All of the things necessary for the Army program require a great deal of skilled labor which at the moment has not much employment.

Under the Army bill I know some money has been asked for, for this purpose, but not near enough.

Since looking into this matter, I have been greatly disturbed, as everyone is who looks into it, at our condition.

I do not know whether the special machinery that is necessary for making powder has been bought. That should be the top priority. Next should be the shortage in anti-aircraft and anti-tank guns and semi-automatic shoulder rifles, with a reserve of special machinery. Then airplanes and more airplanes.

The minimum required, is the Navy program now under discussion plus about \$500,000,000 for the Army, - if we want to be safe.

Is there anything further that you would wish me to do in the circumstances?

Should the objectors to the Navy program not be informed?

I am impelled to write you because I am so deeply concerned that my mind will not rest.

W. Maruch

~~SECRET~~

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D. C.

95/26/39
PSF

L. F. Navy

November 2, 1938.

The President,
The White House.

Dear Mr. President:

In furtherance of the plan for the expansion of aircraft production as submitted to you in a joint letter dated October 28, 1938, the following locations have been selected as sites for production plants to be constructed immediately:

Priority	Location	Ownership of Land
1	Philadelphia Navy Yard Philadelphia, Pennsylvania	Naval Reservation
2	Ogden Depot Ogden, Utah	Military Reservation
3	Air Corps Technical School Denver, Colorado	Military Reservation
4	Patterson Field, Ohio Dayton, Ohio	Military Reservation
5	Great Lakes Naval Training Station	Naval Reservation
6	New Cumberland General Depot Harrisburg, Pennsylvania	Military Reservation
7	Scott Field, Illinois Near East St. Louis, Illinois	Military Reservation

All of these sites are adjacent to an Army, Navy or civilian airport except Ogden where there is an authorized project. All of these sites are on federally owned land, with the exception of Ogden Depot and Scott Field, Illinois, where it will be necessary to expand the existing establishment by purchasing additional land for the factory site. In the case of the Ogden Depot the local community has donated a considerable area of land for the Ordnance Depot.

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~~SECRET~~

Date- 2/11/54

Signature- *Carl L. Spicer*

~~SECRET~~

The sites listed in the preceding paragraph are but a part of a larger list, from the remainder of which, nine additional sites must be selected to meet the requirements of the program. The additional sites selected for consideration are as follows:

Chicago, Illinois	Two Units	Site to be purchased
Kansas City, Missouri		" " " "
Indianapolis, Indiana		" " " "
Cincinnati, Ohio		" " " "
Park Field, Tennessee (near Memphis)		Military Reservation
Rock Island-Moline Area, Illinois		Site to be purchased
Cleveland-Akron Area, Ohio		" " " "
Atlanta, Georgia		" " " "
Wichita, Kansas		" " " "
Dallas-Fort Worth Area, Texas		" " " "
Nashville, Tennessee		" " " "
Chattanooga, Tennessee		" " " "
Houston, Texas		" " " "
Worcester, Massachusetts		" " " "
Moffett Field, California (near Oakland)		Military Reservation

The War Department and the Navy Department are in agreement on the sites selected for immediate construction and on those selected for further consideration.

Upon receipt of your approval of the seven (7) sites selected for immediate construction listed in the first paragraph, specific projects will be prepared and submitted for your action.

At this time it is desired to bring to your attention, that the completion of this program will necessitate additional funds over and above those which can properly be made available from current Works Progress Administration appropriations and for this purpose a fiscal program is being prepared for your consideration.

Respectfully yours,

Louis Johnson

LOUIS JOHNSON,
The Assistant Secretary of War.

x 25

Charles Edison

CHARLES EDISON,
The Assistant Secretary of the Navy.

x 18

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75/26/39

C.F. War

December 7, 1938

The President,
The White House.

My dear Mr. President:

I enclose you herewith charts
depicting, as mere words cannot do, the
airplane situation of the major powers.

It seems to me likely that you
will some time want to use this data, and
if the general idea of these charts appeals
to you, I will have them revamped and put
up in excellent form.

Sincerely,

Louis Johnson

U.S. Library of Congress

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000 512 22000 (2/21/38)

Date - 10-19-66

Signature - *Carl L. Spence*

~~SECRET~~

x249 official
x773

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D. C.

November 19, 1938.
1:45 p.m.

MEMORANDUM FOR THE ASSISTANT SECRETARY OF WAR:

1. The accompanying charts show graphically the breakdown of the aircraft data gathered on Thursday of this week. There are eight charts in addition to the cover page. Each page is titled.
2. The same information contained on the charts is also attached in the form of a tabulation.
3. There are two geographical charts showing certain distances in the area of the North and South Atlantic Oceans. Distances on the larger of these two charts are given in statute miles and are airline distances. On the smaller chart the distances in the Caribbean area are given in nautical miles. The conversion factor is 1.152.

C. H. Tenney
C.H. Tenney
Lt.Col., C.A.C.
Asst. Exec.

AIRCRAFT DATA

	Great Britain	France	Germany	Italy	United States
Total Strength (all types)	7,200	2,700	10,000	4,000	3,930
By types					
Training	760	380	3,520	1,510	1,100
Observation	1,730	490	860	530	1,500
Pursuit	1,270	770	1,570	860	620
Att. or L.B.	2,720	100	650	200	410
Med. & Hvy. Bmb.	720	960	3,400	900	300
Combat Planes*					
Pursuit - Cl.I	82	21	1,250	7	63
Cl.II	361	67	-	585	128
Cl.III	821	676	300	285	427
Total	1,264	764	1,550	877	618
Light Bombers - Cl.I	763	87	450	180	1
Cl.II	-	-	197	30	426
Cl.III	1,953	18	-	-	437
Total	2,716	105	647	210	864
M. & H. Bombers - Cl.I	10	2	3,353	361	13
Cl.II	509	264	-	552	263
Cl.III	196	690	-	3	282
Total	715	956	3,353	916	558
*Notes: Cl.I - Pursuit has speed in excess of 275 m.p.h.					
Cl.II - Pursuit has speed between 240 and 275 m.p.h.					
Cl.III - Pursuit has speed less than 240 m.p.h.					
Cl.I - Bombardment (both L.M. & H.) has speed in excess of 250 m.p.h.					
Cl.II - " " has speed between 200 and 250 m.p.h.					
Cl.III - " " has speed less than 200 m.p.h.					
Observation, patrol and training planes are not included in this table.					
Annual (all types)					
Production Rate	3,840	480	18,000	2,700	3,773
Military (Reg.)	78,500	69,500	131,000	103,500	44,400
Aviation (Res.)	22,500	12,000	20,000	328,500	8,850
Personnel (Tot.)	101,000	81,500	151,000	432,000	53,250

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Date: 10-19-66

Signature: Carol S. Spicer

AIRCRAFT DATA (Continued)

	Great Britain	France	Germany	Italy	United States
Range in miles					
Pursuit, S.E.	694	?	?	780	1,150
Pursuit, M.E.	-	807	900	1,553	2,550
Att. & L.B.	-	-	750	1,242	1,430
Med. Lt. Bomb.	2,500	1,242	1,050	-	1,443
Med. Hv. Bomb.	2,400	1,430	1,100	1,550	823
Heavy Bomb.	?	1,250	2,000	?	1,130

Notes: Light Bombardment and Attack Planes weigh up to 7,000 lbs.

Medium Light Bombardment Planes weigh between 7,000 and 12,000 lbs.

Medium Heavy Bombardment Planes weigh between 12,000 and 17,000 lbs.

Heavy Bombardment Planes weigh over 17,000 lbs.

Range in miles means total distance that plane can fly under full load.

Maximum Speed, M.P.H.					
Pursuit, S.E.	360	310	325	310	300 300-P36
Pursuit, M.E.	-	285	350	340	-
Att. & L.B.	-	-	250	267	230
Med. Lt. Bomb.	280	320	340	-	240
Med. Hv. Bomb.	260	300	280	270	215
Heavy Bomb.	-	215	255	-	255
Bomb Loads					
Light Bombardment	550	-	210	600	650
Med. Lt. "	880	4,400	2,200	-	2,000
Med. Hv. "	2,200	1,100	4,400	4,400	4,000
Heavy "	-	-	-	-	10,000
Long Range "	-	-	6,400	-	-

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DDO DIN. 3200.9 (9/27/58)

Date- 10-19-66

Signature- *Paul L. Spicer*

SECRET

Charts removed to
Audio-Visual
Collection

Dear Mr. [unclear]:

I enclose [unclear] charts
[unclear], as well as [unclear] the
[unclear] situation of the [unclear] power.

