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SUBJECT - Non Capital Project Paper (PROP) -
Aeronautical Ground Services Improvement

REFERENCE -

DATE SENT
AID 7-28-69
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NON-CAPITAL PROJECT PAPER (PROP)

Country : Thailand Project No.: 493-11-370-103
Submission Date : July 14, 1969 Original
Project Title : Aeronautical Ground Services Improvement
U.S. Obligation Span : FY 1956 through 1971

Gross Life-of-project Financial Requirements:

U.S. Dollar Contribution	\$ 7,175,000
Cooperating Country Contribution (\$ equivalent)	41,934,000
Counterpart, Project Account	\$ 6,989,000
Counterpart, Trust Funds	912,000
Other RIG Budget Funds (that portion of the Department of Aviation budget which is project related for FY65-71)	34,033,000
Other Project Donor:	<u>None</u>
Total	\$49,109,000

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DRAFTED BY <i>W. Schaefer</i>	OFFICE CAAG	PHONE NO 862911	DATE 7/14/69	APPROVED BY: <i>A. H. Boehme</i> A. H. Boehme, AAD/P
AID AND OTHER CLEARANCES cc: AD/DD, AD/P, GD/CP, LA, AD/CD, AD/F, M/CR, CD/CP: <i>OMP</i> date <i>7/15</i> AD/P: <i>JNC</i> date <i>7/15</i> CAAG, SA/CI, AD/CD: <i>OIH</i> date <i>7/15</i> MACTHAL, UNCLASSIFIED SA/IC CLASSIFICATION				

I. SUMMARY.

This AGSI project was formally undertaken by AID in 1955, although some (mostly surplus) commodities had been made available as early as 1951. The project called for the FASA assistance of a U.S. Federal Aviation Administration team (a CAAG) to assist the Thai civil aviation authorities to develop the efficient, integrated system of ground facilities and services necessary to properly support current and anticipated domestic and international air commerce.

This project was one among several complementary projects started at approximately the same time. The related projects, which had varying degrees of CAAG involvement, dealt with airfield development, meteorological improvement, national air carrier improvement and development of an aviation repair facility.

These interrelated projects were completed by the early 60's as was the basic work of the AGSI project and the project was scheduled to phase out in FY-66. At that time, however, the escalation of political unrest in Southeast Asia, the probability that Thailand would be in a key supporting role, and the expected (and realized) increase in military air traffic (more than 70% of all IFR traffic serviced by the Bangkok Area Control Center during the past year was U.S. military) necessitated an extension of the project. New goals were identified (development of Thai flight check capability and radar air traffic control operation) and a new facility improvement program added. The expanded project was originally time-phased for five years, FY 1966-1970, but slippages on both sides have delayed the project, with the new date for completion set as early 1972, forward-funded in FY-1971.

The attached Table I on the next page shows project funding over the life of the project.

II. REVISIONS.

The basic condition which created the need for technical assistance in the field of civil aviation was the requirement for a safe, reliable and effective environment for the movement of air traffic within and through Thailand. In recognition of the major contribution which air operations can make to a country's economic and political well-being (tourism, commerce and defense) and Thailand's strategic geographic position, the RTG and the U.S. Mission formally agreed upon the establishment of the Aeronautical Ground Services Improvement Project (AGSI) in 1955.^{1/}

^{1/} Footnotes begin on page 16

Table I.

