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CONDITION SURVEY, WESTOVER AIR FORCE BASE, MASSACHUSETTS.(U)
JUN 73 R D JACKSON, H H BAKER, G D GILMAN

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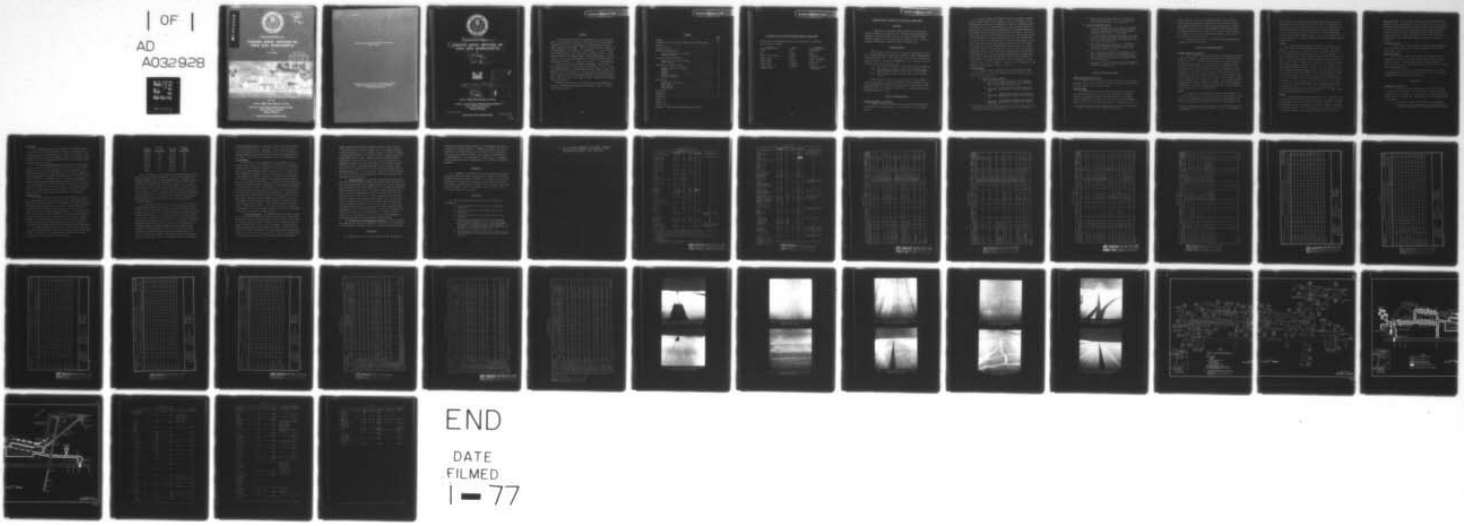

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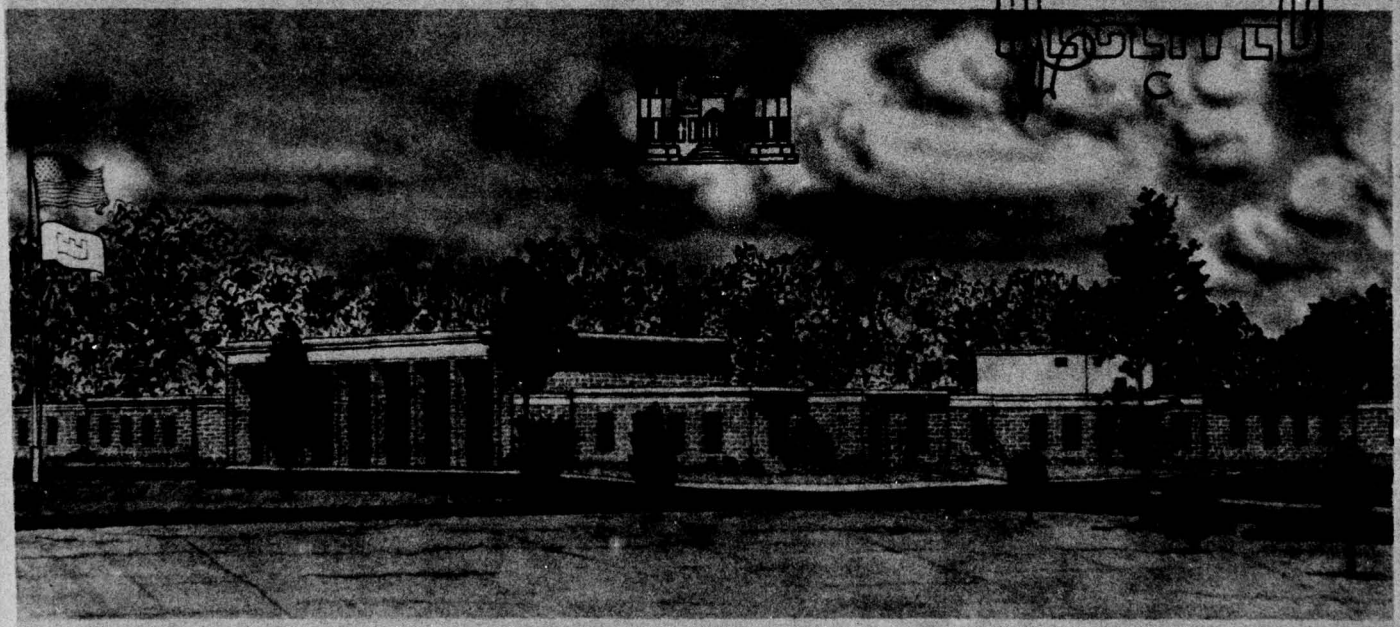
MISCELLANEOUS PAPER S-73-41

CONDITION SURVEY, WESTOVER AIR FORCE BASE, MASSACHUSETTS

by

R. D. Jackson



June 1973

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Conducted by U. S. Army Engineer Waterways Experiment Station
Soils and Pavements Laboratory
Vicksburg, Mississippi

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(9) MISCELLANEOUS PAPER S-73-41

(6) CONDITION SURVEY, WESTOVER AIR FORCE BASE, MASSACHUSETTS.

by

(10) R. D. Jackson,
H. H. Baker
G. D. Gilman

(14) WES-MP-S-73-41

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(11) June 1973

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Vicksburg, Mississippi

ARMY-MRC VICKSBURG, MISS

Foreword

The study reported herein was conducted under the general supervision of the Engineering Design Criteria Branch, Soils and Pavements Laboratory, of the U. S. Army Engineer Waterways Experiment Station (WES), Vicksburg, Mississippi. Personnel involved in the condition survey were Messrs. R. D. Jackson, P. S. McCaffrey, Jr., and W. J. McKay of the WES and Messrs. H. H. Baker and A. A. Downey of the U. S. Army Engineer Division, New England (NED), Waltham, Massachusetts. The main portion of this report was prepared by Mr. Jackson under the general supervision of Messrs. J. P. Sale, R. G. Ahlvin, R. L. Hutchinson, and P. J. Vedros of the Soils and Pavements Laboratory. That portion of the study pertaining to frost action was carried out by the U. S. Army Cold Regions Research and Engineering Laboratory (CRREL), Hanover, New Hampshire, with the assistance of the Foundations and Materials Branch, NED. The section of this report concerning frost action was prepared by Mr. Baker and by Mr. G. D. Gilman of CRREL. Appendix A was obtained from the Air Force.

COL Ernest D. Peixotto, CE, was Director of the WES during the conduct of the study and preparation of the report. Mr. F. R. Brown was Technical Director.

Contents

Conversion Factors, British to Metric Units of Measurement

British units of measurement used in this report can be converted to metric units as follows:

Multiply	By	To Obtain
inches	2.54	centimeters
feet	0.3048	meters
miles (U. S. statute)	1.609344	kilometers
square inches	6.4516	square centimeters
square yards	0.8361274	square meters
pounds (mass)	0.45359237	kilograms
pounds (force) per square inch	0.6894757	newtons per square centimeter

CONDITION SURVEY, WESTOVER AIR FORCE BASE, MASSACHUSETTS

Authority

1. Authority for conducting condition surveys at selected airfields is contained in amendment to FY 1972 RDTE Funding Authorization (MFS-MC-5, 16 February 1972), subject: "Air Force Airfield Pavement Research Program," from the Office, Chief of Engineers, U. S. Army, Directorate of Military Construction, dated 18 February 1972.

Purpose and Scope

2. The purpose of this report is to present the results of a condition survey performed at Westover Air Force Base (WAFB), Massachusetts, during 21-24 August 1972. The frost action inspection was performed during 7-8 June 1972. The following ~~three~~ major areas of interest were considered in this condition survey:

a. The structural condition of the primary airfield pavements;

b. The condition of pavement repairs and the types of maintenance materials that have been used at this airfield; and

c. Any detrimental effects of frost action to the pavement facilities.

3. This report is limited to a presentation of visual observations of the pavement conditions, discussion of those observations, and pertinent remarks with regard to the performance of the pavements. No physical tests of the pavements, foundations, or patching materials were performed during this survey.

Pertinent Background Data

General description of airfield

4. WAFB is located in Hampden County, between South Hadley Falls and Chicopee Falls, Massachusetts. A vicinity map is shown in plates 1 and 2.

5. In August 1972, the airfield facilities consisted of a NE-SW (05-23) runway, a NW-SE (15-33) runway, a series of taxiways, aircraft parking stubs, hangar aprons, hangar access aprons, a maintenance apron, six warm-up aprons, an operational apron, a base and transient operational apron, a SAC operational parking apron, an Aerospace Defense Command (ADC) operational apron, ADC and SAC alert facilities, and a calibration hardstand. The NE-SW runway was 11,600 ft* long and 300 ft wide; the NW-SE runway was 7,050 ft long and 150 ft wide; the taxiways were 75 ft wide, except for taxiways G and L, which were 100 ft wide; the aircraft parking stubs, the hangar aprons, the access aprons, the maintenance apron, and the warm-up aprons were of various sizes; the operational apron was 2,092 ft long and 312 ft wide; the base and transient operational apron was 250 ft wide and of varying length; the SAC operational parking apron, the ADC operational parking apron, the ADC operational apron, and the ADC and SAC alert facilities were irregular in shape; and the calibration hardstand was 275 ft in diameter. A layout of the airfield is shown in plate 1. A pavement plan indicating the type pavement on each facility is shown in plate 2.

Previous reports

6. Previous reports concerning the airfield pavements at WAFB are listed below. Pertinent data were extracted from them for use in this condition survey report.

a. Condition survey reports:

(1) Ohio River Division Laboratories, CE, "Condition Survey Report, Westover Air Force Base, Massachusetts," August 1947, Cincinnati, Ohio.

(2) _____, "Condition Survey Report, Westover Air Force Base, Massachusetts," June 1952, Cincinnati, Ohio.

(3) _____, "Condition Survey Report, Westover Air Force Base, Massachusetts," August 1958, Cincinnati, Ohio.

(4) _____, "Condition Survey Report, Westover Air Force Base, Massachusetts," December 1960, Cincinnati, Ohio.

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* A table of factors for converting British units of measurement to metric units is presented on page vii.

(5) Ohio River Division Laboratories, CE, "Condition Survey Report, Westover Air Force Base, Massachusetts," September 1964, Cincinnati, Ohio.

b. Pavement evaluation reports:

(1) U. S. Army Engineer Office, CE, "Report of Pavement Evaluation, Westover Field, Chicopee Falls, Massachusetts," February 1944 (Revised August 1944 and January 1945), Providence, Rhode Island.

(2) U. S. Army Engineer Division, New England, CE, "Addendum No. 1, Report of Pavement Evaluation, Westover Air Force Base, Chicopee Falls, Massachusetts," August 1945, Boston, Massachusetts.

(3) Ohio River Division Laboratories, CE, "Interim Report, Airfield Pavement Evaluation, Westover Air Force Base, Chicopee Falls, Massachusetts," September 1953, Cincinnati, Ohio.

(4) U. S. Army Engineer Division, New England, CE, "Report of Pavement Evaluation, Parking Apron, Alert Apron, Connecting Taxiway, 1951 Construction, Westover Air Force Base, Massachusetts," November 1954, Boston, Massachusetts.

(5) _____, "Airfield Evaluation Report, Westover Air Force Base, Chicopee Falls, Massachusetts," December 1959, Boston, Massachusetts.

History of Airfield Pavements

Design and construction history

7. Details of the design and construction history of the airfield pavements are presented in table 1. Pavement thicknesses, descriptions, and other details are presented in table 2.

Traffic history

8. Detailed traffic records were not available for the period since the reconstruction of the airfield during 1954-56. However, based on the incomplete records that were available, it is reasonable to assume that the airfield has received at least the following number of cycles* of traffic per type of aircraft during the period

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* A cycle of operation is one landing and one takeoff.

1957-71: B-47's, 2,300; B-52's, 23,000; KC-97's, 7,000; KC-135's, 14,500; heavy cargo aircraft, 8,000; and all other aircraft, 100,000. From January 1971-July 1972, traffic from all aircraft using the airfield (with the exception of B-52's) averaged 1,000 cycles per month. The average number of monthly cycles of B-52 traffic during the period was estimated to be 75, which would add an additional 1,425 cycles to the total for the 19-month period.

9. More than 50 percent of the takeoffs from the NE-SW runway at WAFB are made from the NE end.

Conditions of Pavement Surfaces

Pavement inspection procedure

10. The following procedure was used in conducting the inspection of the rigid pavements. Representative features were selected for detailed inspection. The features were then inspected slab* by slab, and the defects were recorded. The locations of the individual pavement features, the inspection starting points, and the directions in which the pavements were inspected (shown by arrows) are indicated in plate 1. The results of the rigid pavement survey for those features that were inspected in detail are presented in table 3. This table shows a quantitative breakdown of the various types of defects and a condition rating for each pavement feature inspected in detail. The procedures used for determining the condition rating of a pavement are given in Appendix III of Department of the Army Technical Manual TM 5-827-3, "Rigid Airfield Pavement Evaluation," dated September 1965.

Runway

11. The NE-SW (05-23) runway has 1,000-ft portland cement concrete (PCC) ends and a 9,600-ft asphaltic concrete (AC) interior. The SW end (15-in. PCC pavement), features R1A and R2B, was in excellent condition, with only nine major defects recorded for both features. The

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* A slab is the smallest unit, containing no joints, of a given pavement feature.

NE end (15-in. PCC pavement), features R5A and R4B, was also in excellent condition, with only five major defects noted. The interior AC portion was in very good condition (photos 1 and 2); a slurry seal had been applied during 1972 before this condition survey was performed. Photo 3 shows a closeup view of this slurry seal on the NE-SW runway. The NW-SE (15-33) runway pavement, which is AC over PCC, appeared to be in only fair condition, with considerable reflection and random cracking (photos 4 and 5).