It seems to be likely that you
will not have [unclear] by this date, and
if the [unclear] [unclear] of these charts appeals
to you, I will have them [unclear] and put
up in [unclear] form.

Sincerely,

[unclear]

Request for allotment No. 18

WAR DEPARTMENT
WASHINGTON

*PSF
CF*

CF - War

~~SECRET~~

September 13, 1940.

The President,

The White House.

Dear Mr. President:

In order further to provide for adequate national defense, the War and Navy Departments regard as essential the development of special facilities for air navigation in the Western Hemisphere. Plans for these facilities have been completed and their cost is estimated at \$12,000,000. I respectfully request that you allocate this amount from the emergency fund provided by the Military Appropriation Act for the fiscal year 1941. The Judge Advocate General of the Army has advised me that this fund may be used for this purpose if the President so desires.

The work will be done by contract under the supervision of the War Department, which Department will be responsible for inspection of the projects and approval of expenditures. It is desirable that the funds requested be allocated at the earliest possible date.

Respectfully yours,

Henry L. Stimson

Secretary of War

~~SECRET~~

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DOD DIR. 5200.9 (9/27/58)

Date- 2/13/59

Signature- *Carl L. Spicer*

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D. C.

25

78/10/40

~~file~~

Dear Steve -

Hope this is what
is wanted. If any changes
desired, please let us know.

Sincerely -

Louis T -

C.F.

July 20, 1940

War

MEMORANDUM FOR THE PRESIDENT:

x773

Herewith is a chart showing in form for popular consumption the over-all status of certain important elements in the history of the U. S. Army during the period from 1921-1940, inclusive. A brief narrative statement, supported by detailed breakdown of figures, accompanies the chart.

Louis Johnson

x25

July 20, 1940

MEMORANDUM FOR THE PRESIDENT:

Herewith is a chart showing in form for popular consumption the over-all status of certain important elements in the history of the U. S. Army during the period from 1921-1940, inclusive. A brief narrative statement, supported by detailed breakdown of figures, accompanies the chart.

Enclosures: 3 (2 in duplicate)

THE MILITARY ESTABLISHMENT FROM 1921-1940

I. REGULAR ARMY

1. The National Defense Act of June 4, 1920, passed while the lessons of the World War were still fresh in the minds of the American people, authorized a Regular Army of 280,000 enlisted men (including Philippine Scouts) and 18,000 officers. It is a matter of record that these figures were never reached. Only six months later, in December 1920, a Joint Resolution, presented in the then Republican House of Representatives directed the discontinuance of enlistments until the enlisted strength (at that time only 196,530), was reduced to 175,000. This resolution was agreed to by the Senate but was vetoed by President Wilson. It was then passed by Congress over his veto and became law on February 7, 1921.

2. In the Appropriations Act for the fiscal year 1923, approved June 30, 1922, provision was made for the reduction of the commissioned strength of the Army (then 13,248, including 44 emergency officers) to 12,000 by means of forced discharges and retirements. Provision was also made for reducing the authorized enlisted strength to a maximum of 125,000, exclusive of the Philippine Scouts.

3. In 1926 an increase in the Air Corps of 403 officers and 6,240 enlisted men was authorized over a 5-year period. While these increases were intended to be over and above previously existing authorized strength of the Army as a whole (as fixed by annual appropriations) the Bureau of the Budget each year required

the authorized increments in Air Corps personnel to be absorbed by corresponding reductions in other Arms and Services. During this period, in fact in the fiscal year 1927, the Army reached a post-war low of only 133,096 (119,876 enlisted, 1,284 warrant and 11,936 commissioned).

4. The Military Appropriation Act for the fiscal year 1936 provided funds to increase the enlisted strength of the Regular Army to 171,415.

5. The Supplemental Military Appropriations Act for the fiscal year 1940 provided funds to increase the strength of the Regular Army to 210,031 by June 30, 1940. President Roosevelt's Executive Order dated September 8, 1939 directed that enlisted strength be increased to 227,000 as rapidly as possible. The Military Appropriations Act and the Supplemental National Defense Appropriations Act for the fiscal year 1941 have together provided a further increase in the enlisted strength of the Regular Army to 375,000.

x155
II. NATIONAL GUARD

1. For the 15-year period from 1920-1935, inclusive, the average aggregate strength of the National Guard was 190,000. This figure was increased to 195,000 in the fiscal year 1936; to 200,000 in the fiscal year 1937; and to 205,000 in the fiscal year 1939. President Roosevelt, in an Executive Order dated September 8, 1939, directed the aggregate strength of the National Guard to be increased to approximately 253,500. On July 30, 1940 the strength of the National Guard was approximately 242,700.

x109-A
III. ORGANIZED RESERVES

1. During the period 1924-1933, inclusive, the average number of Reserve Officers trained each year was 17,073. During the period from 1934-1940 the average number of Reserve Officers trained annually was 22,895. Appropriations for the last two fiscal years have provided for the training of 30,000 Reserve Officers annually, an increase of nearly 57% over the figures for the earlier period. Beginning with the fiscal year 1937 and continuing through until the close of the fiscal year 1940, Reserve Officers have been trained under the provisions of the Thomason Act to the total amount of 3,283.

IV. APPROPRIATIONS FOR THE SUPPORT OF THE MILITARY ESTABLISHMENT

1. During the fiscal years 1921-1925, inclusive, the average annual appropriation for the support of our military establishment was \$323,396,925. The bulk of this money was expended for recurring charges. Very little was available for improvement of the situation with respect to arms and equipment. In fact, an annual average of \$7,073,880 was all that was available. During this period the Army was compelled to make use of accumulated war stocks of supplies and equipment under a policy of drastic restriction. This policy was extended to operating expenses, resulting in marked deterioration in structures and utilities and a notably adverse effect upon the morale and efficiency of the Army. During the period covered by the fiscal years 1926-1933 (the Coolidge and Hoover

administrations) the average annual appropriation available for the military establishment as a whole was only \$310,426,786. Owing to the depletion of war stocks it became necessary during this period to increase procurements of arms and equipment with the consequence that the average amount available annually for this purpose over this 8-year period was \$25,578,377.

2. Starting with the fiscal year 1934 and continuing through the fiscal year 1940, a marked and substantial change becomes evident. For this 7-year period the average annual total available for the military establishment was \$495,215,479, an increase of 62%. Stated in different terms this means that the total amount of money available for the military establishment during the seven years of President Roosevelt's administration was 64% greater than the total available for the military establishment during the seven years preceding 1933.

3. But, even more striking is the fact that during the seven fiscal years of the Roosevelt administration (1934-1940) the amount available for improvement of the arms and equipment situation was approximately three and a half times, or 350%, as much as was available during the seven years preceding the fiscal year 1934.

4. With respect to rehabilitation of plant, it is of interest to note that during the first six fiscal years of President

Roosevelt's administration, a total of \$172,093,427 was provided as contrasted with \$86,488,034 for this item during the preceding six fiscal years. This means that approximately twice as much money was available for this purpose during the fiscal years 1934-1939, inclusive, as in the six fiscal years preceding 1934.

V. AIRCRAFT

1. On July 2, 1926 an Act of Congress was approved which fixed the number of serviceable airplanes at not to exceed 1800. Ten years later on June 24, 1936, another Act of Congress was approved increasing the number of serviceable airplanes to 2,320. Within the last fiscal year this figure has been more than doubled and at the present time all limitation as to the number of serviceable airplanes, that may be maintained has been removed. From an aircraft low of 1099 planes on hand and on order in the fiscal year 1927, the figure has risen to 5155 planes on hand and on order in the fiscal year 1940. This increase of 469% needs no elaboration to convey a meaning.

There will be found attached a more detailed statement in support of the foregoing.

x 249 official

TABLE I.

SIZE OF THE MILITARY ESTABLISHMENT

REGULAR ARMY INCLUDING PHILIPPINE SCOUTS

1. Wilson Administration - November 11, 1918 to March 4, 1921.

	ACTUAL STRENGTH			
	Commissioned Officers	Warrant Officers	Enlisted Men	Total
1919 (War Year)				
March 1, 1920	17,728 ^a	(b)	212,930	230,658
March 1, 1921	13,483 ^a	1,029	242,323	256,835

(a) Inclusive of Emergency Officers.