NONCAPITAL PROJECT FUNDING
SUMMARY
(Obligations expressed in \$1,000)

	U. S. Funding			BTC Funding			TOTALS
	PASA	Participants	Commo- dities	Proj. Acct. 1/	Trust Fund	Other BTC Budget Funds	
FY-1956-65	938	252	2,622	6,025	340	2/	10,177
FY-1966	3/	29	1,412	136	150	3,500	5,227
FY-1967	138	28	40	51	40	3,100	3,767
FY-1968	309	50	-	178	120	3,000	4,257
FY-1969	369	90	-	299	82	8,433	9,273
FY-1970	359	65	-	150	80	7,350	8,004
FY-1971	424 4/	50	-	150	80	7,700	8,404
TOTALS	2,537	564	4,074	6,989	912	34,033	49,109

- 1/ Thai Fiscal Year
2/ Figures prior to FY-65 not available
3/ FY-66 forward-funded in FY-1965
4/ Figures include 6 months forward-funding into FY-72

NONCAPITAL PROJECT FUNDING (COMMITMENTS IN \$000)

PROP DATE: 7/15/69
 Original
 Rev. No.
 Project No. 493-11-370-103

Table 1
 Page 1 of 2
 Country: Thailand

Project Title: Aero. Ground Services

Fiscal Years	Ap	L/G	Total	Personal Serv.			Participants		Commodities	Other Costs
				1/ AID	PASA	CONF	AGENCIES	CONF	DIR. U.S.	DIR. U.S.
Prior through Act. FY 69 ^{2/}	TC	G	6,277		1,554		449		4,074	
Oper. FY 70	TC	G	424		359		65			
Budg. FY 71	TC	G	474		424		50			
B + 1 FY _										
B + 2 FY _										
Total Life			7,175		2,537		564		4,074	

1/ Memorandum (nonadd) columns
 2/ FY 56-FY 69

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Fiscal Years	AID-controlled Local Currency		Other Cash Contribution Cooperating Country 3/	Other Donor Funds (\$ Equiv.)
	U. S. owned	Country- owned 2/		
Prior through 1/ Act. FY 69		7,441	18,983	NA
Oper. FY 70		230	7,350	
Budg. FY 71		230	7,700	
B + 1 FY__				
B + 2 FY__				
B + 3 FY__				
All Subs.				
Total Life		7,901	34,033	

1/ FY 1956-FY 1965

2/ Counterpart, approximately 50% sales proceeds from program assistance, the remainder direct RTG appropriations deposited to counterpart.

3/ FY 65-69 only. Figures for prior years not available.

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The purpose of the project, as stated then and still valid today, was to assist the Thai government in developing an efficient, integrated system of aeronautical ground services and facilities to support its domestic and international air transport operational requirements in the Bangkok Flight Information Region. The following major improvements were specified:

- (a) A system of improved airports, chosen to meet both economic and military considerations, including power and approach, runway and taxiway lighting and fire/crash rescue services as required to support airport operations.
- (b) Air/ground and point-to-point communications for each civil airport with scheduled air carrier operations, together with appropriate navigational aids and en-route communications to ensure safety in handling air traffic.
- (c) Training of personnel (locally and overseas) in all phases of civil aviation, with special emphasis in the fields of air traffic control, communications and specialized navigational equipment.

A Civil Aviation Assistance Group (CAAG) staffed by personnel of what is now the U.S. Federal Aviation Administration (FAA) plus, in the early years, a Weather Bureau specialist, was established to provide the technical advisory services required. In ensuing years their primary counterpart agency charged with the responsibility for civil aviation in the Thai Government has been the Department of Aviation (DOA) - and its predecessor agency in the Ministry of Communications.

The other civil aviation elements of the RTG complementing the DOA are the Directorate of Civil Aviation of the Royal Thai Air Force (RTAF) and the Aeronautical Radio of Thailand, Ltd. (Aero-Thai). Although air traffic services at all civil and combined civil/military airports remain under the jurisdiction of the DOA, authority has been delegated to the RTAF Directorate of Civil Aviation to exercise airport traffic control at Bangkok International Airport (Don Muang) and the military airports upcountry. Aero-Thai is a RTG-owned corporation under the control of the DOA which exercises area control and provides aeronautical international and enroute communications. 2/

The AGSI Project is broken into two phases. The original program, which covered the FY1956 - FY1965 period, was designed to provide an unsophisticated safe, reliable and effective environment for the movement of air traffic in Thailand. Initially, the AGSI was one among several aeronautical, or aeronautically related projects. There were the airport (Bangkok) and airfield (upcountry) improvement projects, 037 and 039, the Thai Airways improvement project, 038, and the Aviation Overhaul Base project, 106. There was in addition, the meteorological services improvement project, 104, where a meteorological specialist was assigned as part of the CAAG staffing.