Taxiways

12. The primary taxiway system is composed of taxiways G, H, L, N, S, and Z and the north and south connecting taxiways. The surface pavement on taxiways G, H, L, N, and S and the southeast half of Z is AC. The center sections of these taxiways were in good condition. Photo 6 shows a general view of taxiway S looking southwest from parking stub 9. Part of the shoulders of this taxiway were slurry sealed in 1972. Photo 7 shows a closeup view of this seal. Northeast of parking stub 9, the shoulders of taxiway S had not been sealed, and they contained numerous cracks (photo 8). Taxiway G from its SW end to the NE end of the SAC operational parking apron was in good condition (photo 9). Photo 10 shows the typical condition of the NE end of taxiway G, which was in good condition. The north connecting taxiway (feature T1A) was in only fair condition based on the percentage of slabs that contained major defects. Forty-eight major defects were noted in this feature, of which 41 were longitudinal cracks. These longitudinal cracks were all located in lanes 2, 3, and 4 and are probably load related. The south connecting taxiway was in excellent condition. The other taxiways in the primary system were in good condition.

Aprons

13. Operational apron B and maintenance apron C, which are 11-in. PCC over 6-in. PCC, were in excellent condition. The extension to maintenance apron C (15-in. PCC) was also in excellent condition. However, a considerable amount of uncontrolled contraction cracking was observed in operational apron B. The base and transient operational apron B was in excellent condition, with only 213 major defects, including 160

transverse cracks. Most of these transverse cracks were at about the midpoint of those slabs that were 25 ft long and 12.5 ft wide. The SAC operational parking apron was in very good condition, with approximately 15 percent of the slabs containing major defects. Most of the major defects in this feature were longitudinal cracks. Other aprons and parking stubs were in conditions ranging from fair to excellent, with the majority of the parking stubs being in very good to excellent condition.

SAC alert facility

14. This facility, which consists of an alert taxiway, an alert apron, and parking stubs, was in excellent condition, with only two major defects noted.

ADC alert facility

15. ADC alert taxiway U was in only fair condition, since approximately 35 percent of the slabs contained major defects. Longitudinal cracking was the predominate defect. ADC alert aprons A and B were in good condition, with approximately 20 percent of the slabs containing major defects.

16. All other features not specifically mentioned in the preceding paragraph were in good to excellent condition. Some contraction cracking was noted in the flexible pavements.

Frost Action

Objectives of inspection

17. The airfield pavements at WAFB were inspected for evidence of detrimental frost effects on 7-8 June 1972 by a team from the New England Division. One member of this team also participated in the WES condition survey of August 1972. The objectives of the inspections were to determine:

a. Any adverse effects of frost heave to the pavements.

b. Any traffic-induced pavement failures that might be related to thaw weakening of the subgrades or base courses.

Frost heave

18. The airfield pavements were examined for surface irregularities indicative of differential frost heaving. The inspection was conducted long after the spring thaw at a time when the effects of non-uniform frost heave would not be apparent except in severe cases. Base personnel were queried regarding the development of undesirable surface unevenness during the winter.

19. The heavy-load pavements were smooth and free of detectable unevenness of the type associated with frost heaving. Base personnel reported that no pilots had complained of runway roughness but that slight frost heaving of the flexible pavements had occurred beneath some of the painted traffic markings. The heaving was on the order of 1/4 in. and was restricted to the painted areas. Occasional slight pavement damage had been caused by these areas being caught by snow plow blades. It was also reported that some of the taxiway light bases heaved during the winter, returning to grade in the spring. It was observed, however, that a few of these bases in the north shoulder of taxiway G were an inch or more above pavement grade at the time of this inspection.

Freezing indices

20. A design freezing index of about 1100 degree-days is cited in the rigid pavement condition survey report prepared by the Ohio River Division in 1958 (see paragraph 6). Reportedly, this index was derived from short-term temperature data from the Base Weather Station and from long-term data from adjacent weather stations. Data from the Base Weather Station are available only through 1963. On the basis of these data, a design index of 1023 degree-days is computed representing the average of the three coldest winters of the 30 years ending with 1963. Average monthly temperatures for months entirely within the freezing seasons and average daily temperatures for the transition months at both ends of the freezing seasons were considered in this determination.

21. Seasonal freezing indices since the 1957-58 season are tabulated below for the Hartford, Connecticut, Weather Station located about 30 miles south of WAFB. The design index for Hartford for the same period as above is approximately 850 degree-days.

Freezing Season	Freezing Index degree-days	Freezing Season	Freezing Index degree-days
1958-59	763	1965-66	263
1959-60	298	1966-67	210
1960-61	885	1967-68	518
1961-62	545	1968-69	598
1962-63	846	1969-70	736
1963-64	654	1970-71	636
1964-65	573	1971-72	301

22. The tabulated seasonal indices were determined solely on the basis of average monthly temperatures. Indices thus determined are generally somewhat lower than those computed with consideration given to average daily temperatures for the transition months. Also, these values do not reflect indices experienced at WAFB. The tabulated indices, however, when compared with the Hartford design index, do indicate the relative severity of winters during the period of heavy-load aircraft operations. In this respect, and considering the design index difference between the two locations, two seasons of design freezing index magnitude have occurred at WAFB during the period 1958-72 (1960-61 and 1962-63).

23. Since the heavy-load pavements at this base were constructed, the experienced freezing index has been of design magnitude at least twice. In view of this fact, the general absence of differential frost heaving is significant. For a design freezing index of 1023 degree-days, current criteria indicate that a combined pavement and base thickness of about 65 in. is required for the prevention of subgrade freezing and that combined thicknesses of from 45 to 50 in. are required for limited subgrade frost penetration design. A 48-in. combined thickness for the latter design is required at WAFB and has been employed, particularly for primary pavements, since 1954. The actual combined thicknesses of the heavy-load pavement features range from 16 to 48 in., and substantial subgrade freezing probably has occurred under the thinner structures. However, the subgrade soils are principally

nonfrost-susceptible medium to fine sands, with pockets of silty sands of low frost susceptibility. Groundwater levels are at least 20 ft below the pavement surfaces. Therefore, little or no frost heaving is expected beneath these pavements even when substantial subgrade freezing occurs. The results of this inspection bear this conclusion out.

Thaw weakening

24. The extent of thaw weakening of the subgrades and base courses could not be readily determined by inspection of the pavements. Pavement failures usually are repaired soon after they occur and usually are not easily examined during a condition survey. However, even where examination is possible, it is often impossible to establish by visual observations whether a failure is the result of thaw weakening or of deficiencies in the thickness of the pavement components with respect to the "normal" period loading. The depletion of the fatigue resistance of a pavement system is progressive under repeated loadings and in a frost area is related to thaw weakening in that the rate of depletion is greater during and directly following the frost-melting period. This rate of pavement weakening holds true whether the evidence of fatigue or failure becomes apparent during the melting period or at some other time. The degree of thaw weakening and its effects, if any, on the condition of the pavements at WAFB consequently could not be appraised solely by this inspection. Some limited perception of the severity of thaw weakening effects can be gained, however, by comparing the performance of certain pavement features with what might be expected in the light of current frost design criteria.

25. Flexible pavements. The principal flexible pavement features used by heavy-load aircraft are the NE-SW runway interior (feature R3C) and primary taxiways G (features T2A, T3A, and T4A) and S (feature T5A). The combined pavement and base thickness for these features, except for features T3A and T4A, is 48 in., which is adequate in accordance with limited subgrade frost penetration design criteria. However, with the exception of the features noted above, the pavements were designed for medium-load traffic (100,000-lb gear loads). Relative to current normal (nonfrost) design criteria for heavy-load aircraft (265,000-lb gear

loads), the runway and taxiway pavements are deficient by 3 and 4 in. of 100 CBR base course material, respectively. The taxiway pavements are also deficient by 1 in. in pavement thickness. Portions of taxiway G (features T3A and T4A) are overlain World War II pavements which were placed without a base course. However, the total present pavement thicknesses for these two features, 16 and 19 in., respectively, are adequate for normal period heavy-load design. Despite these thickness deficiencies and the experienced intensive heavy-load traffic (paragraph 8), all of these features were in good condition and had very few load-induced defects. It does not appear, therefore, that thaw weakening of the base courses and subgrades has significantly influenced the performance of these features.

26. Rigid pavements. The principal heavy-load rigid pavement features at this base include the runway ends (features R1A, R5A, R2B, and R4B), the SAC operational apron (feature A13B), the SAC alert taxiway and aprons (features A3B and A4B), and the north warm-up apron and connecting taxiway (features T1A and A1B). The combined pavement and base thickness of all of these facilities is 48 in., except for that of the SAC operational apron, which is 47 in. (limited subgrade frost penetration design). However, these features are deficient by 3 to 4 in. in pavement slab thickness relative to current normal (nonfrost) design criteria for heavy-load aircraft (265,000-lb gear loads). Despite these thickness deficiencies and the experienced intensive heavy-load traffic (paragraph 8), all of these features were in very good to excellent condition, having very few load-induced defects. It does not appear, therefore, that thaw weakening of the base courses and subgrades has significantly influenced the performance of these features.

27. Evaluations for frost-condition operation. Because of favorable subgrade soil and water conditions, no reduction in the evaluations for frost-condition operation (table 4) is considered warranted at WAFB.

Maintenance

28. Maintenance of the airfield pavements at WAFB has generally

consisted of crack and joint sealing of the PCC pavements and slurry sealing of the flexible pavements. Pavement maintenance costs were not available for preceding years, with the exception of FY 1972 during which the cost amounted to $95,000. This figure is representative of the approximate cost for maintenance in preceding years. The annual pavement maintenance plan for WAFB through 31 July 1972 is presented in Appendix A.

Evaluation

29. A summary of the pavement evaluation is presented in table 4. Previously published pavement evaluations were updated to include those aircraft that have been added to the Air Force inventory and to exclude those that are no longer in the inventory. The evaluation is based on the pavement thickness, flexural strength (PCC), base and subbase thickness and strength, strength of the subgrade (CBR or k value), and the structural condition of the pavement.

Conclusions

30. The following statements summarize the findings of this investigation:

a. The PCC pavements of the runway were in excellent condition.

b. The AC interior portion of the runway was in good condition.

c. The center portions of the AC taxiways were in good condition.

d. The pavements of operational apron B and maintenance apron C, which consist of 11-in. PCC over 6-in. PCC, were in excellent condition, even though uncontrolled contraction cracks were numerous in these pavements. The pavement of the extension to maintenance apron C (15-in. PCC) was also in excellent condition.

e. The PCC pavements that had been overlaid with AC were in only fair condition, with considerable reflection cracking noted.

f. The only reported instances of detrimental effects of frost action were upheaval of AC pavement at painted surfaces and slight heave of the light bases.

Table 1

Airfield Design and Construction History

Pavement Facility	Pavement Dimensions, ft Length	Width	Type	Thickness, in.	Construction Year(s)	Agency	Design Criteria
NW-SE (15-33) runway							
Sta 0+00 to 10+00	1000	150	PCC	8-6-8	1941	CE	World War II medium-bomber loads
Sta 10+00 to 19+32	932	150	PCC	8-6-8	1941	CE	
Sta 19+32 to 34+00	1468	150	PCC	8-6-8	1941	CE	
Sta 34+00 to 54+00	2000	150	PCC	8-6-8	1941	CE	
Sta 54+00 to 61+70	770	150	PCC	9-6-9	1942	CE	
Sta 61+70 to 70+50	880	150	PCC	6	1942	CE	
NE-SW (6-24) runway*							
Sta 0+50 to 35+20	3470	150	AC	3	1940	QC	
Sta 0+50 to 35+20	3470	150	PCC	6	1941	CE	
Sta 35+20 to 40+40	520	150	PCC	8-6-8	1941	CE	
N-S (1-19) runway**							
Sta 8+00 to 18+00	1000	150	PCC	8-6-8	1941	CE	
Sta 20+00 to 35+00	1500	150	PCC	8-6-8	1941	CE	
Sta 35+00 to 55+00	2000	150	PCC	9-6-9	1942	CE	
Taxiway A	1400	75	Soil cement	6	1942	CE	
Taxiway B	2200	75	Soil cement	6	1942	CE	
Taxiway H							
Sta 21+15 to 25+00	385	75	Soil cement	6	1942	CE	
Sta 25+00 to 30+80	1480	75	Soil cement	6	1942	CE	
Sta 21+15 to 30+80 (outside lanes)	1865	12.5	Soil cement	6	1942	CE	
Taxiway L†							
Sta 52+15 to 68+52	1637	50	Soil cement	6	1942	CE	
Sta 52+15 to 68+52 (outside lanes)	1637	12.5	Soil cement	6	1942	CE	
Taxiway M	800	75	Soil cement	6	1943	CE	
Taxiway apron D	400	200	PCC	9-6-9	1942	CE	
Taxiway apron E	400	200	PCC	9-6-9	1942	CE	
Taxiway apron F	Varies	Varies	PCC	9-6-9	1942	CE	
Taxiway apron G	Varies	Varies	PCC	9-6-9	1942	CE	
Taxiway apron J	Varies	Varies	PCC	9-6-9	1942	CE	
Taxiway apron K	Varies	Varies	PCC	9-6-9	1942	CE	
Hangar apron	Varies	Varies	RPCC	8-6-8	1941	CE	
Branch taxiways	Varies	50	Soil cement	6	1942	CE	
Hardstands (100-ft diameter)			PCC	9-6-9	1942-43	CE	
Service apron sections††							
550 to 625 ft	1637	75	RPCC	8	1944	CE	
625 to 700 ft	Varies	75	RPCC	9	1944	CE	
700 to 800 ft (taxiway through apron)	2400	100	RPCC	9	1944	CE	
Taxiway A	1400	75	AC‡	2-1/2	1945	CE	None
Taxiway B	2200	75	AC‡	2-1/2	1945	CE	None
Taxiway H (portion)	1480	75	AC‡	2-1/2	1945	CE	None
Taxiway M	800	75	AC‡	2-1/2	1945	CE	None
Taxiway V‡‡	Varies	Varies	PCC	10	1951	CE	Tricycle arrangement: 25,000-lb, single-wheel load with 200-psi tire pressure
ADC alert apron§	Varies	Varies	PCC	10	1951	CE	
NW-SE (15-33) runway	7050	150	AC‡	2-1/2	1952	AF	None
NE-SW (6-24) runway	3990	100	AC‡	2-1/2	1952	AF	None
Taxiway apron E	400	200	AC‡	2-1/2	1952	AF	None
Taxiway apron J	Varies	Varies	AC‡	2-1/2	1952	AF	None
Taxiway apron K	Varies	Varies	AC‡	2-1/2	1952	AF	None
NE-SW (05-23) runway§§							Tricycle arrangement: 100,000-lb gear load on dual wheels spaced 37.5 in. c-c with 267-sq-in. contact area per tire
Sta 0+00 to 10+00	1000	300	PCC	15	1954-55	CE	
Sta 10+00 to 106+00	9600	300	AC	4	1954-55	CE	
Sta 106+00 to 116+00	1000	300	PCC	15	1954-55	CE	
NW-SE (15-33) runway#							
Sta 19+32 to 34+00	1468	150	AC	4	1954-56	CE	

(Continued)

Note: CE denotes Corps of Engineers. QC denotes Quartermaster Corps. AF denotes U. S. Air Force.