(b) Warrant officers not shown separately included in Enlisted Men total.

From November 11, 1918, until June 30, 1920, the Army was in the process of demobilization from its war strength.

Under the provisions of the National Defense Act of June 4, 1920, the enlisted strength of the Regular Army was limited to 280,000 inclusive of the Philippine Scouts, and the maximum commissioned strength was placed at approximately 18,000. In accordance with the provisions of this Act appropriations for the fiscal year 1921 provided for an increase in the enlisted strength as a step toward attaining the authorized enlisted strength of 280,000. However, upon the assembling in December, 1920, of the last regular session of the Congress elected in 1918, a Joint Resolution was initiated in the (Republican) House of Representatives directing the discontinuance of enlistments until the enlisted strength of the Army had been reduced to 175,000. This resolution was agreed to by the Senate, but was vetoed by President Wilson. It was then passed by Congress over his veto and became law on February 7, 1921.

x 400 Philippines

2. Harding-Coolidge Administration - March 4, 1921 to March 4, 1925.

	ACTUAL STRENGTH			
	Commissioned Officers	Warrant Officers	Enlisted Men	Total
March 1, 1921	13,483 ^a	1,029	242,323	256,835
March 1, 1922	13,195 ^a	1,199	140,445	154,839
March 1, 1923	11,635 ^a	1,094	122,371	135,100
March 1, 1924	11,750 ^a	1,072	120,434	133,256
March 1, 1925	12,051 ^a	1,039	125,980	139,070

(a) Inclusive of Emergency Officers.

In the appropriation for the fiscal year 1923, approved June 30, 1922, provision was made for the reduction of the commissioned strength of the Army (then somewhat over 13,000) to 12,000 by means of forced discharges and retirements. Provision was also made for reducing the authorized enlisted strength to a maximum of 125,000 exclusive of the Philippine Scouts.

3. Coolidge Administration - March 4, 1925 to March 4, 1929.

	ACTUAL STRENGTH			
	Commissioned Officers	Warrant Officers	Enlisted Men	Total
March 1, 1925	12,051 ^a	1,039	125,980	139,070
March 1, 1926	12,077 ^a	1,011	127,788	140,876
March 1, 1927	11,936	1,284	119,876	133,096 (b)
March 1, 1928	11,916	1,227	124,149	137,292
March 1, 1929	11,951	1,157	128,621	141,729

(a) Inclusive of Emergency Officers.

(b) By an Act of July 2, 1926, Congress authorized an increase in the Air Corps of 403 officers and 6,240 enlisted men, the increase to be effected in a five-year program. While the increases in personnel

were intended to be over and above the previously existing authorized strength of the Army as a whole (as fixed by annual appropriations), the Bureau of the Budget each year required the increments authorized in Air Corps personnel to be absorbed by corresponding reductions in other arms and services.

4. Hoover Administration - March 4, 1929 to March 4, 1933.

	ACTUAL STRENGTH			
	Commissioned Officers	Warrant Officers	Enlisted Men	Total
March 1, 1929	11,951	1,157	128,621	141,729
March 1, 1930	12,073	1,106	128,507	141,686
March 1, 1931	12,110	1,050	124,083	137,243
March 1, 1932	12,131	991	121,612	134,734
March 1, 1933	12,028	935	124,955	137,918

5. Roosevelt Administrations - March 4, 1933, to July 1, 1940.

	ACTUAL STRENGTH			
	Commissioned Officers	Warrant Officers	Enlisted Men	Total
March 1, 1933	12,028	935	124,955	137,918
March 1, 1934	12,100	879	124,638	137,617
March 1, 1935	11,835	810	124,577	137,222
March 1, 1936	11,908	795	152,719 ^a	165,422
March 1, 1937	12,088	736	164,471	177,295
March 1, 1938	12,266	782	172,998	186,046
March 1, 1939	12,632	778	167,361	180,771
March 1, 1940	13,368	762	230,034 ^b	244,164
July 1, 1940	13,831	763	246,949	261,543

(a) The Military Appropriation Act, fiscal year 1936, provided funds so that the enlisted strength of the Regular Army could be increased to 171,415.

(b) The Supplemental Military Appropriation Act, fiscal year 1940, provided funds to increase the strength of the Regular Army to 210,031 by June 30, 1940. By Executive Order, dated September 8, 1939, the President directed that the enlisted strength be increased to 227,000 as rapidly as possible.

The Military Appropriation Act, fiscal year 1941, approved June 13, 1940, provided for an increase in the enlisted strength of the Regular Army to 280,000, the funds appropriated being immediately available. The Supplemental National Defense Appropriation Act, fiscal year 1941, approved June 26, 1940, provides for a further increase in the enlisted strength of the Regular Army to 375,000.

AIR CORPS

1. Efforts to strengthen the Army Air Corps since March 4, 1933, are reflected in the following table showing the personnel strength of this arm as of June 30 of each year indicated.

	(1)	(2)	(3)	(4)
Year	Commissioned Officers	Organized Reserve Officers on Extended Active Duty	Flying Cadets	Enlisted Men other than Flying Cadets
1933	1,282	237	238	13,262
1934	1,299	162	318	13,998
1935	1,303	158	363	14,355
1936	1,359	172	328	15,312
1937	1,422	378	166	17,120
1938	1,438	635	342	18,568
1939	1,670	846	633	20,191
1940	2,210	1,187	1,583	43,644

2. From the foregoing it is seen that when President Roosevelt took office on March 4, 1933, the Army Air Corps consisted of approximately 1,282 regular commissioned officers, 237 reserve officers on extended active duty, 238 flying cadets and 13,262 enlisted men. Since that date this arm of the service has shown a steady growth until, on June 30, 1940, it included 2,210 regular commissioned officers, 1,187 reserve officers on extended active duty, 1,583 flying cadets and 43,644 enlisted men.

NATIONAL GUARD

1. During the fiscal years 1920 to 1935, inclusive, the average aggregate strength of the National Guard was 190,000.
2. In the fiscal year 1936 the strength was increased to 195,000; in the fiscal year 1937 to 200,000; in the fiscal year 1939 to 205,000.
3. In the fiscal year 1940 the President, by Executive Order, dated September 8, 1939, directed that the aggregate strength of the Guard be increased to approximately 253,500. The strength of the Guard on June 30, 1940, was approximately 242,718.

ORGANIZED RESERVES

1. Fourteen Day Trainees.

The average number of Reserve Officers trained during the fiscal years 1924-1933, inclusive, was 17,073. The average during the seven fiscal years of the Roosevelt Administration, 1934-1940, inclusive, was 22,895. The appropriations for each of the fiscal years 1939 and 1940 provided for 30,000 trainees.

2. Thomason Act Trainees.

The numbers of Reserve Officers trained for one year under the provisions of the Thomason Act were as follows:

Fiscal Year 1937	995
1938	645
1939	703
1940	940

TABLE II.

**APPROPRIATIONS AVAILABLE FOR THE SUPPORT
OF THE MILITARY ESTABLISHMENT**

1. Wilson Administration - November 11, 1918 to March 4, 1921 -
Fiscal Years 1919 to 1921 inclusive.

<u>Fiscal Year</u>	<u>Recurring Charges and Improvement of Plant</u>	<u>Augmentation, Modernization and Replacement of Arms and Equipment</u>	<u>Total Appropriations Military Establishment</u>
1919	\$ -	\$ -	\$15,408,115,472
1920	-	-	795,164,668
1921	474,341,155	8,899,721	483,240,876

2. Harding-Coolidge Administration.- March 4, 1921 to March 4, 1925 -
Fiscal Years 1922 to 1925 inclusive.

<u>Fiscal Year</u>	<u>Recurring Charges and Improvement of Plant</u>	<u>Augmentation, Modernization and Replacement of Arms and Equipment</u>	<u>Total Appropriations Military Establishment</u>
1922	\$ 348,872,345	\$ 6,564,989	\$ 355,437,334
1923	258,956,528	3,839,928	262,796,456
1924	247,801,818	3,742,763	251,544,581
1925	251,643,386	12,322,000	263,965,386
Totals	1,107,274,077	26,469,680	1,133,743,751
Average	276,818,519	6,617,420	283,435,939

3. Coolidge Administration - March 4, 1925 to March 4, 1929 -
Fiscal Years 1926 to 1929 inclusive.

Fiscal Year	Recurring Charges and Improvement of Plant	Augmentation, Modernization and Replacement of Arms and Equipment	Total Appropriations Military Establishment
1926	\$ 244,607,031	\$ 19,255,000	\$ 263,862,031
1927	242,531,105	29,731,000	272,262,105
1928	290,319,118	14,815,000	305,134,118
1929	287,773,551	31,406,000	319,179,551
Totals	1,065,230,805	95,207,000	1,160,437,805
Average	266,307,701	23,801,750	290,109,451

NOTE: During the period March 4, 1921, to March 4, 1929, the estimates and appropriations for materiel for the Army were based upon a policy of strictest economy, the Army being forced to utilize war stocks of supplies and equipment. Drastic economies were also enforced in operating expenses, thus resulting in marked deterioration in Army structures and utilities.