Regarding the three objectives discussed above, the AGSI project provided the system of VOR facilities for the international airways requirements. These internationally accepted standard nav aids were installed at Bangkok (Don Muang), Chaiwat and Ubon. Non-directional radio beacons (NDBs) were installed for both domestic and international requirements at 13 civil airport locations and air/ground communications capability provided at the majority of the domestic airports. A system of teletype and voice communications was developed for the domestic transmission of flight data and meteorological information between all active Thai civil airports. Equipment, training and assistance was provided for international and area enroute communications. Also provided were airport improvements, such as towers or combined communication stations/towers at sixteen major domestic fields, the planning and supervision of taxiways and parking aprons at five domestic airfields, with runway, taxiway and parking apron construction at a sixth, Phuket. Main or emergency power plants had been installed at 23 facilities. Improvements were also made at Don Muang. An Instrument Landing System (ILS) and a high-intensity approach light system were installed, together with a new seven-story tower, and a 3 megawatt power plant and distribution system.

By 1965 a system of airfields suitable for daylight visual flight rules (VFR) operations had been developed together with the basic nav aids and communications necessary to support the type and level of flying then required in Thailand. To operate, maintain and administer these facilities and services, an extensive training program in Thailand, in third countries and in the U.S. was provided. A total of 80 participants had been trained in the U.S. by 1965, with 18 more having been sponsored by the project for training in neighboring third countries (Singapore and Taipei).

Although not formally emphasized in the original project a fourth objective, the reorganization of the Thai government civil aviation agencies to effectively accomplish and carry on the program was completed in 1963. The Thai Civil Aviation Administration was up-graded to Departmental status and Aero-Thai converted from an airline managed corporation into a corporate structure under the DOA.

In retrospect, the forecast growth of air traffic which provided the requirement for this project seems to have been justified. Thailand today is one of the world's major air-hubs (only 11 airports in the world exceed Bangkok in the number of scheduled carriers operating into the airport). The economy of Bangkok is heavily dependent upon air transport, both passenger and freight carrying. A total of 31 carriers, 30 of them international, already operate into Bangkok.

Scheduled carriers made approximately 45,000 international and 5,000 domestic operations through Don Muang in 1968. During the same year, over 100,000 unscheduled movements were flown by USAF and RTAF planes and by charters such as Air America, Continental and others.

Tourism is now Thailand's fifth largest money earner with the RTG devoting efforts which are expected will soon raise tourism's status to Thailand's third largest foreign currency earner. 80% of all visitors to the country arrive by air, this in spite of the fact that the adjoining countries of Laos, Burma and Malaysia sent, in 1968, 58,1% of their visitors, out of the 3-country total of 69,109, by land vehicle! Forecasts as to passenger growth are for a reduction from the present 15% growth rate to only 10%. This still translates to 2.9 million passengers to be handled through Don Muang in 1975 and 4.7 million by 1980, as compared with last year's 3.3 million.

Cargo traffic is also experiencing a phenomenal growth rate (currently 27% due to the Vietnam situation, with longer term estimates of a 15% growth rate).

This growth and its resultant air traffic, the new generations of giant and supersonic aircraft and the increased military requirement discussed above, demand that Thailand provide effective air traffic control measures to guarantee safe operating space for all air traffic within its borders. This simply stated, is what the AGSI project, with its navigation aids, communications, air traffic control training, etc., is designed to help Thailand to do.