* Now taxiway G.

** Section south from Sta 8+00 was removed in 1954; remaining pavement currently used as apron access taxiway.

† Sections southeast from Sta 52+15 and northwest from Sta 68+52 were removed in 1944.

†† Now base and transient apron B. Distances cited as identifications of sections are measured from left edge of NW-SE (15-33) runway.

‡ Resurfacing.

‡‡ Shortened in 1954.

§ Now ADC operational apron.

§§ Construction during 1954-56 was for general reconstruction of WAFB for use as SAC airfield.

\# Intersections with NE-SW (15-33) runway and taxiway G.

Table 1 (Concluded)

Pavement Facility	Pavement: Dimensions, ft Length	Width	Type	Thickness, in.	Construction Year(s)	Agency	Design Criteria
Taxiway G							Tricycle arrangement: 100,000-lb gear load on dual wheels spaced 37.5 in. c-c with 267-sq-in. contact area per tire
Sta 0+50 to 35+20	3470	100	AC	4	1955-56	CE	
Sta 35+20 to 40+40	520	100	AC	4	1955-56	CE	
Sta 40+40 to 75+65	3525	100	AC	4	1955-56	CE	
Taxiway H							
Sta 8+30 to 21+15	1285	100	AC	4	1955-56	CE	
Sta 21+15 to 25+00	385	75	AC	4	1955-56	CE	
Sta 25+00 to 39+80	1480	75	AC	4	1955-56	CE	
Sta 21+15 to 39+80 (outside edges)	1865	12.5	AC	4	1955-56	CE	
Taxiway L							
Sta 33+27 to 39+80	653	100	AC	4	1955-56	CE	
Taxiway N							
Sta 1+50 to 24+33	2283	100	AC	4	1955-56	CE	
Taxiway S							
Sta 0+50 to 48+92	4842	100	AC	4	1955-56	CE	
Taxiway Z							
Sta 0+50 to 4+35	385	100	AC	4	1955-56	CE	
Sta 4+35 to 8+00	365	Varies	PCC	15	1955-56	CE	
South connecting taxiway	Varies	Varies	PCC	15	1955-56	CE	
North connecting taxiway	750	100	PCC	15	1955-56	CE	
South warm-up apron	Varies	Varies	PCC	15	1955-56	CE	
North warm-up apron	Varies	Varies	PCC	15	1955-56	CE	
Parking stubs (19)	215	75	PCC	15	1955-56	CE	
Parking stubs (11)	300	Varies	PCC	15	1955-56	CE	
NE-SW (05-23) runway							Tricycle arrangement: 10,000-lb, single-wheel load with 100-psi tire pressure
Blast pads	150	300	AC	2	1956	CE	
Overruns	850	300	DEST	--	1956	CE	
Shoulders for parking apron	3700	50	AC	2	1956	CE	
Overlay shoulders for parking apron B and maintenance apron C	Varies	Varies	AC	2	1956	CE	
Shoulders for taxiways and warm-up aprons	Varies	37.5	AC	2	1955-56	CE	
Shoulders for stubs	Varies	50	AC	2	1955-56	CE	
Hangar aprons A1 and A2	Varies	400	PCC	15	1955-56	CE	Tricycle arrangement: 80,000-lb gear load
Hangar access aprons (5)	125	200	AC	3	1955-56	CE	
Calibration hardstand (275-ft diam)			PCC	15	1955-56	CE	
Calibration hardstand taxiway	467	75	PCC	15	1955-56	CE	
Operational apron B	2092	212	PCC##	11	1955-56	CE	Tricycle arrangement: 100,000-lb gear load on dual wheels spaced 37.5 in. c-c with 267-sq-in. contact area per tire
Taxiway through operational apron B	2092	100	PCC##	11	1955-56	CE	
Maintenance apron C	Varies	Varies	PCC##	11	1955-56	CE	
Taxiway through maintenance apron C	1500	100	PCC##	11	1955-56	CE	
Maintenance apron C extension	800	50	PCC	15	1955-56	CE	
SAC operational parking apron	Varies	Varies	PCC	14	1955-56	CE	
Hangar access aprons 32, 34, 36, and 38	Varies	Varies	PCC##	12	1955-56	CE	
Hangar access aprons 32, 34, 36, and 38 extension	Varies	Varies	PCC	15	1955-56	CE	
Maintenance areas adjacent to stubs 1, 3, 28, and 30	Varies	Varies	AC	3	1955-56	CE	Tricycle arrangement: 25,000-lb, single-wheel load with 200-psi tire pressure
Taxiway P	1970	75	AC	3	1954-55	CE	
Taxiway U	550	75	PCC	10	1954-55	CE	
ADC alert apron A	600	100	PCC	10	1954-55	CE	
ADC alert apron B	550	300	PCC	10	1954-55	CE	
Taxiway T	390	75	PCC	10	1954-55	CE	
Blast pads	Varies	50	AC	2	1954-55	CE	None
Apron access taxiway‖							300,000-lb gross loading
Sta 8+00 to 18+00	1000	100	AC##	5	1957	AF	
Sta 20+00 to 35+00	1500	150	AC##	5	1957	AF	
Sta 35+00 to 55+00	2000	Varies	AC##	5	1957	AF	
Sta 35+00 to 55+00	1300±	75	AC##	5	1957	AF	
Operational apron F	Varies	Varies	AC##	5	1957	AF	
Operational apron G	Varies	Varies	AC##	5	1957	AF	
Shoulders	Varies	25	AC	2	1958	AF	Unknown
SAC alert taxiway	1000	75	PCC	18	1958	CE	Bicycle arrangement: 265,000-lb gear load on twin-twin wheels spaced 37-62-37 in. and 267-sq-in. tire contact area per tire
SAC alert apron	610	100	PCC	18	1958	CE	
SAC alert stub(s)	Varies	Varies	PCC	18	1958	CE	
SAC connecting taxiway	300	75	PCC	18	1958	CE	
Stubs 1 and 2 widening	Varies	215	PCC	15	1958	CE	
Blast pads and shoulders	Varies	Varies	AC	2	1958	CE	Tricycle arrangement: 10,000-lb, single-wheel load with 100-psi tire pressure
Shoulders	Varies	50	AC	2	1958	CE	
Blast pads adjacent to stubs 19, 28, and 30	170	15	AC	2	1958	CE	
Blast pads adjacent to stubs 20, 25, 27, and 29	170	105	AC	2	1958	CE	

Overlay.
‖ Formerly N-S (1-19) runway.

Table 7

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY Westover AFB, Mass.				OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
FACILITY NUMBER AND IDENTIFICATION		LENGTH FT	WIDTH FT	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
R1A	NE-SW runway;1st 500 ft, SW (05) end	500	300				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
R2B	NE-SW runway;2nd 500 ft, SW (05) end	500	300				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
R3C	NE-SW runway interior NE (23) end	9600	300				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam NFS Gravelly sand (SP) NFS Silty gravelly sand (SP-SM) NFS Silty gravelly sand (SP-SM) NFS	100 50 35 25	Silty sand (SM) F-2	Compacted 25 Natural 15	Good
R4B	NE-SW runway;2nd 500 ft, NE (23) end	500	300				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
R5A	NE-SW runway;1st 500 ft, NE (23) end	500	300				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
R6A R7B R8C	NW-SE runway;1st 500 ft, SE (33) end 2nd 500 ft, SE (33) end Interior:sta 10+00 to 19+32, sta 34+00 to 61+25	500 500 932 2725	150 150 150 150	2.5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	18	Silty sandy gravel (SP-SM)	CBR=30 K=250	Silty sand (SM)	15	Fair
R9C	NW-SE runway interior Sta 19+32 to 34+00	1468	150				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam NFS Gravelly sand (SP) NFS Silty gravelly sand (SP-SM) NFS Silty gravelly sand (SP-SM) NFS	100 50 35 25	Silty sand (SM) F-2	Compacted 25 Natural 15	Fair
R10B R11A	NW-SE runway; sta 61+25 to 65+50, NW (15) end. NW-SE runway; 1st 500 ft, NW (15) end	425 500	150 150	2.5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	6 12	Soil cement Silty gravelly sand (SP-SM)	50 30 K=350	Silty sand (SM)	15	
T1A	North connecting taxiway South connecting taxiway	750 Varies	100 Varies				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Fair Excellent
T2A	Taxiway G Sta 40+40 to 76+65	3625	100				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam Gravelly sand (SP) Silty gravelly sand (SP-SM) Silty gravelly sand (SP-SM)	100 50 35 25	Silty sand (SM)	15	Good
T3A	Taxiway G Sta 35+20 to 40+40	520	100				4	Asphaltic concrete		3.5/ 2.5 6	Dry bound Macadam/ Asphaltic concrete subbase Portland cement concrete	100 100	Silty sand (SF-SM)	Compacted 30 Natural 15	Used for evaluation

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(1 of 4 sheets)

Table 2 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY Westover AFB, Mass.				OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
FACILITY NUMBER AND IDENTIFICATION		LENGTH FT	WIDTH FT	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
T4A	Taxiway G Sta 0+50 to 35+20	3470	100				4	Asphaltic concrete		3.5/ 2.5 6/ 3	Dry bound Macadam/ Asphaltic concrete subbase Portland cement concrete/ Asphaltic concrete	100 100/ 50	Silty sand (SP-SM)	Compacted 40 Natural 15	Used for evaluation
T5A	Taxiway S	4842	100				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam Gravelly sand (SP) subbase Silty gravelly sand (SP-SM) Silty gravelly sand (SP-SM)	100 50 35 25	Silty sand (SM)	Compacted 25 Natural 15	Good
T6B	Taxiway P	1970	75				3	Asphaltic concrete		6 11 10 18	Dry bound Macadam Silty gravelly sand (SP-SM) subbase Silty gravelly sand (SP-SM) Silty gravelly sand (SP-SM)	100 35 25 15	Silty sand (SP-SM)	15	Good
T7A T15A T16A T17C	Taxiway H:sta 8+30 to 21+15, sta 21+15 to 39+80 (12.5 ft, each side) Taxiway L Taxiway N Taxiway N	1285 1865 653+ 900 1400	100 12.5 100 100 100				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam Gravelly sand (SP) subbase Silty gravelly sand (SP-SM) Silty gravelly sand (SP-SM)	100 50 35 25	Silty sand (SM)	15	Good
T8A	Taxiway H,sta 21+15 to 25+00	385	75				4	Asphaltic concrete		7 6	Dry bound Macadam Subbase-soil cement	100 50	Silty sand (SP-SM)	30	Good
T9A	Taxiway H,sta 25+00 to 39+80	1480	75				4	Asphaltic concrete		5 2.5/ 6	Dry bound Macadam subbase Asphaltic concrete/ Soil cement	100 80/ 50	Silty sand (SP-SM)	30	Good
T10A	Taxiway Z,sta 0+50 to 4+35	385	100				4	Asphaltic concrete		6 4 16 18	Dry bound Macadam Gravelly sand (SP) subbase Silty gravelly sand (SP-SM) Silty gravelly sand (SP-SM)	100 50 35 25	Silty sand (SM)	15	Good
T11A	Taxiway Z (through hangar apron A-2), sta 4+35 to 8+00	365	Varies				15	Portland cement concrete	660	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
T12C	Taxiway M	800	75				2.5	Asphaltic concrete		6 18	Soil cement Subbase silty gravelly sand (SP-SM)	50 30	Silty sand (SM)	CBR= 15	Excellent
T13C	Apron access taxiway Sta 8+00 to 18+00 Sta 20+00 to 35+00	 1000 1500	 100 150	5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	18	Silty gravelly sand (SP-SM)	CBR= 30 K=250	Silty sand (SM)	CBR= 15	Good

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Table 2 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY Westover AFB, Mass.				OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
FACILITY NUMBER AND IDENTIFICATION		LENGTH FT	WIDTH FT	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
T14A	Apron access taxiway Sta 35+00 to 55+00	2000	Varies	5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	9 9	Gravelly sand (SP) Silty gravelly sand (SP-SM)	CBR= 40 CBR= 30 K=250	Silty sand (SM)	CBR= 15	Good
A1B	South warm-up apron North warm-up apron	Varies Varies	Varies Varies				15	Portland cement concrete	720	8 25	Soil cement Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent Good
A2B	ADC alert taxiway U Taxiway T ADC alert aprons A and B	550 390 600± 550±	75 75 100 300				10	Portland cement concrete	720	6 32	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Fair Very good Good
A3B	SAC alert taxiway and apron	1000 610	75 100				18	Portland cement concrete	700	6	Gravelly sand (SP) Silty gravelly sand (SP-SM)	400	Silty sand (SM)		Excellent
A4B	SAC alert stubs and connecting taxiway	Varies 300	Varies 75				18	Portland cement concrete	660	6 24	Gravelly sand (SP) Silty gravelly sand (SP-SM)	400	Silty sand (SM)		Excellent
A5B	ADC operational apron and taxiway V	Varies 600	Varies 75				10	Portland cement concrete	700	8 12	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SP-SM)		Good
A6B	Apron access taxiway and operational apron G	1300± Varies	75 Varies	5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	9 9	Gravelly sand (SP) Silty gravelly sand (SP-SM)	CBR= 40 CBR= 30 K=250	Silty sand (SM)	CBR= 15	Fair
A7B	Operational apron F	Varies	Varies	5	Asphaltic concrete		6	Portland cement concrete	750 CBR=100	18	Silty gravelly sand (SP-SM)	CBR= 30 K=250	Silty sand (SM)	CBR= 15	Fair
A8B	Base and transient operational apron B	1637	75				8	Reinforced portland cement concrete $h_E = 9$	750	6	Soil cement	400	Silty sand (SP-SM)		Excellent
A9B	Base and transient operational apron B	Varies	175				9	Reinforced portland cement concrete $h_E = 10.8$	750	6	Gravelly sand (SP)	250	Silty sand (SP-SM)		Excellent
A10B	Operational apron B Maintenance apron C	2092 Varies	312 Varies	11	Portland cement concrete (h_E^* + 13.2 for evaluation)	720	6	Reinforced portland cement concrete		6	Gravelly sand (SP)	250	Silty sand (SM)		Excellent
A11B	Maintenance apron C extension	800	50				15	Portland cement concrete	660	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
A12B	Hangar aprons A1 and A2	Varies	400				15	Portland cement concrete	660	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Excellent
A13B	JAC operational apron	Varies	Varies				14	Portland cement concrete	780	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	400	Silty sand (SM)		Very good
* Equivalent thickness.															