4. Hoover Administration - March 4, 1929 to March 4, 1933 -
Fiscal Years 1930 to 1933 inclusive.

Fiscal Year	Recurring Charges and Improvement of Plant	Augmentation, Modernization and Replacement of Arms and Equipment	Total Appropriations Military Establishment
1930	\$ 303,918,899	\$ 28,196,000	\$ 332,114,899
1931	314,901,179	32,078,000	346,979,179
1932	308,554,916	30,366,000	338,920,916
1933	286,181,492	18,780,000	304,961,492
Totals	1,213,556,486	109,420,000	1,322,976,486
Average	303,389,121	27,355,000	330,744,121

NOTE: Owing to the depletion of war stocks, the necessity for increased procurements caused an increase in annual appropriations during the Hoover Administration over those of the previous eight years.

5. Roosevelt Administration - March 4, 1933 to July 1, 1940 -
Fiscal Years 1934 to 1940 inclusive.

Fiscal Year	Recurring Charges and Improvement of Plant	Augmentation, Modernization and Replacement of Arms and Equipment	Total Appropriations Military Establishment
1934	\$ 268,163,381 59,562,913*	\$ 8,903,000 25,500,000*	\$ 277,066,381 85,062,913*
1935	259,456,094 11,971,801*	21,406,000 500,000*	280,862,094 12,471,801*
1936	301,360,204 18,778,058*	54,178,000 -	355,538,204 18,778,058*
1937	325,029,859 27,866,583*	63,215,000 -	388,244,859 27,866,583*
1938	358,268,029 50,353,707*	58,917,000 -	417,185,029 50,353,707*
1939	375,642,254 120,220,196*	84,559,000 -	460,201,254 120,220,196*
1940	602,713,603 49,514,672*	320,429,000 -	923,142,603 49,514,672*
Totals	2,490,633,424 338,267,930* 2,828,901,354	611,607,000 26,000,000* 637,607,000	3,102,240,424 364,267,930* 3,466,508,354

(*) Allotments from Federal Emergency Funds.

Remarks:

1. Total appropriations for the Military Establishment during the seven years 1927-1933 \$2,219,552,260
Total during the seven fiscal years (1934-40)
of the Roosevelt Administration 3,466,508,354
Excess \$1,246,956,094
2. Total amount available for arms and equipment
seven fiscal years 1927-1933 \$ 185,372,000
Total during the seven fiscal years (1934-40)
of the Roosevelt Administration 637,607,000
Excess \$ 452,235,000

Remarks - continued:

3. Construction at Military Posts:

During the first six fiscal years of the Roosevelt Administration a total of \$172,093,427 was spent on new construction for the Army as compared with an expenditure of \$86,488,034 on this item for the six preceding fiscal years.

<u>Fiscal Year</u>	<u>Amount</u>	<u>Fiscal Year</u>	<u>Amount</u>
1928	\$ 6,029,000	1934	\$52,773,423
1929	14,515,555	1935	2,756,828
1930	16,407,813	1936	17,924,441
1931	17,852,734	1937	8,396,537
1932	21,594,606	1938	15,407,477
1933	10,088,326	1939	74,834,721

Note: Data with reference to construction prior to the fiscal year 1928 and during the fiscal year 1940 is not immediately available in the Office of The Quartermaster General.

TABLE III

DATA ON PROJECT AIRPLANES

1. The Act approved July 2, 1926, fixed the number of serviceable airplanes at not to exceed 1,800.
2. The Act approved June 24, 1936, enlarged the authorized number of serviceable airplanes to 2,320.
3. Actual balances of serviceable project airplanes on hand for the Regular Army and Organized Reserves for the fiscal years 1927 - 1939, inclusive, are as follows:

Fiscal Year	Beginning of F.Y. Balance on Hand	Receipts	Losses	End of F.Y. Balance on Hand	Av. No. on Hand During Year	On Order End of F.Y.	Total on Hand and on Order
1927	1254	301	532	1023	1138	150	1173
1928	1023	305	425	903	963	196	1099
1929	903	407	146	1164	1034	162	1326
1930	1164	345	479	1030	1097	190	1220
1931	1030	628	181	1477	1254	117	1594
1932	1477	416	247	1646	1566	65	1711
1933	1646	72	221	1497	1571	278	1775
1934	1497	214	410	1301	1399	152	1453
1935	1301	41	264	1078	1190	362	1440
1936	1078	208	431	855	966	574	1429
1937	855	371	362	864	860	811	1675
1938	864	546	85	1325	1095	823	2148
1939	1325	675	77	1923	1624	523	2147
1940	1924	801	218	2507	2215	2648	5155
1941	2507						

NOTE: No data are available for the fiscal years prior to 1927.

C.F.

W July 11, 1940

Dear Mr. Schanck:

In reference to your letter of May 31, 1940, in which you enclosed a special communication, the President desires me to express his appreciation of your courtesy in making this information available and to assure you that it has been referred to the proper military authorities in strictest confidence.

The President appreciates the patriotic motives which prompted you to render this service.

Very sincerely yours,

EDWIN M. WATSON
Secretary to the President

F. R. Schanck, Esq., x
Failing Building,
Portland, Oregon.

G-2/1766-Z-671

WAR DEPARTMENT
WAR DEPARTMENT GENERAL STAFF
MILITARY INTELLIGENCE DIVISION, G-2
WASHINGTON, D. C.

G-2
J M

July 8, 1940.

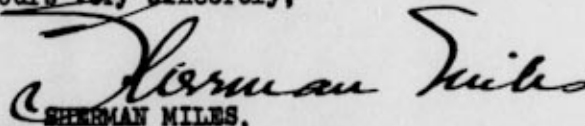
MEMORANDUM FOR GENERAL WATSON:

It is recommended that a letter substantially as follows be sent to Mr. Schanck in reply to his letter of May 31, 1940:

In reply to your letter of May 31, 1940, in which you inclosed a special communication, the President desires me to express his appreciation of your courtesy in making this information available and to assure you that it has been referred to the proper military authorities in strictest confidence.

The President appreciates the patriotic motives which prompted you to render this service.

Yours very sincerely,



SHERMAN MILES,
Brigadier General, U.S. Army,
Acting Assistant Chief of Staff, G-2.

Encls.

x25-T

asv

x25-
x25-T "S"

June 17, 1940

MEMORANDUM FOR: General Sherman Miles,
War Department.

The attached correspondence is respectfully referred to you for consideration.

EDWIN M. WATSON
Secretary to the President

Letter from F. R. Schanck, Failing Bldg., Portland, Oregon, May 31, 1940; to the President; sends certain information which he believes may be of value in the defense of our country.

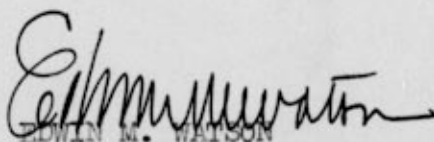
EAK

THE WHITE HOUSE
WASHINGTON

June 17, 1940

MEMORANDUM FOR: General Sherman Miles,
War Department.

The attached correspondence is respectfully referred to you for consideration.

A handwritten signature in dark ink, appearing to read 'Edwin M. Watson', written in a cursive style.

EDWIN M. WATSON
Secretary to the President

REC'D Executive Office C-2, W. 1. JUN 20 1940

CONFIDENTIAL

F. R. SCHANCK
CONSULTING ENGINEER

MEM. AM. SOC. CIVIL ENGRS.
FALLING BUILDING
PORTLAND, OREGON

May 31, 1940.

Hon. Edwin M. Watson,
Secretary to the President,
The White House,
Washington, D.C.

Dear Mr. Watson:

Acknowledging your letter of May 27th, you may be assured that I fully appreciate the protection which our President must have against attention to unimportant matters.