The condition which created the requirement for an additional, post FY-65, phase was in recognition of the increased demands being placed on the Thai civil aviation structure as a result of the increased air traffic developed by the Vietnam conflict. In the interests of safety of both the tactical and commercial air users, the CAAG, which was to have phased out in FY-1966, was extended. It was determined that the requirement for improved services could most effectively be achieved by working with the civil Department of Aviation. This coordination would assure that the services required by U.S. aircraft in Thailand would be available in the shortest possible time and at the least overall expense. This approach also recognized that:

1. Only the existing civil air traffic control system can legally (and safely) provide ATC service for any and all aircraft (there is the one exception of the tactical aircraft being used as a weapon. This is - and should be - handled by a tactical control system).
2. The civil air traffic control system will continue to be required after hostilities cease. To develop a sophisticated and expensive parallel military (tactical) system should be contrary to sound planning and U.S. country objectives.

The immediate military requirement was thus logically wedded to AID objective of strengthening the country's own capabilities.

III. STRATEGY.

The end result of the Aeronautical Ground Services Improvement Project by 1965 was a system of airfields suitable for daylight operations, together with the basic nav aids and communications necessary to support the type and level of flying to be found in Thailand. The current, post FY 1965 phase of the project was agreed upon primarily because of expanded military requirements due to the increased tempo of the conflict in Vietnam.

Seventy percent of all air traffic handled in accordance with instrument flight rules (IFR)* by the civil air traffic services over the past year

* Instrument Flight Rules assure that aircraft flying in accordance with an air traffic control clearance are protected from other IFR traffic.

has been U.S. military. The U.S. thus has a direct interest in the safety of operations in the Thai airspace.

The need to handle the heavy military traffic and mix it safely into the expanding civil aviation traffic focused attention on the air traffic control services and capabilities of the Thai government. These capabilities are dependent upon both the availability of qualified personnel and essential facilities (consisting primarily of upgraded air navigation aids and certain communications capabilities). It was agreed that some of the facility needs should be met through USAID technical assistance funds, some by direct Thai budget funding and some through U.S. military assistance. Although the primary reason for an extension of the project after 1965 was the increase in military air traffic, it is standard U.S. policy to encourage the development of a strong civil aviation competence which can provide for most military needs, rather than see wasteful, duplicatory systems developed. There were also strong beliefs that U.S. advisory services to Thai civil aviation should be civilian in nature.

Because of the immediate requirement for the services and facilities being developed under the expanded ACSI Project, USOM undertook operational responsibility for two parts of the project concurrently with the training required to upgrade RTG capability. FAA civilian air traffic controllers were provided to directly control traffic while otherwise qualified Thai controllers are being trained in radar operations. An FAA flight check pilot, while training Thai counterparts, actually certified the reliability of Thai civil navigational aids during the interim period when the RTG first took over this responsibility from the U.S. Air Force.

Using the Regional Plan of the International Civil Aviation Organization (ICAO) as a base,* an up-dated facilities requirements plan was developed by Thai and U.S. civil and military agencies for the extended FY 66-70 project and agreement was reached on the funding of required equipment and facilities. This plan was

* International requirements for communication and navigational facilities are developed, country by country, in a Regional Plan which is worked out by the countries concerned and the users through the medium of the ICAO, a specialized U.N. agency. Additional requirements exist that are not recognized in the Regional Plan. These are usually domestic requirements or, in this case, requirements dictated by the large scale military involvement.

coordinated to take full advantage of military installations and to prevent duplication of civil/military capabilities wherever possible (for example, the standard international short distance navigational aid, the Very High Frequency Omnidirectional Radio Range or VOR, is being installed by three different programs in Thailand. These are the DQA project assisted by the USOM/CAAG program, the U.S. Air Force Advisory Group project for RTAF use, and the U.S. Air Force for its own tactical requirements).

The Thai government components concerned, the DQA and Aero-Thai, have cooperated fully in implementing this expanded program. There is a vigorous recruitment and training program for Aero-Thai controllers and technicians. The DQA has provided complete support to the project but has had more difficulty recruiting and retaining qualified personnel. This is due primarily to the generally lower level of pay for governmental personnel, with little ability to recognize by incentive pay technical skills or shortage category positions.