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Table 2 (Continued)

SUMMARY OF PHYSICAL PROPERTY DATA

FACILITY				OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
Westover AFB, Mass.															
FACILITY NUMBER AND IDENTIFICATION		LENGTH FT	WIDTH FT	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
A14B	Hangar stubs 1-30	(19)215 (11)300	75 Varies				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Fair to excellent
A15B	Stubs 1 and 2 widening	Varies	215				15	Portland cement concrete	700	6 27	Gravelly sand (SP) M-F sand (SP)	350	Silty sand (SM)		Excellent
A16B	Hangar access aprons 32, 34, 36, and 38	Varies	Varies	12	Portland cement concrete (h_e^* = 14.4 for evaluation)	720	6	Reinforced portland cement concrete		18	Silty gravelly sand (SP-SM)	250	Silty sand (SM)		Good to excellent
A17B	Hangar access aprons 32, 34, 36, and 38 widening	Varies	Varies				15	Portland cement concrete	720	8 25	Gravelly sand (SP) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Good to excellent
A18B	Warm-up apron D	Varies	Varies	5	Asphaltic concrete		6	Portland cement concrete	600	18	Silty gravelly sand (SP-SM)	CBR=30 K=250	Silty sand (SM)	CBR=20	Fair
A19C	Calibration hardstand (275-ft diameter) and taxiway	467	75				15	Portland cement concrete	660	8 25	Gravelly sand (SF) Silty gravelly sand (SP-SM)	350	Silty sand (SM)		Very good
R12X	Blast pad, SW (05) end	150	300				2	Asphaltic concrete		6	Graded crushed stone	100	Silty gravelly sand (SP-SM)	35	
R13X	Blast pad, NE (23) end	150	300				2	Asphaltic concrete		6	Graded crushed stone	100	Silty gravelly sand (SP-SM)	35	
R14X	Overrun, SW (05) end	850	300					Double bituminous surface treatment		6	Graded crushed stone	100	Silty gravelly sand (SP-SM)	35	
R15X	Overrun, NE (23) end	850	300					Double bituminous surface treatment		6	Graded crushed stone	100	Silty gravelly sand (SP-SM)	35	

* Equivalent thickness.

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MAR 1958

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Table 3

DATE: August 1972

SUMMARY OF DATA - RIGID PAVEMENT CONDITION SURVEY

AIRFIELD: Westover AFB, Chicopee, Mass.

FEATURE NO.	FEATURE DESIGNATION	SLAB SIZE FT	APPROX NO. OF SLABS	PAVE. THICK. IN.	NO. OF SLABS CONTAINING INDICATED DEFECTS																	% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
					I	—	\	Δ	*	K	~	S	J	↓	J	⊕	M	P	O	C	D			
R1A	NE-SW runway SW end 1st 500 ft	25 by 25	240	15	2	5					1									4		96.3	97.8	Excellent
R2B	NE-SW runway SW end 2nd 500 ft	25 by 25	240	15	1	1					7									7		93.3	99.2	Excellent
R4B	NE-SW runway NE end 2nd 500 ft	25 by 25	240	15		3														2		97.9	98.8	Excellent
R5A	NE-SW runway NE end 1st 500 ft	25 by 25	240	15		1	1				3									5		95.8	99.2	Excellent
T1A	North connecting taxiway	25 by 25	120	15	41	6	1				8									2		57.5	60.0	Fair
T11A A12B	Hangar apron A2 and taxiway Z	25 by 25	277	15		2	4	1	1		7		4	2	6					3		92.2	97.2	Excellent
A1B T1A	S warm-up apron & S connecting taxiway	25 by 25	635	15	27	19	6	2	1		9			4	6					11		88.0	91.7	Excellent
A1B	North warm-up apron	25 by 25	232	15	49	3	1	1			12									7		70.6	77.0	Good
A2B	ADC alert taxiway U	25 by 25	161	10	46	10	1	1			4		1	1	2					2		62.2	65.3	Fair
A2B	ADC alert aprons A and B	25 by 25	248	10	22	22	9		1		17		7	2	8					13		66.6	79.9	Good

REMARKS:

LEGEND:

I	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	M	MAP CRACKING
—	TRANSVERSE CRACK	S	SCALING	P	PUMPING JOINT
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	O	POP-OUT
Δ	CORNER BREAK	↓	SPALL ON LONGITUDINAL JOINT	C	UNCONTROLLED CONTRACTION CRACK
*	SHATTERED SLAB	J	CORNER SPALL	D	"D" CRACKING
K	KEYED JOINT FAILURE	⊕	SETTLEMENT		

WES FORM NO. 2004
JUN 1972

(1 of 5 sheets)

Table 3 (Continued)

DATE: August 1972

SUMMARY OF DATA - RIGID PAVEMENT CONDITION SURVEY

AIRFIELD: Westover AFB, Chicopee, Mass.

FEATURE NO.	FEATURE DESIGNATION	SLAB SIZE FT	APPROX NO. OF SLABS	PAVE. THICK. IN.	NO. OF SLABS CONTAINING INDICATED DEFECTS																	% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
					I	—	\	Δ	*	K	~	S	J	↓	J	⊕	M	P	O	C	D			
A2B	Taxiway T	25 by 25	96	10	9	3	2						2	1								83.4	86.6	Very good
A3B A4B	SAC alert facility	25 by 25	856	18	1	1							1									99.8	99.9	Excel-lent
A8B A9B	Base and tran-sient operational apron B	25 by 12-1/2	2112	8 and 9 reinf	7	160	37	3	6		76		4	6	15					2		87.6	90.8	Excel-lent
A10B	Operational apron B	25 by 12-1/2	5001	11/6 reinf	24	36	14	8			9	1	79	38	48					233		91.1	98.6	Excel-lent
A10B A11B	Maintenance apron C & extension	15 by 12-1/2	840	11/6 reinf & 15	27	15	19	6			2			4	4					13		89.8	92.2	Excel-lent
A12B	Hangar apron A1	25 by 25	336	15	4	6					2		8	7	3					3		91.8	97.2	Excel-lent
A13B	SAC operational apron	25 by 25 variable	2198	14	343	10	6				70	1	24	9	11				3	32		78.8	84.0	Very good
A14B A15B	Stub 1 Stub 1 widening	25 by 25	96	15		2	2				1		1	1	1					1		93.8	96.9	Excel-lent
A14B A15B	Stub 2 Stub 2 widening	25 by 25	98	15	1	1	1				1				1							95.9	97.1	Excel-lent
A14B	Stub 3	25 by 25	39	15		2					2			3	2							82.0	95.0	Excel-lent

REMARKS:

LEGEND:

I	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	M	MAP CRACKING
—	TRANSVERSE CRACK	S	SCALING	P	PUMPING JOINT
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	O	POP-OUT
Δ	CORNER BREAK	↓	SPALL ON LONGITUDINAL JOINT	C	UNCONTROLLED CONTRACTION CRACK
*	SHATTERED SLAB	J	CORNER SPALL	D	"D" CRACKING
K	KEYED JOINT FAILURE	⊕	SETTLEMENT		

WES FORM NO. 2004
JUN 1972

(2 of 5 sheets)

Table 3 (Continued)

DATE: August 1972

SUMMARY OF DATA - RIGID PAVEMENT CONDITION SURVEY

AIRFIELD: Westover AFB, Chicopee, Mass.

FEATURE NO.	FEATURE DESIGNATION	SLAB SIZE FT	APPROX NO. OF SLABS	PAVE. THICK. IN.	NO. OF SLABS CONTAINING INDICATED DEFECTS																	% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
					I	—	\	Δ	✳	K	~	S	J	↲	J	⊕	M	P	O	C	D			
A14B	Stub 4	25 by 25	39	15	7	1					4			3	1							71.9	79.6	Good
A14B	Stub 5	25 by 25	72	15	1	2	4	1			1		4		3					2		82.1	90.3	Excel-lent
A14B	Stub 6	25 by 25	72	15		6	8						1		2					1		79.2	82.2	Very good
A14B	Stub 7	25 by 25	72	15		6	2				1				1					1		86.2	88.9	Very good
A14B	Stub 8	25 by 25	96	15	1	8	15				3		2	2	2					3		75.1	79.2	Good
A14B	Stub 9	25 by 25	72	15			6				3		1									90.3	93.1	Excel-lent
A14B	Stub 10	25 by 25	96	15		1	10	1			1		3							2		85.4	90.6	Excel-lent
A14B	Stub 11	25 by 25	39	15	3	3	2				4		2	1								77.0	84.7	Very good
A14B	Stub 12	25 by 25	96	15		3	3				4		4	1	2							86.5	93.8	Excel-lent
A14B	Stub 13	25 by 25	33	15	1	3		5			5		3		4							60.6	81.8	Very good

REMARKS:

LEGEND:

I	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	M	MAP CRACKING
—	TRANSVERSE CRACK	S	SCALING	P	PUMPING JOINT
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	O	POP-OUT
Δ	CORNER BREAK	↲	SPALL ON LONGITUDINAL JOINT	C	UNCONTROLLED CONTRACTION CRACK
✳	SHATTERED SLAB	J	CORNER SPALL	D	"D" CRACKING
K	KEYED JOINT FAILURE	⊕	SETTLEMENT		

WES FORM NO. 2004
JUN 1972

(3 of 5 sheets)

Table 3 (Continued)

DATE: August 1972

SUMMARY OF DATA - RIGID PAVEMENT CONDITION SURVEY

AIRFIELD: Westover AFB, Chicopee, Mass.

FEATURE NO.	FEATURE DESIGNATION	SLAB SIZE FT	APPROX NO. OF SLABS	PAVE. THICK. IN.	NO. OF SLABS CONTAINING INDICATED DEFECTS																	% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
					I	—	\	Δ	*	K	~	S	J	↓	J	⊕	M	P	O	C	D			
A14B	Stub 15	25 by 25	33	15	3	3		1			4			4	2							63.7	78.8	Good
A14B	Stub 16	25 by 25	96	15	1	9	7				2		4	1	4					2		77.2	84.4	Very good
A14B	Stub 17	25 by 25	39	15	3	2		1			3		1									77.0	84.8	Very good
A14B	Stub 18	25 by 25	39	15	1		1				3		1	1	2							89.8	94.9	Excel-lent
A14B	Stub 19	25 by 25	35	15	6	4	2				7		1	2	2							60.0	68.8	Fair
A14B	Stub 20	25 by 25	33	15	3	2					1		4		3				1			72.8	84.9	Very good
A14B	Stub 21	25 by 25	96	15			4				4											91.6	95.8	Excel-lent
A14B	Stub 22	25 by 25	44	15	5						4		2		3							77.4	88.8	Very good
A14B	Stub 23	25 by 25	96	15		1		1						1	1							95.9	97.9	Excel-lent
A14B	Stub 24	25 by 25	41	15	6		1				3	1		1								75.7	83.0	Very good

REMARKS:

LEGEND:

I	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	M	MAP CRACKING
—	TRANSVERSE CRACK	S	SCALING	P	PUMPING JOINT
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	O	POP-OUT
Δ	CORNER BREAK	↓	SPALL ON LONGITUDINAL JOINT	C	UNCONTROLLED CONTRACTION CRACK
*	SHATTERED SLAB	J	CORNER SPALL	D	"D" CRACKING
K	KEYED JOINT FAILURE	⊕	SETTLEMENT		

WES FORM NO. 2004
JUN 1972

(4 of 5 sheets)

Table 3 (Continued)

DATE: August 1972

SUMMARY OF DATA - RIGID PAVEMENT CONDITION SURVEY

AIRFIELD: Westover AFB, Chicopee, Mass.

FEATURE NO.	FEATURE DESIGNATION	SLAB SIZE FT	APPROX NO. OF SLABS	PAVE. THICK. IN.	NO. OF SLABS CONTAINING INDICATED DEFECTS																	% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
					I	—	\	Δ	✳	K	~	S	J	↓	J	⊕	M	P	O	C	D			
A14B	Stub 25	25 by 25	38	15	4				1		1			5	1							79.1	86.8	Very good
A14B	Stub 26	25 by 25	41	15	3	1	1		1		1			2								80.6	85.4	Very good
A14B	Stub 27	25 by 25	35	15	3	1					2											85.8	88.7	Very good
A14B	Stub 28	25 by 25	35	15	1	2					1	1			3					1		77.2	91.4	Excel-lent
A14B	Stub 29	25 by 25	35	15	5		1		1		3											74.3	80.0	Good
A14B	Stub 30	25 by 25	35	15	1	2					3				2							88.6	91.4	Excel-lent
A16B A17B	Stub 32 & widening	25 by 25	60	12/6 15		9	3				2		1									76.7	80.0	Good
A16B A17B	Stub 36 & widening	25 by 25	62	12/6 15		3																95.3	95.3	Excel-lent
A16B A17B	Stub 38 & widening	25 by 25	61	12/6 15									1									98.3	100	Excel-lent
A19C	Calibration hardstand & twy	25 by 25	213	15	17	3	1				4											87.1	89.0	Very good

REMARKS:

LEGEND:

I	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	M	MAP CRACKING
—	TRANSVERSE CRACK	S	SCALING	P	PUMPING JOINT
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	O	POP-OUT
Δ	CORNER BREAK	↓	SPALL ON LONGITUDINAL JOINT	C	UNCONTROLLED CONTRACTION CRACK
✳	SHATTERED SLAB	J	CORNER SPALL	D	"D" CRACKING
K	KEYED JOINT FAILURE	⊕	SETTLEMENT		

WES FORM NO. 2004
JUN 1972

(5 of 5 sheets)