In order that you may judge as to my responsibility and trustworthiness may I add to the information which I have given in the enclosed letters which I have addressed to the President.

For eight years, before the World War, I held engineering positions of increasing responsibility in the Irrigation Services of the Interior Department. Was Assistant Chief Engineer of the Indian Irrigation work at the time I resigned to accept a commission on the staff of the army ordnance department. Brief sketches of my life appear in Who's Who in Engineering, Who's Who in Oregon and in the American Cyclopedia of National Biography. Have been a trustee of Albany College, Oregon. Was president of board of trustees for eight years. And have been associated with enterprises where the respect of those who know me seemed very evident.

Senators Hayden of Arizona and Mc Mary were at Stanford when I was and I am sure both these gentlemen would vouch for me. Congressman Homer Angell of Oregon knows me very well. Also Congressman Walter Pierce of the same state knows me sufficiently to permit me to refer to him. Of course I have not communicated with any one in regard to the subject of my letter to the President.

Yours very sincerely,

F. R. Schanck
F. R. Schanck,

Address until June 15,
P.O. Box #353,
Jerseyville, Ills

REC'D Executive Office G-2, W.P.S. JUN 20 1940

F. R. SCHANCK
CONSULTING ENGINEER

MEM. AM. SOC. CIVIL ENGRS.
FALLING BUILDING
PORTLAND, OREGON

May 31, 1940.

The President,
Executive Mansion,
Washington, D.C.

Dear Mr. President:

The conditions described in this letter may not require special watchfulness on the part of the United States, but ever since the rape of Norway and now methods of conquest used against Holland and Belgium make me certain that this information should be in the possession of our Commander-in-Chief so that whatever precautions you think it wise to adopt can be properly arranged. To show just how I have been able to know about this situation it will be necessary to recite considerable of a prologue.

Several years before the World War I was a supervising engineer in the Indian Irrigation Service. One of the projects placed in my hands was to develop, if possible, wells and pumping plants to supply the Papago Indians of southern Arizona. At that time they had no reservation and almost nothing of accurate information was known concerning them.

They inhabit a very arid region and the first thing to determine was whether the area of the watershed of the barren mountains bordering the flat, sandy valley in which most of them lived, was large enough to furnish run-off to replenish any underground supply which might be discovered. There are no running streams between Tucson and the Colorado River. These surveys were carried on for two years and it was found that the drainage area extended a considerable distance into Mexico towards the Gulf of California. While no instrumental surveys were made in Mexico our men went over this uninhabited region carefully enough to be able to make a rough estimate of the approximate size of that portion of the watershed.

About the time that wells were being drilled and the first pumping plants being built, a mining engineer friend, a former college mate, called upon me at my office in Los Angeles. He had been operating several years in Mexico but had left on account of the revolutions then beginning. In talking of our activities I mentioned these interesting Papago Indians. My friend said that he had been at the southern end of this valley in which they live at a mine and that while this mine was on the north slope of the mountains it was close to the Gulf and that an easy road led from the mine to navigable water.

It occurred to us that it might be feasible to construct a railway line from the Southern Pacific in Arizona just north of the Papago valley, south to tide water on the Gulf of California. My friend, his name is Jesse Beach, said that he had cordial relations with the Mexican government. We planned on getting some concession from Mexico and a right-of-way from the United States and perhaps sell these to the Southern Pac-

ific railway company as an outlet for products from the intermountain region. The country is almost level all the way from the railway line in Arizona clear down into Mexico for many miles. We spent considerable time in working on the project on paper but the Mexican revolts continued so that there was no stable government and we let the matter drop.

A few years latter, in the winter of 1916-17 I had, in the meanwhile been made assistant chief engineer of the Indian Irrigation Service, a number of the wells and pumping plants had been installed for the Papago Indians with iron tanks of several thousand gallons capacity at each. On one of my periodic inspection trips from my headquarters from Washington, the engineer in charge of our work in Arizona, C.A. Engle, met me in Los Angeles to report on his work.

Just before leaving on the train he told me that some days before the engineer stationed at the Papago project had told him of seeing, for several successive days, two or three men walking along the skyline of the mountains on each side of the valley. There were only two white families living in that whole region so the engineer's curiosity finally induced him to follow them and when he reached them Mr. Engle told me that they were Japanese seeking minerals. Shortly before this time the Papago Indian Reservation had been established with the provision that mineral rights could still be claimed the same as on the public domain.

By this time in my conversation with Engle my train was ready to start me back to Washington and nothing more was said about this matter. However it soon occurred to me that, as none but a citizen can take up a mineral claim and as Japanese can not become citizens, I began to wonder what they were really wanted. Doubtless you remember about that time there were stories in the papers saying that Germany was plotting with Mexico and also Japan to attack this country. Japan had branded them as ridiculous as she was then the enemy of Germany. Then it came to my mind about the easy route from the Gulf to the center of Arizona. With a little preparation at the isolated Mexican end trucks can easily make the run to the railway in a few hours. By the time I returned to Washington I felt certain that was the reason those men were there, especially noting the adequate water supply that the Papago tanks could furnish.

Arriving at Washington I went, at once, to see General Scott, who was then chief of staff. He knew the arid west. When I had given him the foregoing he asked me to return that afternoon with any maps I had. Also he asked whether I had told any one of this matter. When I said "No" he seemed thankful. Indeed, I did not tell Mrs. Schanck for several years and she can keep a secret. In a few days the newspapers reported that certain of our troops had been deployed along the southern border of Arizona. Also it was reported that an army pilot had made a forced(?) landing at the edge of the Gulf of California and was lost for several days in that region. Soon we were in the war and had enough armed men and supplies so no easy attack could have been made even if Japan might still have wanted to make such an effort.

It may be that all this is known to the present officials of the War Department and to other branches of our defenses. However the lapse of nearly twenty four years may easily have removed all those who would have had any reason to be advised of the unusual conditions which make an attack upon our country feasible.

The distance from the Mexican border to the Southern Pacific railway line is about ninety miles. The open, flat valley floor extends several miles further south into Mexico. I do not remember just how far below our border the closest tide water of the Gulf lies but think it is less than seventy miles. The direct route north to the railway is to the town of Oasa Grande. A few miles west of this station is the junction of the line to Phoenix, at Maricopa. The next station west of Maricopa is Gila, a sub-division point on the Southern Pacific. There extra cars and locomotives are always available for an enemy in complete control of the region.

Since my activity in this region a fine, paved highway has been built along the line of the railway to Los Angeles. It is about four hundred miles. In the Salt River and Gila valleys there are several thousand Japanese. Also in the Imperial valley in California and around Los Angeles there must be nearly half the Japanese population of this country. On the west coast of Mexico there have also been several large colonies of Japanese. All of this is doubtless well known to you but I am putting it down here in connection with the evident consideration which the government of Japan gave to an invasion of our country through this route.

It is, of course, not necessary to call to your attention the life-long antipathy the Mexicans have for us. Also the present condition of strained relations with that country, the many Germans there in influential positions and the antagonistic type of governmental forms which Mexico has set up.

For many years I lived in Southern California. Was consulting engineer in the construction of a power plant in Sonora, Mexico. Attended Stanford University where there were many Japanese students with whom I became intimately acquainted. As a student at Stanford, I enlisted in the Spanish American war, serving in the Philippines. Was a major in the Ordnance Department during the World War and for that service I organized and was the first Chief of the Chicago District Production Office. Have visited Japan and, while I was born in Illinois, have lived most of my life on the Pacific Coast.

Probably there is no danger to our country in the method I have described. I certainly hope not. But felt it my duty to put this information into hands where it would used to the best interest of our defense. This is being typed where I have no access to a typist in whom I have confidence. Have done it myself and wish to apologize for its appearance.

Very respectfully,

W. B. Schenck

W. B. Schenck,
Present address,
Box #353 Jerseyville, Ill.

x335-
x146
x146-A
x463-B

Copy

May 27, 1940

My dear Mr. Schenck:

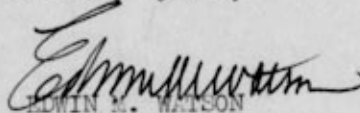
This will acknowledge the receipt of your letter of May seventeenth.

I am sure you will understand the burden on the President at the moment and the necessity for limiting the demands on him to those of the most urgent and important nature.

Under these circumstances, if you wish to forward your communication to me personally, you may rest assured that I shall treat it with all due confidence.