Interrelationships with other activities are shown below:

- a) The U.S. military/civil interrelationship has been discussed above. In addition, Bangkok is the headquarters for the South East Asia Regional Treaty Organization (SEATO). During 1962, in cooperation with SEATO, the CAAG, DQA and MAC/Thailand resources and technical know how were combined to design and plan the Bangkok segment of the SEATO Meteorological Telecommunications network which was later implemented by USOM/RTG with FAA/CAAG acting as USOM's project manager.
- b) The relationship of this project to the U.N. programs to up-grade and standardize civil aviation capabilities through the ICAO has also been discussed above. A continuing coordination program to assure minimal overlap of efforts with ICAO is facilitated as Bangkok is the headquarters for the South East Asia Regional Headquarters of ICAO. ICAO and the DQA established a Regional Civil Aviation Training Center in 1961 to enlarge and improve upon the already functioning DQA/CAAG training facility. Training was divided into two categories i.e. flight training at Hua Hin Airport and academic training in Bangkok. As customary, commodities and technical assistance were provided for five years by the United Nations Special Fund through the Technical Assistance

Division of ICAO. After five years the facility was transferred to the DOA which has continued this regional facility with its own resources. 5/

- c) Bangkok also is the headquarters of the South East Asia Regional Technical Liaison Office of the International Air Transport Association (IATA). IATA represents all member international civil air carriers operating into Bangkok International Airport and participates in an advisory capacity in the Air Space Coordinating Group meetings with DOA, RTAF, Aero-Thai, USAF and the CAAG.
- d) The current improvement project also fits into the aviation-related feasibility studies sponsored by the Conference of South East Asian Officials on Transport and Communications and financed under the AID regional program. These are Search and Rescue, Regional Telecommunications, and Regional Flight Inspection. (The availability of the Thai flight checking capability developed as a part of the AGSI Project may well be a major factor in the planning and development of a regional capability). The forthcoming Asian Development Bank Regional Transportation Study will also build on these efforts and may result in ADB financing for projects which result.

IV. TARGETS AND RESULTS.

The current targets of the expanded post FY 1965 project is as follows:

- a) Development of Thai flight inspection capability.

Safety of flight and effective control of aircraft movements necessitates that the components of the air navigation system be accurate, adequate and reliable. To insure the high level of safety required for today's speeds and volume of air traffic requires that the facilities utilized to guide and control these aircraft be continuously monitored and periodically checked and certified by especially qualified personnel using special aircraft and equipment.

Thailand, with its vigorous program of expansion of its air navigation aids must have the capability to keep these

aids operating and to check that these aids do provide navigational information of the quality and accuracy required. Previously the U.S. Air Force or the US FAA had checked Thai civil nav aids. At the conclusion of this project, Thailand will be able to certify its own nav aids and will probably undertake this task for certain of its neighbors who now call on the FAA to do this for them.

b) Improvement of air navigational facilities.

Assistance is being given to the Thai government in the siting, procurement, engineering, installation and commissioning of four VORs (short distance nav aids). These facilities, together with another procured by the DOA, and several being installed by the USAFAG, under the MAP program, will provide the system of airways required to handle the growth of air traffic in Thailand.

c) Improvement of aeronautical communications (both air/ground and point-to-point).

The air/ground communications improvements (the most critical area) is a major effort of the project and the completion of the four RCAG peripheral sites will provide direct pilot-to-controller communications between aircraft in every area of Thailand (except the extreme northwest) and the Area Control Center in Bangkok. This improvement will tremendously increase the level of air traffic service and safety in the Thailand FIR.