Table 4

SUMMARY OF PAVEMENT EVALUATION

NAME OF AIRFIELD: Westover AFB DATE OF EVALUATION MONTH: August YR: 1972			LOAD-CARRYING CAPACITY IN LB OF GROSS PLANE LOAD FOR INDICATED LANDING GEAR TYPES AND CONFIGURATIONS										
			TRICYCLE ARRANGEMENT									BICYCLE	REMARKS
FEATURE		PAVEMENT OPERATIONAL USE	SINGLE 100-PSI TIRE PRESSURE	SINGLE 100-SQ-IN. CONTACT AREA	SINGLE 241-SQ-IN. CONTACT AREA	TW 28-IN. C-C 226-SQ-IN. CONTACT AREA EACH TIRE	SINGLE TANDEM 60-IN. SPACING 400-SQ-IN. CONTACT AREA	TW 37-IN. C-C 267-SQ-IN. CONTACT AREA EACH TIRE	TW 44-IN. C-C 630-SQ-IN. CONTACT AREA EACH TIRE	TWIN TANDEM 33 IN. x 48 IN. 208-SQ-IN. CONTACT AREA EACH TIRE	C-5A GEAR CONFIGURATION	TWIN TWIN SPCG 37-62-37 267-SQ-IN. CONTACT AREA EACH TIRE	
NO.	DESIGNATION		1	2	3	4	5	6	7	8	9	10	
R1A R5A	NE-SW runway 1st 500 ft SW end 1st 500 ft NE end	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	250,000	330,000+	380,000+	800,000+	390,000	
R2B R4B	NE-SW runway 2nd 500 ft SW end 2nd 500 ft NE end	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	300,000	330,000+	380,000+	800,000+	420,000	
R3C T17C	NE-SW runway interior and taxiway N	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	330,000+	330,000+	380,000+	800,000+	540,000	
R6A R11A	NW-SE runway Sta 0+00 to 5+00 Sta 65+50 to 70+50	Capacity	65,000	50,000	85,000	100,000	155,000	115,000	165,000	220,000	620,000	(a)	
R7B	NW-SE runway Sta 5+00 to 10+00	Capacity	95,000	50,000	80,000	120,000	160,000	150,000	185,000	2[illegible]5,000	600,000	(a)	
R10B	Sta 61+25 to 65+50	Capacity	155,000	50,000	105,000	120,000	180,000	200,000	220,000	300,000	800,000	350,000	
R9C	NW-SE runway Sta 19+32 to 34+00	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	330,000+	330,000+	380,000+	800,000+	540,000	
R8C	NW-SE runway Sta 10+00 to 19+32 Sta 34+00 to 61+25	Capacity	95,000	70,000	135,000	145,000	200,000+	170,000	240,000	320,000	800,000+	245,000	
T1A	North and south connecting taxiways	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	250,000	330,000+	380,000+	800,000+	390,000	
T2A T5A T7A T16A T15A T10A	Taxiway G Sta 40+40 to 76+65 Taxiway S Taxiway H Taxiway N Taxiway L Taxiway Z Sta 0+50 to 4+35	Capacity	155,000+	85,000+	140,000	220,000+	220,000+	245,000	300,000	350,000	800,000+	390,000	

Note: + sign denotes allowable gross loading greater than maximum gross weight of any existing aircraft having indicated gear configuration.
(a) denotes allowable gross loading less than minimum gross weight of any existing aircraft having indicated gear configuration.
Pavements are adequately protected against frost action.

(1 of 3 sheets)

WES FORM NO. 999
JUNE 1972 EDITION OF AUG 1960 IS OBSOLETE.

Table 4 (Continued)

SUMMARY OF PAVEMENT EVALUATION

NAME OF AIRFIELD: Westover AFB DATE OF EVALUATION MONTH: August YR: 1972			LOAD-CARRYING CAPACITY IN LB OF GROSS PLANE LOAD FOR INDICATED LANDING GEAR TYPES AND CONFIGURATIONS										
			TRICYCLE ARRANGEMENT									BICYCLE	
FEATURE		PAVEMENT OPERATIONAL USE	SINGLE 100-PSI TIRE PRESSURE	SINGLE 100-SQ-IN. CONTACT AREA	SINGLE 241-SQ-IN. CONTACT AREA	TW 28-IN. C-C 226-SQ-IN. CONTACT AREA EACH TIRE	SINGLE TANDEM 60-IN. SPACING 400-SQ-IN. CONTACT AREA	TW 37-IN. C-C 267-SQ-IN. CONTACT AREA EACH TIRE	TW 44-IN. C-C 530-SQ-IN. CONTACT AREA EACH TIRE	TWIN TANDEM 33 IN. × 48 IN. 208-SQ-IN. CONTACT AREA EACH TIRE	C-5A GEAR CONFIGURATION	TWIN TWIN SPCG 37-62-37 267-SQ-IN. CONTACT AREA EACH TIRE	REMARKS
NO.	DESIGNATION		1	2	3	4	5	6	7	8	9	10	
T3A	Taxiway G Sta 35+20 to 40+40	Capacity	155,000+	85,000+	140,000	180,000	200,000+	235,000	300,000	330,000	800,000+	360,000	
T4A	Taxiway G Sta 0+50 to 35+20	Capacity	155,000+	85,000+	140,000	180,000	200,000+	250,000	300,000	360,000	800,000+	420,000	
T6B	Taxiway P	Capacity	145,000	55,000	115,000	140,000	200,000+	185,000	235,000	265,000	730,000	270,000	
T8A	Taxiway H Sta 21+15 to 25+00	Capacity	155,000+	85,000+	140,000	180,000	200,000+	250,000	300,000	350,000	800,000+	390,000	
T9A	Taxiway H Sta 25+00 to 39+80	Capacity	155,000+	85,000+	140,000	180,000	200,000+	250,000	300,000	360,000	800,000+	390,000	
T11A	Taxiway Z (through hangar apron A-2)	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	230,000	310,000	380,000+	800,000+	360,000	
T13C	Apron access taxiway	Capacity	155,000+	85,000+	150,000	220,000	200,000+	265,000	330,000+	370,000	800,000+	360,000	
T14A	Apron access taxiway Sta 35+00 to 55+00	Capacity	155,000+	85,000+	140,000	215,000	200,000+	220,000	280,000	300,000	800,000+	340,000	
A1B A14B A17B	North and south warm-up apron Hangar stubs 1-30 Hangar access aprons 32, 34, 36, 38 widening	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	300,000	330,000+	380,000+	800,000+	420,000	
A2B	ADC alert taxiway U, taxiway T, and ADC alert aprons A and B	Capacity	85,000	65,000	125,000	125,000	195,000	145,000	200,000	280,000	780,000	(a)	
A3B	SAC alert taxiway and apron	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	330,000+	330,000+	380,000+	800,000+	580,000	
A4B	SAC alert stubs and connecting taxiway	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	330,000+	330,000+	380,000+	800,000+	530,000	

WES FORM NO. 999 JUNE 1972 EDITION OF AUG 1960 IS OBSOLETE.

Table 4 (Continued)

SUMMARY OF PAVEMENT EVALUATION

NAME OF AIRFIELD: Westover AFB DATE OF EVALUATION MONTH: August YR: 1972			LOAD-CARRYING CAPACITY IN LB OF GROSS PLANE LOAD FOR INDICATED LANDING GEAR TYPES AND CONFIGURATIONS										
			TRICYCLE ARRANGEMENT									BICYCLE	
FEATURE		PAVEMENT OPERATIONAL USE	SINGLE 100-PSI TIRE PRESSURE	SINGLE 100-SQ-IN. CONTACT AREA	SINGLE 241-SQ-IN. CONTACT AREA	TW 28-IN. C-C 226-SQ-IN. CONTACT AREA EACH TIRE	SINGLE TANDEM 60-IN. SPACING 400-SQ-IN. CONTACT AREA	TW 37-IN. C-C 267-SQ-IN. CONTACT AREA EACH TIRE	TW 44-IN. C-C 630-SQ-IN. CONTACT AREA EACH TIRE	TWIN TANDEM 33 IN. × 48 IN 208-SQ-IN. CONTACT AREA EACH TIRE	C-5A GEAR CONFIGURATION	TWIN TWIN SPCG 37-62-37 267-SQ-IN. CONTACT AREA EACH TIRE	REMARKS
NO.	DESIGNATION		1	2	3	4	5	6	7	8	9	10	
A5B	ADC operation apron and taxiway V	Capacity	90,000	70,000	135,000	135,000	200,000+	160,000	220,000	310,000	800,000+	230,000	
A6B	Apron access taxiway and operational apron G	Capacity	155,000+	85,000+	145,000	215,000	200,000+	260,000	330,000+	360,000	800,000	330,000	
A7B A18B	Operation apron F Warm-up apron D	Capacity	155,000+	85,000+	110,000	155,000	200,000+	195,000	245,000	270,000	780,000	270,000	
A8B	Base and transient operational apron B	Capacity	90,000	70,000	135,000	135,000	200,000+	155,000	220,000	300,000	800,000+	(a)	
A9B	Base and transient operational apron B	Capacity	95,000	75,000	145,000	145,000	200,000+	165,000	225,000	320,000	800,000+	235,000	
A10B	Operational apron B and maintenance apron C	Capacity	130,000	85,000+	155,000+	190,000	200,000+	215,000	290,000	380,000+	800,000+	310,000	
A11B A12B	Maintenance apron C extension; and hangar aprons A1 and A2	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	275,000	330,000+	380,000+	800,000+	380,000	
A13B	SAC operational apron	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	320,000	330,000+	380,000+	800,000+	450,000	
A15B	Stubs 1 and 2 widening	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	290,000	330,000+	380,000+	800,000+	410,000	
A16B	Hangar access aprons 32, 34, 36, and 38	Capacity	150,000	85,000+	155,000+	210,000	200,000+	240,000	310,000	380,000+	800,000+	330,000	
A19C	Calibration hardstand and taxiway	Capacity	155,000+	85,000+	155,000+	220,000+	200,000+	330,000+	330,000+	380,000+	800,000+	510,000	

WES FORM NO. 999 JUNE 1972 EDITION OF AUG 1966 IS OBSOLETE.

(3 of 3 sheets)

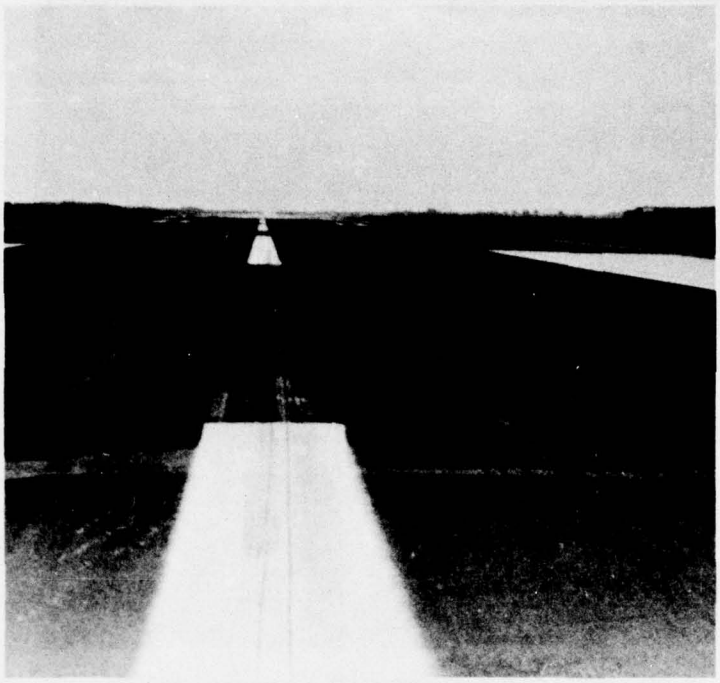


Photo 1. General view of NE-SW (05-23) runway looking southwest from NE end of AC pavement