I am

Very sincerely yours,



EDWIN M. WATSON
Secretary to the President

F. R. Schenck, Esq.,
Post Office Box 353,
Jerseyville, Illinois.

Copy

F. R. SCHANCK
Consulting Engineer
Failing Building
Portland, Oregon.

Jerseyville, Ills.
May 17, 1940

Mr. Edwin M. Watson,
Secretary to the President,
The White House,
Washington, D. C.

My dear Mr. Watson:

Your letter of May 14, replying to mine, of May 11th, addressed to the President, has been received.

It was to avoid just such superficial attention as my letter secured that I asked to be advised how an important communication can be assured the personal attention of the President.

My letter asked distinctly how a letter should be addressed to come to the personal attention of the President, not for an appointment to see him. I appreciate fully the many demands on his time, therefore would not be asking for this short time which the information I can give him will require if I was not certain that it is important enough to require it.

Unless I can obtain the assurance that what I may be able to send will not go through the usual clerks, but be treated in the very confidential manner which it demands, it will be necessary for me to open up some other approach.

Very sincerely yours,

/s/ F. R. Schenck,
P. O. Box #353,
Jerseyville, Ills.

Copy

May 14, 1940

My dear Mr. Schanck:

Your letter of May eleventh has been received. I am very sorry indeed that the President's time is so fully taken up with the many urgent matters requiring his attention that it is impossible to arrange an appointment for you.

If you will send me a memorandum of the matter you have in mind, I shall be very glad to see that it receives careful consideration.

Very sincerely yours,

EDWIN M. WATSON
Secretary to the President

F. R. Schanck, Esq.,
#353 Jerseyville,
Illinois.

F. R. SCHANCK
Consulting Engineer
Feiling Building
Portland, Oregon.

Copy

Jerseyville, Ills.
May 11, 1940.

The President,
White House,
Washington, D. C.

Dear Mr. President:

There is a matter about which I have confidential information which may vitally affect the security of our country. This, I am sure, should come to your personal attention and I am writing to request that I be advised how a letter may be addressed so that it will come to your personal consideration.

Before the World War I had a position of responsibility at Washington in a technical office for the federal government where I wrote replies to mail sent to the President so I know that most letters, and properly so, never are seen by him. During the War I was a major in the Ordnance Department.

What I wish to tell you relates to a foreign country but is not a matter which might be investigated by our Secret Service nor by the War Department.

Respectfully yours,

/s/ F. R. Schanck

For the next two weeks my address is as below.

F. R. Schanck,
#353 Jerseyville,
Illinois.

file
C.F.
War Dept.

WAR DEPARTMENT
WASHINGTON

JUL 17 1941

THE WHITE HOUSE
JUL 19 9 17 AM '41
RECEIVED

MEMORANDUM FOR THE PRESIDENT:

Subject: Underground Storage for Gasoline and Planes.

x 36-B

x 249 offered

The subject of underground storage of airplanes and gasoline is now being studied intensively in the War Department. The lessons learned from the European conflict are being applied insofar as they meet the situation in the United States and its possessions.

Airdrome sites are selected to meet strategic requirements. To assure safe operation of airplanes, they are normally placed on terrain free from hills or other obstacles. Difficulty is likely to be encountered in finding usable mines, caves or tunnels which are coincident with such sites. When such underground areas are available they will be carefully considered in connection with the location of airdromes.

Underground storage of reserve airplanes presupposes attacks which will cripple the aircraft industry and seriously damage storage depots. Dispersion of the aircraft industry and air depots to the Middle West reduces the probability of losses sufficiently serious to require underground storage of reserve airplanes. The failure of Germany to destroy British airplane productive capacity indicates the futility of enemy attempts at destruction of our aircraft industry which is spread over a much larger area.

Utilization of existing mines, caves and tunnels for the storage of gasoline has not, as yet, been found practicable because of explosion hazard present in a confined space when leakage occurs. There is now under construction underground storage facilities for 4,200,000 barrels of aviation gasoline in tanks, which will be completely covered to obviate the explosion hazard. As later developments indicate the practicability of using underground caves or mines, they will be considered. At present it appears that any extension of the aviation gasoline storage system should utilize earth-covered tanks.

R.H.P. Pitt
Acting Secretary of War

x 23

C. F.
25-7
THE WHITE HOUSE
WASHINGTON

June 6, 1941

MEMORANDUM FOR

THE SECRETARY OF WAR *x25-*
THE CHIEF OF STAFF *x25-7*

I enclose a preliminary memorandum from the Director of Geological Survey in relation to natural underground storage for gasoline or planes. This memorandum does not really answer the objective. It may be possible to find existing mines, tunnels or caves for gasoline but it doesn't take up the possibility of excavating shallow hangars at the base of cliffs or very steep hills. Even if such a hangar were capable of holding only a dozen planes there would be a large element of safety and, at the same time, a wide distribution of reserve planes. I think the matter could well be looked into further by Army Aviation.

x 249- official
x56-15
x25-U

x6-74

F. D. R. *x6*

Letter from the Secretary of the Interior, 6/3/41 to the President, with enclosed memorandum he received from W. M. Mendenhall, Director, Geological Survey, Dept. Interior, 5/28/41 in re underground storage for airplanes and gasoline, sent to the Secretary of War. Copy of President's memo sent to the Chief of Staff.

7

September 9, 1941

Dear Colonel Magee:

I have received the copy of the Directory of Signal Equipment, and while we have no suggestions to offer, I shall keep it for reference in case the President or any of us have need of it in the future.

*Directory in
the safe*

With appreciation, I am

Very sincerely yours,

EDWIN M. WATSON
Major General, U. S. Army
Military Aide to the President
Secretary to the President

Lieut. Colonel R. H. Magee,
Assistant Executive,
Statistics Branch,
Office of the Under Secretary,
War Department,
Washington, D. C.

EMW:JJ

August 10, 1917
The Editor of the
Washington Post

SENATE CHAMBERS
WASHINGTON

150

October 7, 1917.

WASHINGTON, D.C., OCTOBER 7, 1917.

Dear Sir: Please find enclosed

I am in receipt of copies of your statement to
the Secretary of War and copy to this effect. It
will be appreciated that the statement
to permit the making of a limited number of pilots
from the new class of pilots will not January.
This would mean, in effect, that the pilots would not
be available for the fighting in the spring of 1918.
The new class of pilots are urgently
needed for the beginning of the year (a) to replace
those in the original class, (b) to meet the new
requirements of the war and (c) to meet the
requirements of the war.

ORIGINALLY Filed in PSF:CF:War
misfiled in 05 160. Returned to
PSF:CF:War 11/25/74

Very truly yours,
and ask that he recommend what was submitted as
recommendation for you.

(Signed) LOUISA CURRIE
Louisa Currie

President's notation
11/25/74

*Original of this memorandum sent to
Mr. Currie 10/7/41*

C
O
P
Y

from THE WHITE HOUSE
WASHINGTON

150

October 3, 1941.

MEMORANDUM FOR THE PRESIDENT:

Re: Hiring of Pilots for China.

I am in receipt of copies of your directives to the Secretaries of War and Navy on this subject. I note with considerable concern that the authorization to permit the hiring of a limited number of pilots from the Army does not take effect until next January. This would mean, in effect, that the pilots would not reach China and be in condition to fight until next March or April. Some additional pilots are urgently needed by the beginning of the year (a) to replace casualties in the original 100, (b) to man the new pursuit ships we are sending and (c) to man the 66 bombers released by the British. In order to have these additional pilots ready for combat at the beginning of the year it would be necessary to authorize hiring immediately.

May I reopen this subject with Secretary Stimson and ask that he reconsider what was doubtless his recommendation to you?

(Signed) LAUCHLIN CURRIE
Lauchlin Currie

President's notation:
"Yes
F.D.R."

WAR DEPARTMENT
WASHINGTON

September 30, 1941

October 2, 1941.

155
File
Personal
Confidential

My dear Mr. President:

I acknowledge receipt of your memorandum of September 30th in regard to the desire of the Chinese government to hire further pilots in the United States.

I have communicated your wishes to the Air Corps and directed that they take all the steps possible to see that China is given an opportunity to secure such pilots and other personnel from our forces who care to accept such employment as China offers.

Faithfully yours,

Henry L. Stimson

Secretary of War.

The President,
The White House.