The point-to-point communications improvements scheduled under this project are designed to assist in the transmission of Notices to Airmen (NOTAMS) and flight data. It is not a major effort, nor are the communications needs of Thai civil aviation adequately being met by these efforts; the RTG is being advised to develop plans for further improvement in this area.

d) Airport improvement (basically, approach and runway lighting, with some minor associated items).

Civil flying in Thailand today is, with the exception of Bangkok International Airport, limited to daylight operations.

This is primarily due to lack of suitable airport lighting. At the completion of the project (which is engineering, ~~procuring and installing required approach, runway, taxiway or obstruction lights at seven airports in Thailand~~) there will be the airport night time capability to meet the increasing business, administrative and tourism needs of the country, as well as supporting its defense posture.

- e) Concurrently, of course, with the development of the above facilities, training programs have been undertaken which will result in the DOA and Aero-Thai having the qualified personnel to operate and maintain the new facilities and services and give them the in-house training capability to provide local training of additional staffing requirements.
- f) The last new element, air traffic control (radar) augmentation which was added in FY-68 to meet the military requirement, can be broken down into sub-elements as follows:
 - (1). To provide the required number of qualified nonradar air traffic controllers to insure efficient and continuous operation of Bangkok ACC while qualified Thai controllers are in the U.S. undergoing FAA radar ATC training.
 - (2). To plan, prepare and implement a radar air traffic control operation for Bangkok ACC.
 - (3). To provide the classroom and OJT radar air traffic control training required to enable Thai controllers to support a radar operation without U.S. assistance.
 - (4). To support the ACC radar operation until such time as the Thai staff is capable of supporting such an operation unassisted.

It is this element (particularly the radar operational support area) which has the most ramifications, involving as it does both civil and military operations. It is in this specific area that there are unresolved questions. The Mission and AID/W are now engaging in a dialogue with FAA and DOD regarding U.S. requirements and legitimate responsibilities in this area. The problem of satisfying both a tactical and air traffic control requirement in the same airspace is, without doubt, the most complicated

subject concerning airspace management. In Vietnam, the decision as to how to maintain U.S. involvement in the civil air system was by military funding of that participation. Decisions regarding Thailand have not, to date, been completed.

V. COURSE OF ACTION.

At the time the current expanded program was developed and time-phased in late FY-65 (March 1965) the scope of work was projected to require 5 additional years, FY-1966 through FY-1970. This expanded program was not, however, approved until June 1966 with the first members of the augmented staff not arriving Bangkok until March of 1967. This slippage made the original terminal date projection immediately doubtful and accomplishments to date have confirmed that the five-year time span initially indicated as required to accomplish the agreed work program was a realistic estimate. Current estimates are that approximately 60% of the U.S. funded airport lighting, communications and navigational facilities will be installed and operating by the originally established termination date of June 1970, with completion not anticipated until June 1971. Additionally a further element was included in the project in FY-1968. This was to assist the Thai government to develop a radar enroute air traffic control operation - an objective originally estimated to require approximately four years of operational assistance.

10 The CAAG was expanded for this post-65 phase to a maximum of sixteen personnel covering the fields of communications, air traffic control (advisory and operational), airport engineering, electronics engineering, power and lighting, supply management and flight inspection. With the MALPA reductions, the CAAG has been cut back (June 1969) to 10 members, five of whom are actually operating in air traffic control positions at the Bangkok Area Control Center (ACC). The other five CAAG specialists consist of a Chief of Group, an ATC advisor, a flight check pilot, a senior electronics engineer (general) and a radar engineer.

✓ A lighting engineer (to advise and assist in the installation of approach and/or runway and taxiway lighting at seven airports) and a calibration laboratory technician (for completion of training of Thai nationals in the use of the flight inspection calibration lab) are included for TDY assignments.

See attached Table II for a graphical presentation of the CAAG staffing for the expanded program from the June, 1966 funding to completion.

Regarding training requirements there are now 29 Thai participants either in the U.S. undergoing training or are funded and waiting a call-forward. A total of 32 additional participants will be required by the termination of the project, the largest number of whom will be in the fields of advanced air traffic control and/or procedures training.