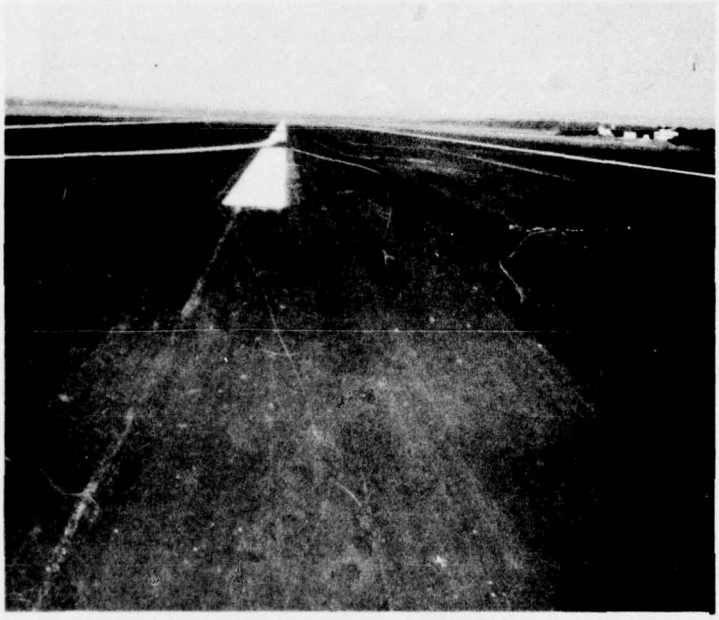


Photo 2. General view of NE-SW (05-23) runway looking northeast from taxiway N

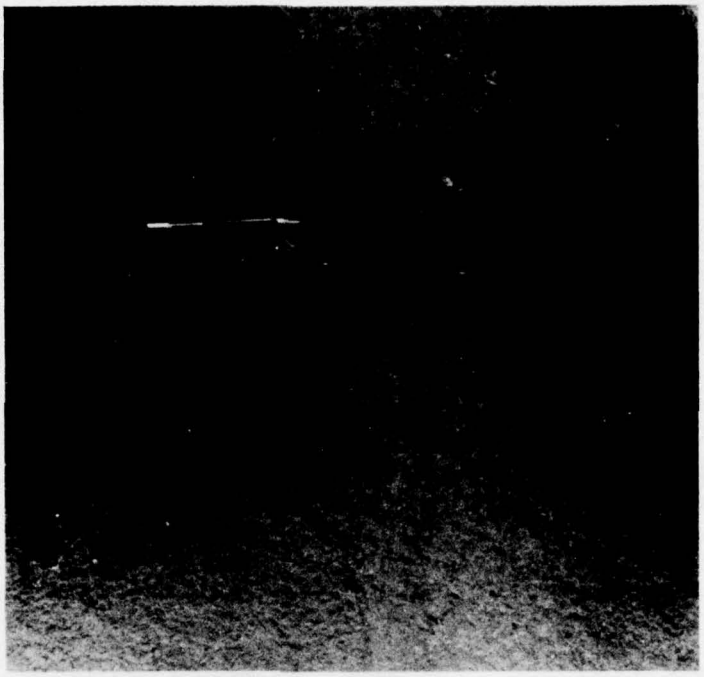


Photo 3. Closeup view of slurry seal on NE-SW (05-23) runway

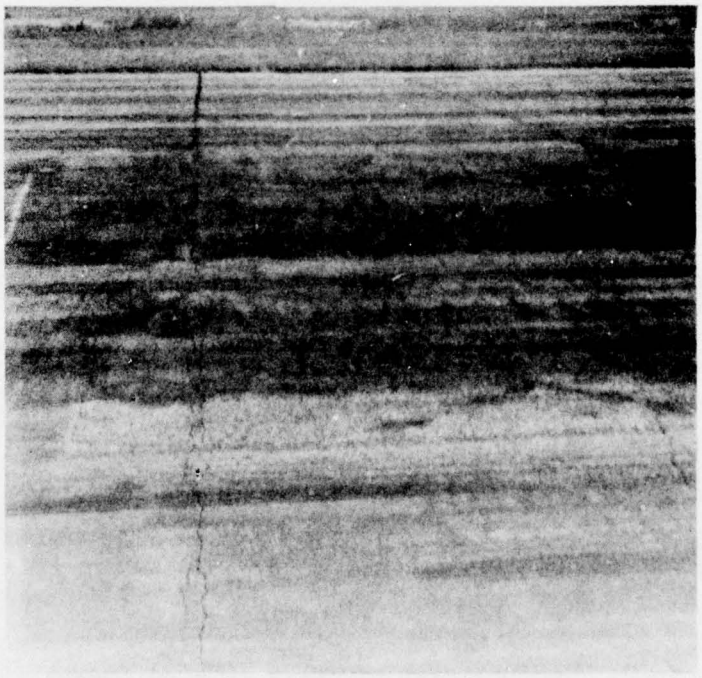


Photo 4. General view of NW-SE (15-33) runway northwest of taxiway G

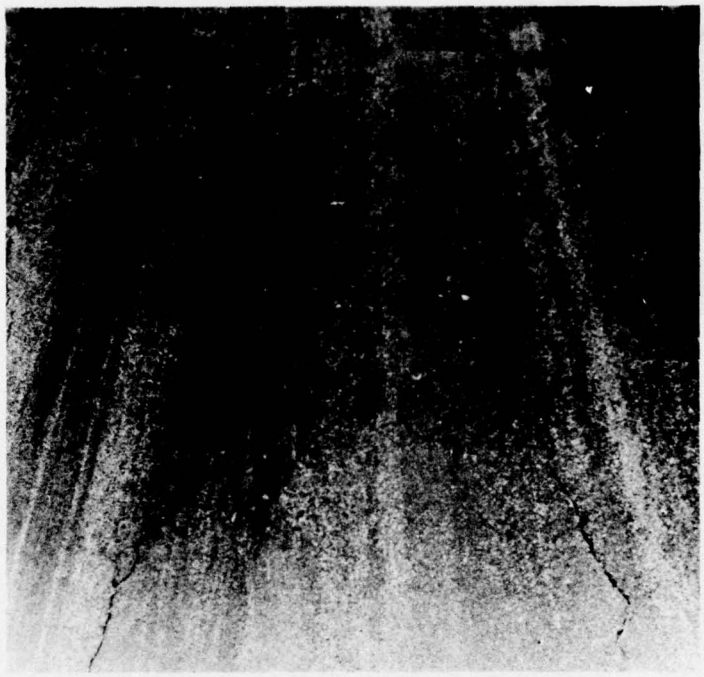


Photo 5. General view of NW-SE (15-33) runway looking southeast from NW end

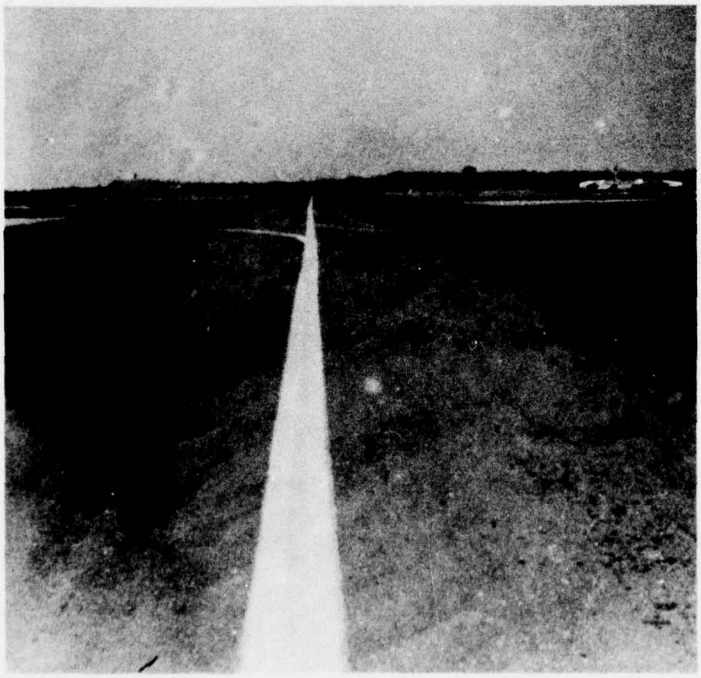


Photo 6. General view of taxiway S looking southwest from stub 9

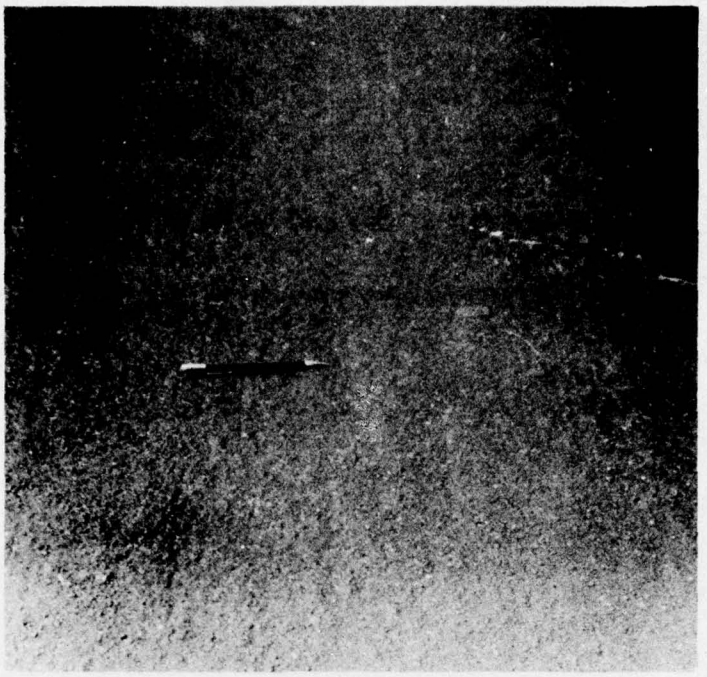


Photo 7. Closeup view of slurry seal on shoulder of taxiway S at parking stub 9

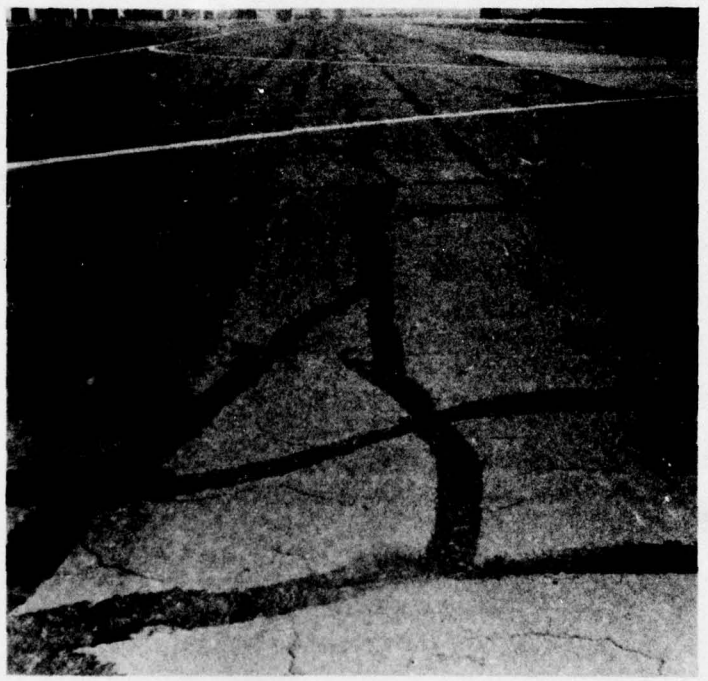


Photo 8. View of shoulder of taxiway S without slurry seal

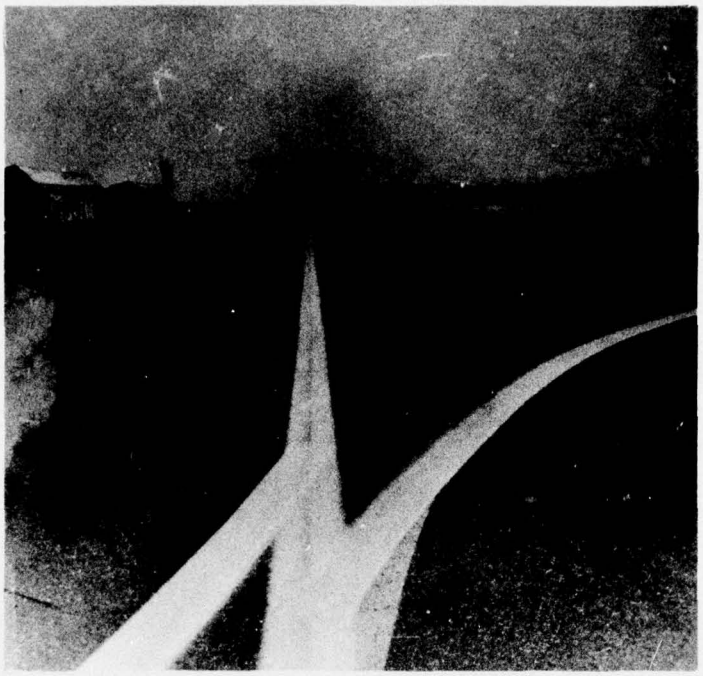


Photo 9. General view of taxiway G along SAC operational parking apron

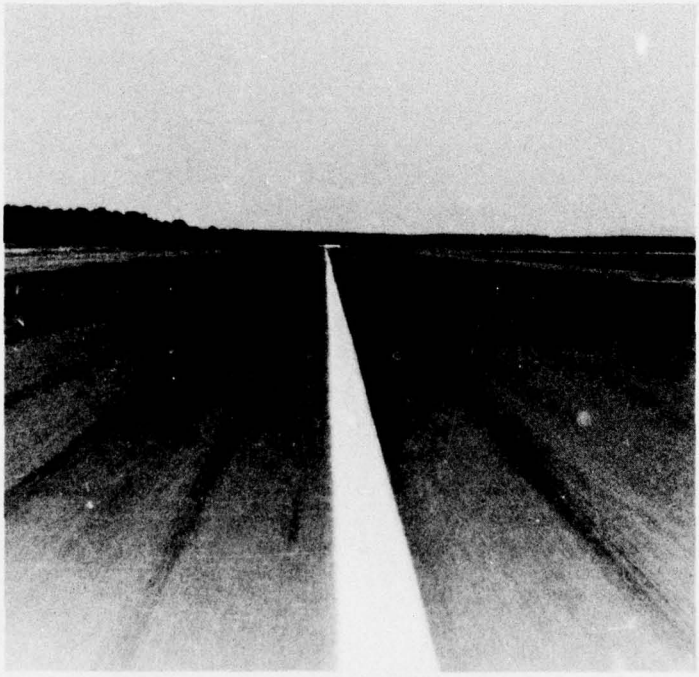
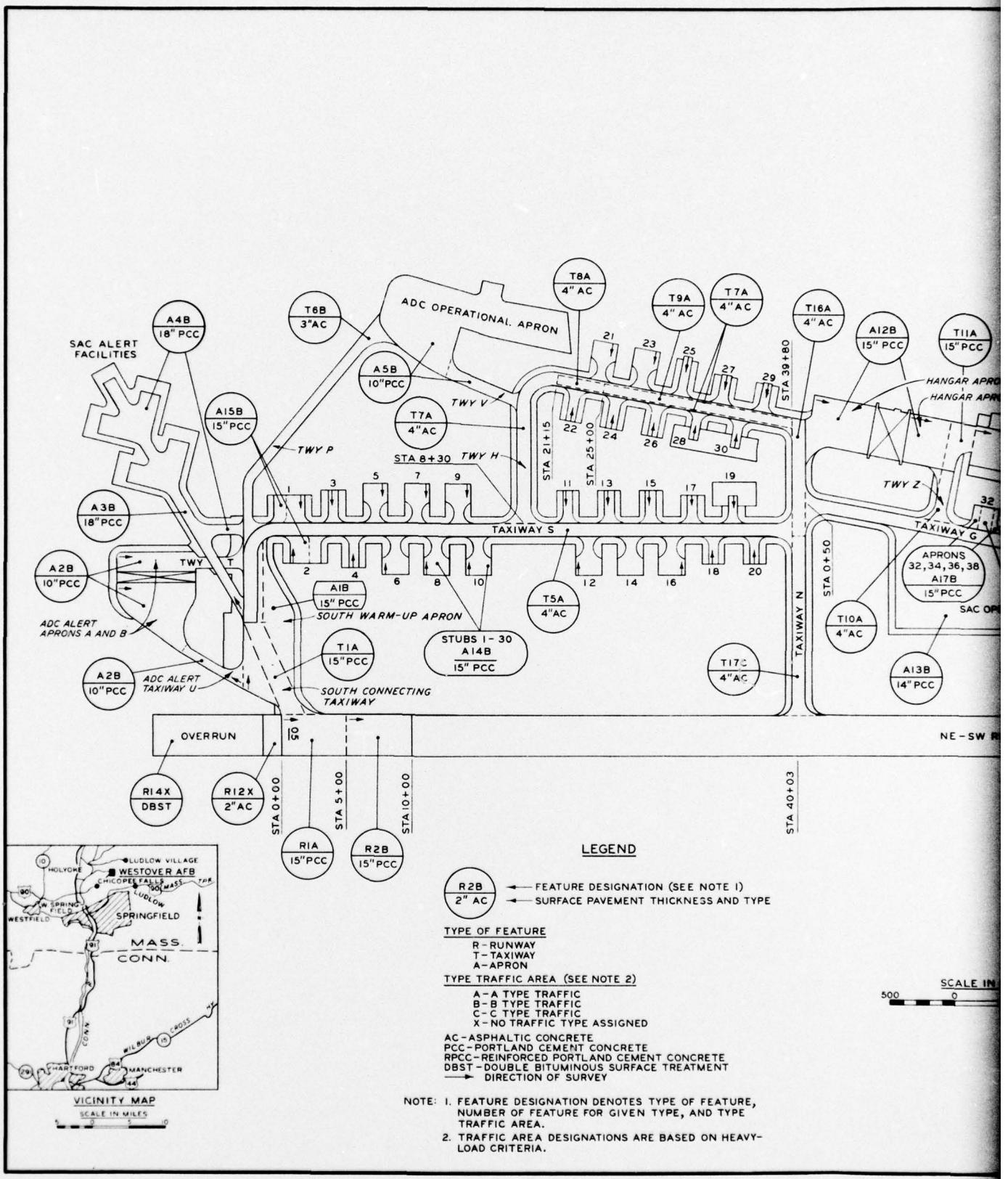
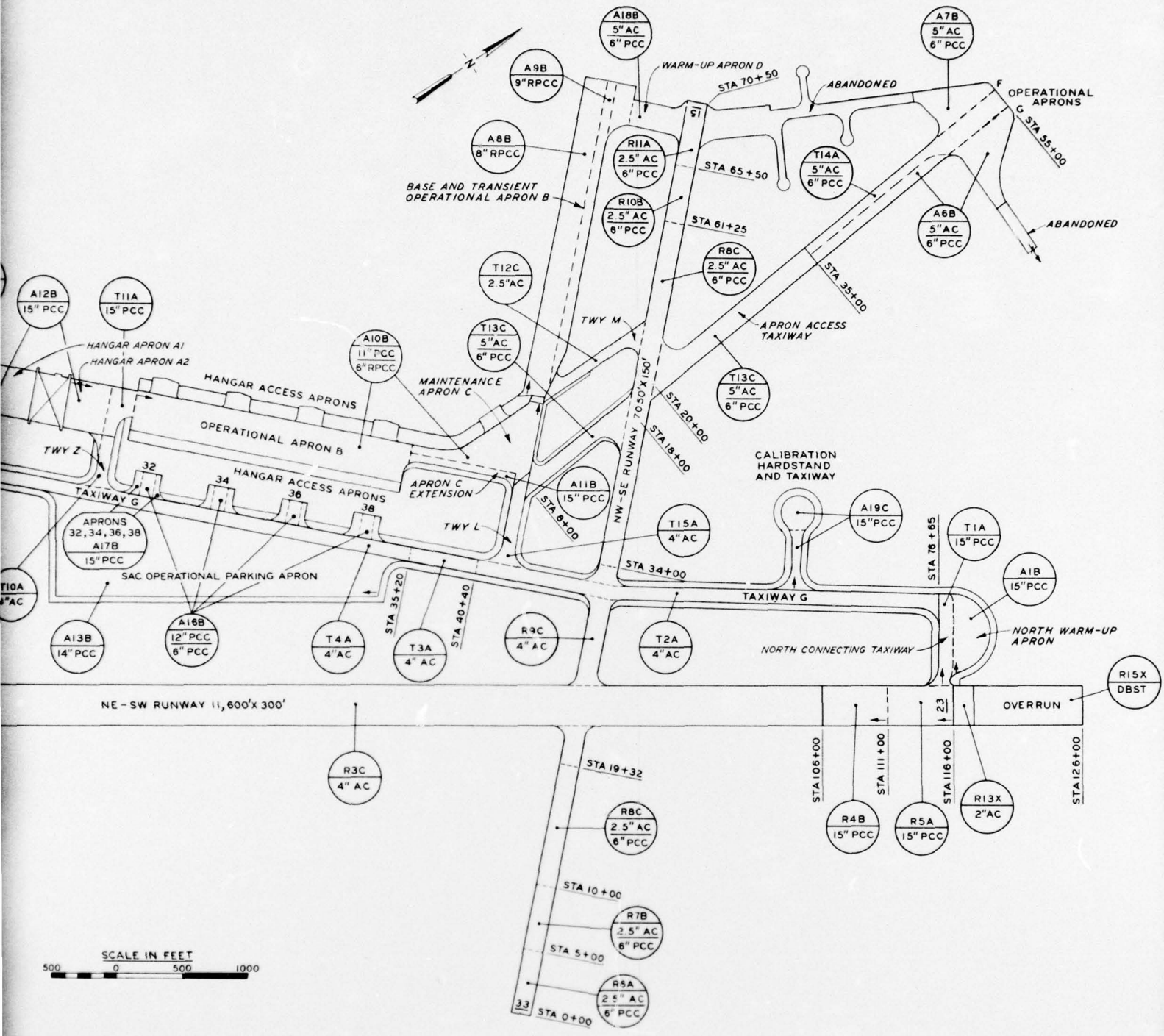