Copy sent to Hon. Lucian W. Brown 10/10/41
A. L. Tracy
H. K. White
10/13
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150
Nav

September 30, 1941

MEMORANDUM FOR THE SECRETARY OF WAR: *x25*

x150

I have been informed that the Chinese Government has hired 100 pilots and 181 ground personnel to man and service 100 P-40's. In the next few months we are delivering to China 269 pursuit planes and 66 bombers. The Chinese pilot training program here will not begin to turn out well-trained pilots until next summer. In the interim, therefore, I think we should facilitate the hiring by the Chinese Government of further volunteer pilots here. I suggest, therefore, that beginning in January, you should accept the resignations of additional pilots and ground personnel as care to accept employment in China, up to a limit of 100 pilots and a proportional number of ground personnel. I am directing Mr. Lauchlin Currie to see that representatives of China carry out the hiring program with the minimum of inconvenience to the Army and also to see that no more are hired than are necessary.

(Signed) FRANKLIN D. ROOSEVELT

*Copy sent to Hon. Lauchlin Currie 10/2/41
him*

*x B. F. Navy
x B. F. State Lino-Japanese War
xH193
x150-6
x249
x249 official*

September 30, 1941

MEMORANDUM FOR THE SECRETARY OF THE NAVY:

x18

I have been informed that the Chinese Government has hired 100 pilots and 181 ground personnel to man and service 100 P-40's. In the next few months we are delivering to China 269 pursuit planes and 66 bombers. The Chinese pilot training program here will not begin to turn out well-trained pilots until next summer. In the interim, therefore, I think we should facilitate the hiring by the Chinese Government of further volunteer pilots here. I suggest, therefore, that beginning in January, you should accept the resignations of additional pilots and ground personnel as care to accept employment in China, up to a limit of 100 pilots and a proportional number of ground personnel. I am directing Mr. Lauchlin Currie to see that representatives of China carry out the hiring program with the minimum of inconvenience to the Navy and also to see that no more are hired than are necessary.

(Signed) FRANKLIN D. ROOSEVELT

Copy sent to Hon. Lauchlin Currie 10/12/41
him

x18-I

THE WHITE HOUSE
WASHINGTON

September 30, 1941

MEMORANDUM FOR THE PRESIDENT:

I have talked to General Arnold about this and he is anxious that the limit on Army pilots be 100 and as many ground personnel as the Chinese need.

He tells me he doesn't believe that many of the men will volunteer. On the other hand, he says he will cooperate fully.

HARRY L. HOPKINS

x 4117

x 25-U

6.7.
War

THE WHITE HOUSE
WASHINGTON

September 18, 1941.

MEMORANDUM FOR

HON. HARRY D. HOPKINS

x4117

What do you think?

F. D. R.

x150

Memorandum for the President from
Hon. Lauchlin Currie, 9/18/41, in re
Pilots for China. Encloses drafts of
memoranda for the President's signature
to the Secretaries of War and Navy,
in re facilitating the hiring by the
Chinese Govt. ~~for~~ of further volunteer pilots
here.

x249

x249 official

x25

x18

x150-6

x6.7. Navy

x6.7 State Sino-Japanese War

THE WHITE HOUSE
WASHINGTON

September 18, 1941.

MEMORANDUM FOR

HON. HARRY L. HOPKINS

What do you think?

F. D. R.

417
99
318
371
689
736
99
B-139

816
139
7

THE WHITE HOUSE

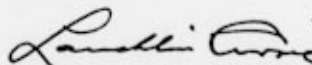
WASHINGTON

September 18, 1941.

MEMORANDUM FOR THE PRESIDENT:

Re: Pilots for China.

I consulted General Magruder on this, but I'm afraid that I can't "work it out" with him. He concurs but thinks you will have to give a directive. I raised the subject with you on Tuesday and you then agreed in principle. I think, however, that something written is necessary to overcome the resistance of the personnel branches of the services. Would you mind signing the rather mildly worded directive attached? In accordance with my information on the needs and number of personnel in the services, I am suggesting that the Army accept further resignations beginning in October and the Navy in January.


Lauchlin Currie

THE WHITE HOUSE
WASHINGTON

September 18, 1941

MEMORANDUM FOR THE SECRETARY OF WAR:

I have been informed that the Chinese Government has hired 100 pilots and 181 ground personnel to man and service 100 P-40's. In the next few months we are delivering to China 269 pursuit planes and 66 bombers. The Chinese pilot training program here will not begin to turn out well-trained pilots until next summer. In the interim, therefore, I think we should facilitate the hiring by the Chinese Government of further volunteer pilots here. I suggest, therefore, that beginning in October, you should accept the resignations of additional pilots and ground personnel as care to accept employment in China. I am directing Mr. Lauchlin Currie to see that representatives of China carry out the hiring program with the minimum of inconvenience to the Army and also to see that no more are hired than are necessary.

insert

~~RESTRICTED~~

WAR DEPARTMENT
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D. C.

SB:RHM:HVE

October 10, 1941

TO: The President

Subject: Additional Pages for Directory of Signal Equipment
Office Under Secretary of War, August 1941

1. The enclosed sheets and accompanying photographs are to be inserted in Directory No. 1.
2. Pages in the Directory are not numbered. Photographs and data sheets are in numerical order, according to set type.
3. The availability of these Directories is insufficient to meet the demand. Should you find that your copy is not needed its return to this Office would be appreciated.

R. H. Magee

R. H. MAGEE, *
Lieut. Col, A.C.,
Ass't Exec., Statistics Branch,
O.U.S.W.

4 Incls.

Franklin D. Roosevelt Library

DECLASSIFIED

DOD DIR. 5200.9 (9/27/58)

Date- 2/11/59

Signature- *Carl L. Spicer*

x25

x136-Misc.

x25-BB

RADIO SET SCR - 284

GENERAL PURPOSE: COMMAND USE FROM DIVISION HQ DOWN TO INCLUDE BATTALIONS AND FOR COMMUNICATION WITH ANTI-TANK UNITS.

USING SERVICE(S): INFANTRY, FIELD ARTILLERY AND SIGNAL CORPS.

COMMUNICATES WITH SCR-131, 161, 183, 274, 283, 284, 288, AND 536

METHOD OF TRANSPORTATION: TWO MAN PACK OR CARRIED IN VEHICLE.

WEIGHT 80 LBS.

CHARACTERISTICS		
	TRANSMITTER	RECEIVER
POWER SUPPLY	1. HAND GENERATOR 2. VEHICLE BATTERY AND DYNAMOTOR	SELF CONTAINED BATTERIES
FREQUENCY RANGE (KC)	3800 - 5800	3800 - 5800
TYPE OF SIGNAL	CW AND VOICE	ALL
RANGE (MILES)	5 MILES VOICE - 20 MILES CW	

MAJOR COMPONENTS: RECEIVER & TRANSMITTER BC-654
GENERATOR GN-45
POWER UNIT PE-103 (12 VOLT)
REMOTE CONTROL RM-29

REMARKS: THIS SET WHICH WAS DESIGNED AS A REPLACEMENT FOR THE SCR-131 AND SCR-171 WILL ALSO REPLACE SCR-161, USED BY THE FA.
DESIGNED TO OPERATE FROM MOVING VEHICLE OR ON THE GROUND.

341 2055



RADIO SET SCR - 299

GENERAL PURPOSE: COMMUNICATION BETWEEN DIVISION COMMAND ELEMENTS OF DIVISION, CORPS AND ARMY TROOPS ASSIGNED SPECIAL MISSIONS BEYOND RANGE OF 30 MILES.