A schedule showing training over the life of the entire project is attached as Table III.

The project is scheduled to complete its technical tasks by July 1971 with the last personnel (air traffic controllers) departing by January 1972.

FOOT NOTES:

1/ 1951 marked the entry by USOM/Thailand into civil aviation related projects with the approval of projects 93-37-069 and 93-37-070. These dealt with meteorology and civil aviation and provided a limited amount of equipment (much of it surplus) and some operational training of personnel.

In March 1955 the formal agreement was signed by the U.S. CAA and the FCA for the provision of technical assistance in the fields of civil aviation and meteorology. One of these was the project under study, the Aeronautical Ground Services Improvement Project, now assigned number 493-11-370-103, but originally numbered 93-37-050. The other project, the Meteorological Services Improvement Project (completed) is now designated 493-12-370-104, but used 93-37-117 during its active period. These were the basic projects for the improvement of Thai civil aviation.

2/ The history of the creation of these various civil aviation bodies follows: Civil aviation in Thailand was reorganized following World War II by the creation of the Thai Civil Aeronautics Board (CAB) in January, 1947 with the Minister of Communications as Chairman and six high level civil and military officials as board members. Approximately one year later the Civil Aeronautics Administration (CAA), presently known as the Department of Aviation (DOA) was established under the Department of Transport, Ministry of Communications. The Civil Aeronautics Administration was upgraded November 27, 1963, to Department status with W/C Saman Sengkachand, Administrator of CAA, continuing as Director-General of the new organization.

May 1948, the Royal Thai Government, Ministry of Communications (MOC), authorized Aeronautical Radio of Siam, now known as Aeronautical Radio of Thailand, Ltd. (Aero-Thai) to operate as a non profit company to provide area control and air traffic services for international civil air carriers (Prior to World War II, this service had been provided by the P & T Department of the RTG). When this contract expired in November 1963, the company stock was purchased by the RTG and Aero-Thai was placed under jurisdiction of the MOC, as an integral component of the DOA. Following this action, the Director General, DOA, delegated authority to the General Manager, Aero-Thai to provide specific air traffic services and the exercise of area control over all aircraft, civil/military, operating in accordance with instrument flight rules within the boundaries of Bangkok Flight Information Region. The corporate base of Aero-Thai has been retained because of the operational flexibility it provides. The company's operational costs are financed by service charges levied on user airlines, the company in turn can pay competitive salaries, etc. Capital costs are borne by the regular RTG budget.

The RTAF Directorate of Civil Aviation (DCA) was established in 1954 when commercial operations at Don Muang became a major activity. (Don Muang, an established military base became the first Thai military airfield in 1921. The first commercial operator into Don Muang was KLM in 1924. After the war, however, international carrier operations were on a restricted basis until, after the civil, or west runway, 21R/3L, was surfaced with USOM assistance to a pavement strength of 75,000 pounds ESWL. This work was completed in 1954). The DCA is concerned with management and operational aspects regarding the portions of the airbase utilized by civil operations.

3/ Other aeronautical or aeronautically related projects are as follows:

- a) The Airport Improvement Project (approximately 1951-1954) dealt with the improvement of the civil runway at Bangkok International Airport (Don Muang).

Since establishment of the CAAG in 1955, USOM has called upon the CAAG to exercise program management or surveillance over the following complementary aviation or meteorological projects, all of which have now been completed.