Photo 10. Typical view of NE end taxiway G opposite calibration hardstand

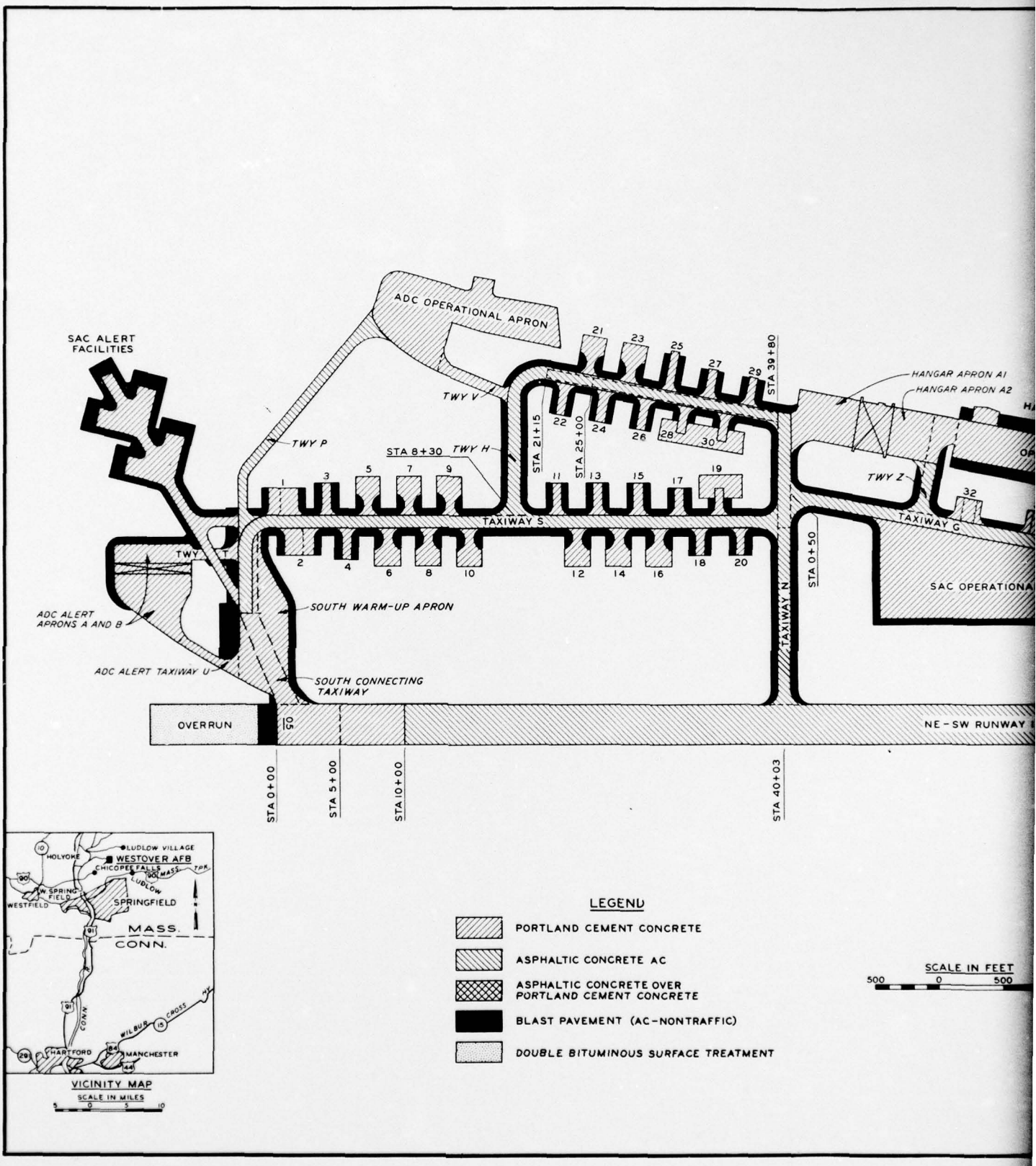

A4B 18" PCC
SAC ALERT FACILITIES
T6B 3"AC
ADC OPERATIONAL APRON
T8A 4" AC
T9A 4" AC
T7A 4" AC
T16A 4" AC
A12B 15" PCC
T11A 15" PCC
A5B 10"PCC
A15B 15"PCC
T7A 4"AC
TWY V
TWY P
STA 8+30
TWY H
STA 21+15
STA 25+00
STA 39+80
HANGAR APRO
HANGAR APR
TWY Z
A3B 18"PCC
TAXIWAY S
TAXIWAY G
A2B 10"PCC
TWY T
A1B 15" PCC
SOUTH WARM-UP APRON
T5A 4"AC
STA 0+50
APRONS 32,34,36,38 A17B 15"PCC
SAC OP
ADC ALERT APRONS A AND B
T10A 4"AC
STUBS 1-30 A14B 15" PCC
T17C 4"AC
TAXIWAY N
A2B 10"PCC
ADC ALERT TAXIWAY U
T1A 15"PCC
SOUTH CONNECTING TAXIWAY
A13B 14"PCC
OVERRUN
NE-SW R
R14X DBST
R12X 2"AC
STA 0+00
STA 5+00
STA 10+00
STA 40+03
R1A 15"PCC
R2B 15"PCC
LUDLOW VILLAGE
HOLYOKE
WESTOVER AFB
CHICOPEE FALLS
MASS TPK
W SPRING FIELD
LUDLOW
WESTFIELD
SPRINGFIELD
MASS.
CONN.
WILBUR CROSS
HARTFORD
MANCHESTER
VICINITY MAP
SCALE IN MILES
LEGEND
R2B 2" AC
FEATURE DESIGNATION (SEE NOTE 1)
SURFACE PAVEMENT THICKNESS AND TYPE
TYPE OF FEATURE
R - RUNWAY
T - TAXIWAY
A - APRON
TYPE TRAFFIC AREA (SEE NOTE 2)
A - A TYPE TRAFFIC
B - B TYPE TRAFFIC
C - C TYPE TRAFFIC
X - NO TRAFFIC TYPE ASSIGNED
AC - ASPHALTIC CONCRETE
PCC - PORTLAND CEMENT CONCRETE
RPCC - REINFORCED PORTLAND CEMENT CONCRETE
DBST - DOUBLE BITUMINOUS SURFACE TREATMENT
DIRECTION OF SURVEY
SCALE IN
500
0
NOTE: 1. FEATURE DESIGNATION DENOTES TYPE OF FEATURE, NUMBER OF FEATURE FOR GIVEN TYPE, AND TYPE TRAFFIC AREA.
2. TRAFFIC AREA DESIGNATIONS ARE BASED ON HEAVY-LOAD CRITERIA.

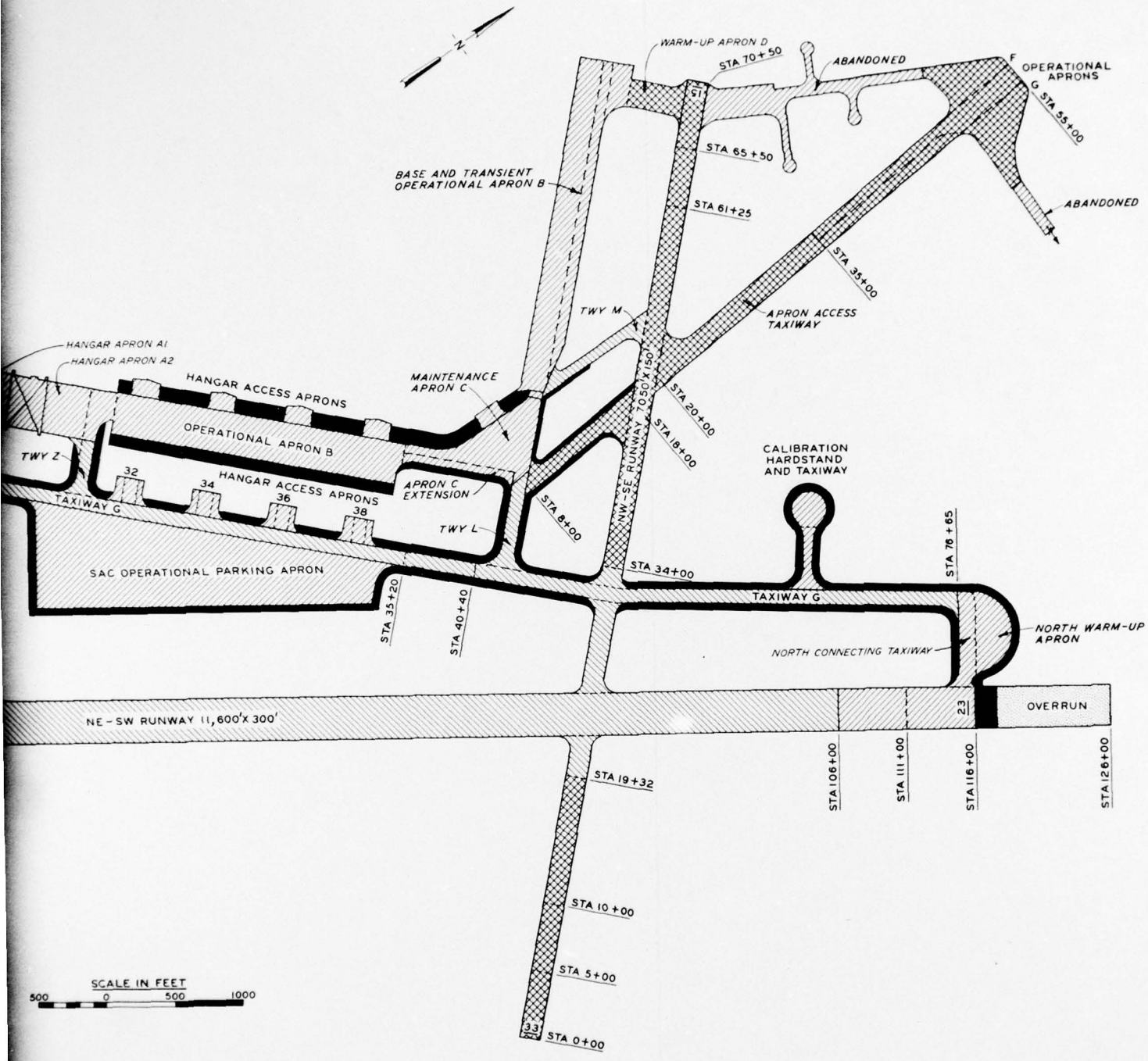


WESTOVER AFB

AIRFIELD LAYOUT

PLATE 1


ADC OPERATIONAL APRON
SAC ALERT FACILITIES
TWY V
TWY P
STA 8+30
TWY H
STA 21+15
STA 25+00
STA 39+80
HANGAR APRON A1
HANGAR APRON A2
TWY Z
TAXIWAY S
TAXIWAY G
TAXIWAY N
STA 0+50
SAC OPERATIONA
TWY T
ADC ALERT APRONS A AND B
ADC ALERT TAXIWAY U
SOUTH WARM-UP APRON
SOUTH CONNECTING TAXIWAY
OVERRUN
NE-SW RUNWAY
STA 0+00
STA 5+00
STA 10+00
STA 40+03
LUDLOW VILLAGE
WESTOVER AFB
CHICOPEE FALLS
HOLYOKE
LUDLOW
W. SPRING FIELD
WESTFIELD
SPRINGFIELD
MASS.
CONN.
WILBUR CROSS
HARTFORD
MANCHESTER
VICINITY MAP
SCALE IN MILES
LEGEND
PORTLAND CEMENT CONCRETE
ASPHALTIC CONCRETE AC
ASPHALTIC CONCRETE OVER PORTLAND CEMENT CONCRETE
BLAST PAVEMENT (AC-NONTRAFFIC)
DOUBLE BITUMINOUS SURFACE TREATMENT
SCALE IN FEET