USING SERVICE(S): SIGNAL CORPS

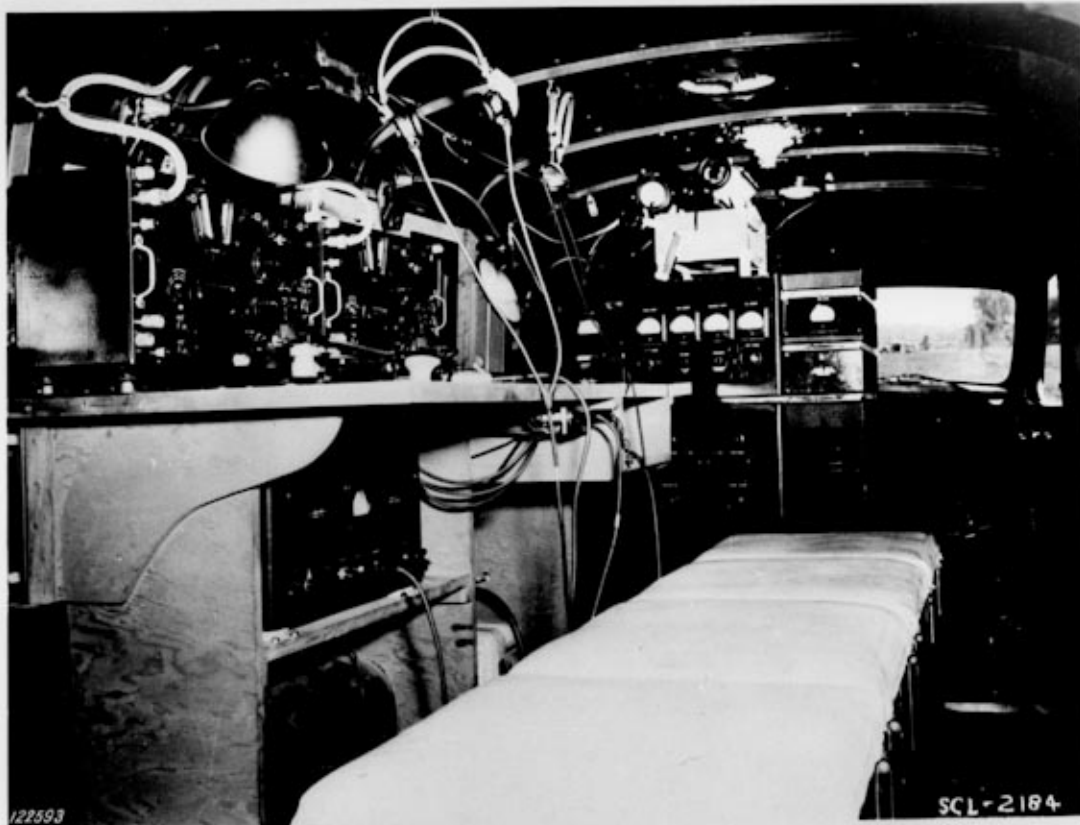
COMMUNICATES WITH SCR-177, 183, 187, 193, 209, 238, 245, 274, 283
284, 287

METHOD OF TRANSPORTATION: INSTALLED IN 1-1/2 TON TRUCK, WHICH TOWS 1 TON CARGO TRAILER MOUNTING THE GASOLINE GENERATOR.

CHARACTERISTICS		
	TRANSMITTER	RECEIVER
POWER SUPPLY	GASOLINE GENERATOR 110 VOLT AC 6 1/2KVA	GASOLINE GENERATOR 110 VOLT AC
FREQUENCY RANGE (KC)	1600 - 6000	1500 - 18,000
TYPE OF SIGNAL	CW - VOICE	ALL
RANGE (MILES)	100	

MAJOR COMPONENTS: TRANSMITTER BC-610 ()
RECEIVER BC-312
RECEIVER BC-342
POWER UNIT PE-95

REMARKS: A COMPLETE MOBILE RADIO STATION WITH ALL EQUIPMENT NECESSARY FOR MAINTENANCE AND COMMUNICATION WHEN IN THE FIELD.
MUST BE OPERATED BY TRAINED SIGNAL PERSONNEL.



SIGNAL CORPS LABORATORIES • FORT MONMOUTH, N.J.

RADIO SET SCR-299-T1
Interior of Installation Front View
July 15, 1941 SCL-2184

~~RESTRICTED~~ - For Official Use Only
Within The War Department.
This picture is not for sale.

Copy of this memorandum sent to the
Secy. of the Navy, 12/4/41
nm

C. F.

War

Op-12A-aw
11/8/41

NAV.

ORD.

December 3, 1941

AERO.

BUSHIPS.

Memorandum for the Secretary of War. x25

Y. & D.

S. & A.

M. & S.

J. A. G.

M. G. C.

BUDGET

In my memorandum of September 13, 1941, I requested that you arrange for the establishment of certain depots in the Middle East for the supply and maintenance of American aircraft and all types of ordnance furnished the British in that area.

x48
x4193

Requests have now been received from the British Government that a repair base for light craft, and certain salvage facilities, be provided in the same area.

In order to simplify the contractual procedure, and avoid unnecessary duplication, you are requested to provide for these additional projects, in consultation with the Secretary of the Navy. The necessary funds will be furnished from Defense Aid appropriations. The procedure to be followed should accord in general with that outlined in my previous memorandum to you, except that the method of operation of the repair base will be determined by the Secretary of the Navy after further investigation and consultation with British authorities.

A copy of this memorandum is being forwarded to the Secretary of the Navy.

(Signed) FRANKLIN D. ROOSEVELT

Op. 12.

Op. 13.

Op. 14.

Op. 16.

Op. 18.

Op. 20.

Op. 21.

Op. 22.

Op. 23.

Op. 30.

Op. 31.

Op. 38.

GPO 16-15724



No papers accompanied the original of this memorandum to the Secretary of War.

Lenny said we could keep this copy. Print & yellow copies were returned to him 1/4/41. E.A.
NB/GG(4)-Red Sea (411201)

THE WHITE HOUSE
WASHINGTON

December 3, 1941

MEMORANDUM FOR MISS TULLY:

THIS IS ALL RIGHT TO BE SIGNED.

HARRY L. HOPKINS

THE WHITE HOUSE
WASHINGTON

December 2, 1941.

MEMORANDUM FOR

HON. HARRY L. HOPKINS

x4117

Is this all right?

F. D. R.

Letter from Sec.Navy,Dec.1,1941,with draft Memo to Sec.War,
re providing certain Depots in the middle
East

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON

NB/QG(9)-Red Sea
(411201)

December 1, 1941

THE WHITE HOUSE
DEC 2 9 48 AM '41
RECEIVED

My dear Mr. President:

A request has been received from the British Joint Staff Mission for the construction of a destroyer repair base, and the supply of a salvage vessel and facilities in the Red Sea Area.

^x
In view of the increasing traffic to this region, particularly in United States flag ships, I consider these to be extremely important projects to both the British and ourselves.

In order to avoid duplication of effort, it is desirable that any construction work be undertaken as an extension to the War Department contracts now being negotiated for that area. In this, representatives of the War Department have expressed concurrence.

I am, therefore, forwarding for your signature a modification to the previous directive issued by you to the Secretary of War.

Sincerely yours,

Frank Knox
x18

The President,

The White House.

x18-73

x48

x18-Misc. Naval Bldg. Folder

x6.F. Navy

COPY

File

THE WHITE HOUSE

WASHINGTON

September 13, 1941

MEMORANDUM FOR THE SECRETARY OF WAR. *x25*

In order to comply with the expressed *needs* of the British Government, it is requested that arrangements be made at the earliest practicable time for the establishment and operation of depots in the Middle East for the maintenance and supply of American aircraft and all types of ordnance furnished the British in that area. Arrangements should also be made for the necessary port, railroad and truck facilities required to make the supply of American material effective.

These depots will

- (a) stock spare parts,
- (b) provide maintenance facilities,
- (c) serve as instruction centers for operation and maintenance of American equipment, and, in general,
- (d) perform the functions usually assigned to intermediate and base depots.

The depots and transportation facilities should be established and operated under contract executed and administered by the appropriate branch of the War Department with American companies, preferably already existing, but if not practicable, organized especially for the purpose. Alternatively, these contracts may be made between the British authorities and American or other companies if such method is found to be more desirable. In this case, it is requested that the War Department assist in finding a contractor and in negotiating and expediting the contract in every way possible. The United States and British representatives will jointly consider which of these alternatives shall be adopted.

x173

*x48
x4193*

x249-official

*x635
x31
x102-A*

The necessary funds will be furnished from Defense Aid appropriations. It is contemplated that a major part of the cost of the proposed projects will be incurred in Sterling or local currencies and will be discharged by the British. Defense Aid funds should be used only to the extent of unavoidable dollar expenditures, such as for pay and allowances for American overhead and skilled mechanics, and material to be procured in the United States.

The British authorities should be consulted on all details as to location, size and character of depots and transport facilities. Their needs should govern.

For your information, it is understood that arrangements are now being made directly between the British and Canadian manufacturers for the maintenance of trucks and automobiles. However, if these arrangements are not adequate, quartermaster depots similar to ordnance and air depots should be established. x48-73

The detailed arrangements in regard to the aircraft facilities are now being investigated by Major General George H. Brett. It is, however, believed that it will be possible for the basic contract to be negotiated prior to the return of General Brett.

(Signed) FRANKLIN D. ROOSEVELT

x25-U
x25-R
x25-X