WESTOVER AFB

PAVEMENT PLAN

PLATE 2

Appendix A

WAFB Annual Pavement Maintenance Plan

No.	Description	Length ft	Width ft	Area sy	Pavement Type	Yr Constructed	Exist Condition	Inspection RQRTS	Maintenance & Repair History	Present or Proposed Maintenance and Repair
NE-SW RUNWAY, PRIM INST										
1	10+00 to 106+00 4" Bit. Conc	9600	300	320,000	Flexible-medium	1954-55	Satis	Weekly-P&G Mthly-E&C	Sealed cracks 1966-WST 81-6 Overlay ctr-80' 1963 Cracks sealed 1969-WST 23-9 1971-WST 32-1, Slurry sealed 1972-WST 81-2	
2	0+00 to 10+00 15" PCC	1000	300	33,300	Rigid-medium	1954-55	Satis	Weekly-P&G Mthly-E&C	Seal joints, cracks, repair spalls FY72, WST 32-1	
	106+00 to 116+00	1000	300	33,300	Rigid-medium	1954-55	Satis	Weekly-P&G Mthly-E&C	Seal joints, cracks, repair spalls FY72, WST 32-1	
3	Blast pads (2) 2" Bit. Conc 6" stone									
4	Overruns (2) DST, 6" Stone	1000	300	33,333	Flexible-medium	1956	Satis	Weekly-P&G Mthly-E&C	Slurry sealed, 1969 WST 31-9	Slurry seal, FY73, WST 33-2
NW-SE RUNWAY										
5	0+00 to 19+32 4" Bit. Conc 6" PCC	1932	150	32,200	Rigid-light W/non-rigid overlay	1941-42	Satis	Weekly-P&G Mthly-E&C		Slurry seal, FY73, WST 28-1
	34+00 to 70+50 4" Bit. Conc 6" PCC	3650	150	60,800	Rigid-light W/non-rigid overlay	1941-42	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
6	19+32 to 34+00 4" Bit. Conc	1468	150	24,500	Flexible-medium	1954-56	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
7	Taxiway apron K 2-1/2" Bit. Conc 6" lean concrete	Irregular		8,000	Rigid-light W/non-rigid overlay	1942	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
8	Taxiway apron J 2-1/2" Bit. Conc 6" lean concrete	Irregular		8,000	Rigid-light W/non-rigid overlay	1942	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
9	Taxiway apron D (T/W Y) 2" Bit. conc 6" PCC 18" Sand base	550	200	8,900	Rigid-light W/non-rigid overlay	1942	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
10	Taxiway apron E 2" Bit. Conc 6" PCC 18" Sand base	400	200	8,900	Rigid-light W/non-rigid overlay	1942	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
11	Runway 19 Operational apron F, G, 5" Bit. Conc 6" PCC, 9" SP, 9" SP-SM	Irregular		8,000	Flexible-medium	1941 1957	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
12	Runway 19 Operational apron 5" Bit. Conc 6" PCC, 9" SP, 9" SP-SM	2000	75	16,667	Flexible-medium	1941 1957	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
13	Runway 19 Operational taxiway 5" Bit. Conc 6" PCC, 9" SP, 9" SP-SM	4500	75-150	52,800	Flexible-medium	1941 1957	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1969	Slurry seal, FY73, WST 28-1
GAC ALERT FACILITIES										
14	Stubs 18" PCC, 6" SP 24" SP-SM	Varies	150	17,000	Rigid-heavy	1958	Satis	Weekly-P&G Mthly-E&C	Sealed cracks and joints, 1965 S, seal joints and cracks; Stubs 22, 24, 25, 26, 27, 28, 28, 30- FY72, WST 33-0	Seal joints and cracks, FY73, WST 33-2
15	Apron, Alert 18" PCC, 6" SP 24" SP-SM	610	125	8,500	Rigid-heavy	1958	Satis	Weekly-P&G Mthly-E&C	Sealed joints and cracks, 1965	Seal joints, FY73, WST 33-2
16	Taxiway A 18" PCC, 6" SP 24" SP-SM	1250 100 Irregular	75 100	11,550	Rigid-heavy	1958	Satis	Weekly-P&G Mthly-E&C	Sealed joints and cracks, 1965	Seal joints, FY73, WST 33-2
17	Blast pads and shoulders 2" Bit. Conc 6" Crushed Stone	Irregular		50,000	Flexible	1958	Satis	Weekly-P&G Mthly-E&C	Sealed cracks, 1965 Repair stubs 28 & 30 FY72, WST 33-0	Seal cracks, FY73, WST 33-2 pads
ADC ALERT FACILITIES										
18	Operational apron 10" PCC, 6" SP 32" SP-SM	Irregular		60,000	Rigid-light	1951	Satis	Weekly-P&G Bi-mthly-E&C	Sealed cracks and joints, 1965	Seal joints, FY73, WST 33-3
19	Taxiway V 10" PCC, 8" SP 12" SP-SM	Irregular		6,000	Rigid-light	1951	Satis	Weekly-P&G Bi-mthly-E&C	Sealed cracks and joints, 1965	Seal joints, FY73, WST 33-3
20	Taxiway P 4" Bit. Conc, 6" Dry Bound Macadam 11", 10", 18" SP-SM	1970	75	16,400	Flexible-light	1954-55	Satis	Weekly-P&G Bi-mthly-E&C		Slurry seal, FY73, WST 28-1

No.	Description	Length ft	Width ft	Area sy	Pavement Type	Yr Constructed	Exist Condition	Inspection RQMTS	Maintenance & Repair History	Present or Proposed Maintenance and Repair
21	Shoulders for taxiways, stubs, aprons, 2" Bit. Conc, 6" SP, 4" SP-SM	Varies	50 37.5	20,500	Flexible	1954-55	Satis	Weekly-P&G Bi-mthly-E&C	Slurry seal, FY72, WST 33-0	
22	Aprons 10" PCC, 6" SP, 32" SP-SM	Irregular		24,400	Rigid-light	1954-55	Satis	Weekly-P&G Bi-mthly-E&C	Joints & cracks sealed 1965	Seal joints & cracks FY74, WST 33-4
23	Taxiway U 10" PCC, 6" SP, 32" SP-SM	550	75	500	Rigid-light	1954-55	Satis	Weekly-P&G Bi-mthly-E&C	Joints & cracks sealed 1965	Seal joints & cracks FY74, WST 33-4
24	North warm-up pad (Pad 23) 15" PCC, 8" Soil Cement 25" SP-SM	Irregular		24,700	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1963 Seal joints & cracks FY72. WST 32-1, Repair spalls	Replace 32 slabs PCC pavement FY74, WST 33-4
25	South warm-up pad (Pad 5) 15" PCC, 8" Soil cement 25" SP-SM	Irregular		40,600	Rigid-medium	1955-56	Satis	Weekly P&G Mthly-E&C	Joints & cracks sealed 1963 Seal joints & cracks FY72. WST 32-1, Repair spalls. Slurry seal shoulders FY72 WST 33-0	
26	Parking stubs (28) 15" PCC 25" SP	Irregular		82,000	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1965 Sealed joints, stubs 22, 23, 25, 27, 28, 29, 30. FY72. WST 33-0	Seal joints & cracks FY73, WST 33-3
26A	Parking stubs 1, 2 15" PCC 6" SP, 27" SP-SM	Irregular		9,600	Rigid-heavy	1958	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1965	Seal joints & cracks FY73, WST 33-3
27	SAC operational parking apron (East Ramp) 14" PCC, 8" SP, 26" SP-SM	Irregular		150,000	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1963	Seal joints & cracks FY73, WST 33-3
28	Operational apron B (South Ramp) (Hangar Apron) 11" PCC, 6" PCC, 25" SP-SM	2090	312	72,500	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1963 Seal cracks, bituminous area FY72, WST 33-0	Seal joints & cracks FY73, WST 33-2
29	Maintenance apron C (Apron T) 11" PCC, 6" PCC, 25" SP-SM	Irregular		33,400	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1963	Seal joints & cracks FY73, WST 33-3
30	Maintenance aprons A1 and A2, 15" PCC, 8" Soil Cement 25" SP-SM	Irregular	400	33,800	Rigid-heavy	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1965	Seal joints & cracks FY73, WST 33-3
31	Base & transient operational apron (North Ramp) 9" PCC, 6" SP	Irregular		74,400	Rigid-light	1944	Satis	Weekly-P&G Bi-mthly-E&C	Joints & cracks sealed 1969 WST 71-9	Seal joints & cracks FY74, WST 33-4
32	VIP ramp (Apron F) 9" PCC, 6" SP	Irregular		16,000	Flexible-light	1958	Satis	Weekly P&G Bi-mthly-E&C	Overlaid w/1" AC and tar sealed 1965	Tar slurry seal FY73, WST 29-2
33	Calibration Pad 15" PCC, 8" SP, 25" SP-SM	275 D		6,600	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1965	Seal joints & cracks FY73, WST 29-2
34	Taxiway G 0+50 to 40+40, 4" Bit. Conc, 3.5" Dry Bound Macadam 40+40 to 74+29 4" Bit. Conc, 6" Dry Bound Macadam 4" SP, 16", 18" SP-SM	7515	150	125,000	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Shoulders repaired & slurry sealed 1969, 34'x2500' keel replaced 1967. Replaced 34'x5000' keel in 1969 WST 71-9, Slurry sealed 2500', overlaid shoulders 1969, WST 71-9, Seal joints, cracks, slurry seal shoulders FY72, WST 33-0	
35	Taxiway S 4" Bit. Conc 6" Dry Bound Macadam 4" SP, 16", 18" SP-SM	4842	150	80,600	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	34'x2200' replaced in 1968 WST 22-9. Replaced 34'x2600' in 1969. WST 71-9, Seal cracks 2000', FY72, WST 33-0	
36	Taxiway H 08+30 to 21+15 4" Bit. Conc, 6" Dry Bound Macadam, 4" SP, 16", 18" SP-SM 21+15 to 25+00 4" Bit. Conc, 7" Dry Bound Macadam 6" Soil Cement 25+00 to 33+79 4" Bit. Conc, 5" Dry Bound Macadam 2-1/2" AC, 6" Soil Cement	3150	Varies	35,400	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Seal cracks FY72, WST 33-0	
37	Taxiway N 4" Bit. Conc 6" Dry Bound Macadam 4" SP, 16", 18" SP-SM	2283	100	25,400	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Slurry sealed 1965 Slurry Seal Shoulder FY72, WST 33-0	WST 33-0
38	Taxiway L 4" Bit. Conc, 6" Dry Bound Macadam 4" SP, 16", 18" SP-SM	653	100	7,300	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Cracks sealed 1966 Slurry Seal Shoulder FY72, WST 33-0	WST 33-0
39	Taxiway J (Taxiway M) 2.5" Bit. Conc 6" Soil Cement 18" SP-SM	800	75	6,700	Flexible-light	1943	Satis	Weekly-P&G Mthly-E&C	Cracks sealed 1966	Slurry seal FY73, WST 29-2

No.	Description	Length ft	Width ft	Area sy	Pavement Type	Yr Constructed	Exist Condition	Inspection RQRTS	Maintenance & Repair History	Present or Proposed Maintenance and Repair
40	Taxiway Z 4" Bit. Conc 6" Dry Bound Macadam 4" SF, 16", 18" SP-SM	385	Irreg	4,300	Flexible-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Slurry Seal FY72, WST 33-0	
40A	Taxiway Z 15" PCC, 8" SP 25" SP-SM	365	Irreg	5,000	Rigid-medium	1955-56	Satis	Weekly P&G Mthly-E&C	Slurry Seal FY72, WST 33-0	
41	Hangar access aprons 32 to 38 15" PCC, 25" SP	153	200	13,600	Rigid-medium	1955-56	Satis	Weekly-P&G Mthly-E&C	Joints & cracks sealed 1965	Seal joints, FY73, WST 33-3
42	Maintenance Areas adjacent to stubs 6" Bit. Conc 6" Dry Bound Macadam 5" SF-SM, 18" SF-SM	Irregular		25,000	Flexible-light	1955-56	Satis	Weekly-P&G Bi-mthly-E&C	Cracks sealed 1966	Seal cracks, FY73, WST 33-3
43	Taxiway F	1400	75	11,700	Flexible-light	1942	Satis	Weekly-P&G Bi-mthly-E&C		Abandoned-used as road
44	Taxiway D	2200	75	18,300	Flexible-light	1942	Satis	Weekly-P&G Bi-mthly-E&C	Repair Heaves in-service FY72	Abandoned as T/W Used as Convoy Route
45	Hangar access aprons 1, 3, 5, 7, 9 3" AC 8" Dry Bound Macadam 6" PCC, 18" SP-SM	125	200	13,900	Rigid	1941	Satis	Weekly-P&G Bi-mthly-E&C		Seal cracks, FY73, WST 29-2
46	Shoulders-South Ramp Transition Hangars 1, 3, 5, 7, 9 2" AC, 6" RPCC 18" SP-SM	2192 1910	80 90	38,500	Rigid-light	1956	Satis	Weekly-P&G Mthly-E&C		Slurry seal, FY73, WST 28-1
47	Taxiway W 3" AC, 6" Soil Cement	450	52 26	1,600	Flexible-light	1963	Satis	Weekly-P&G Bi-mthly-E&C		Slurry seal, FY73, WST 28-1