- b) The Meteorological Services Improvement Project established in 1955 to assist the RTG Meteorological Department to provide necessary services to civil aviation and, to extent possible,

assist in the development of a National Weather Service, e.g., data gathering; collection and dissemination; climatology; storm warning services; general forecasting, etc. (See Note 1/)

- c) The Thai Airways Improvement Project, activated in 1956, provided for a three-year advisory services contract between Thai Airways (then the operator of both international and domestic Thai air carrier services) and Pan American World Airways to improve, modernize and expand the services of Thai Airways. (See Note 1/)
- d) The Aviation Overhaul and Maintenance Facility Project, was initiated in 1957 as a 3.54 million dollar loan to establish a qualified aviation maintenance facility at Don Muang to provide periodic overhaul, major inspection and maintenance of the Thai Airways fleet, plus other RTG components, other carriers and aircraft operators. The project was reduced in 1959 to a survey program to determine the potentiality and economic value to Thailand of such a major facility. (See Note 1/)
- e) Airfield Construction Project, 1955, provided for the design and construction of runways, taxiways and parking aprons, plus the installation of runway and taxiway lighting and power at Korat, Takhlil, Udorn, Chiang Mai and Ubol, plus minor military-support work at Don Muang. OICC was the project manager. (See Note 1/)
- f) SEATO Meteorological Telecommunications Project, 493-12-370-110 established 1962 to correct deficiencies in the telecommunications system for gathering and disseminating meteorological and aeronautical information between Bangkok and Manila and provide weather intercept capability for the Net Department.

1/ The project numbers used in this presentation are those now assigned by USCP/Thailand. Other numbers have previously been assigned to the above projects as follows (See also Note 1/):

The Thai Airways Improvement project, now designated number 493-11-370-038, was 93-37-118 during its active phase.

The Aviation Overhaul and Maintenance Facility project, now designated number 493-12-370-106, was 93-37-152 during its active phase.

The Airfield Construction Project, now 493-12-370-039, was originally 93-37-094.

- 5/ USOM has, through the Civil Police Project, assisted the flight training school in the development of a Thai civil helicopter pilot training capability. Additionally, several instructors at the school have been provided training thru the AGSI Project.

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SR ELEC ENG					LITTLE				LITTLE													
EE (RADAR)					GRIFFEY																	
AIRPORT ENGR					KING				POSITION BALPAed													
ELECTRO/MECH					VOSGIER				POSITION BALPAed													
PILOT					HUGHES				HUGHES													
CAL/LAB TECH					ZAREMBA				POSITION BALPAed													
SUPPLY ADV					SHAW				POSITION BALPAed													
# on board	3	3	5	7	8	9	11	16	15	14	14	14	12	12*	11	11	11	11	10	10	6	6

UNCLASSIFIED

LEGEND

= HOME LEAVE

= ON BOARD

= TDY

* = DOES NOT INCLUDE ATC OVERLAP POSITIONS

JULY 14, 1969

Table III.

**AGSI (493-11-370-103) PARTICIPANT PROGRAM
TOTALS FROM FISCAL YEAR 1955 (U.S. TRAINING)**

UNCLASSIFIED

TYPE OF TRAINING	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	TOTALS		
																		55-65	66-71	
Air Traffic Control		2	4	3	4	4	3	1	2						6	4	10	6	23	26
Communications Operations		2															1	2	1	
EMT Communications		5	1		2	1	2						3	1	5	3	2	11	14	
EMT Nav aids (VOR, DME, ILS, RADAR)	2	1	1	2	1	1	1	3							5	4	3	3	12	15
Pilot											1	1					1	0	3	
Avionics											2						1	0	3	
Electro. Mech. & Elect. Engr.			1		2	1		1	1					1	1	1	1	6	4	
Airport Mgt./Const./Design		1	1	1	3	1	3						1	1	3			10	5	
Search and Rescue			1	1														2	0	
Aviation Admin. & Mgt.		1	5	2				2		1					1			11	1	
International Air Seminar										2		2						2	2	
Airframe & Engine											1	1	1					0	3	
Warehouse and Supply								1						1	1			1	2	
Familiarisation/Observation															4			0	4	
TOTALS	2	12	14	9	12	8	9	5	6	0	3	4	8	16	23	18	14	80	83	

UNGER

UNCLASSIFIED

TOTAL A-1346

<u>AGSI THIRD COUNTRY PROGRAM THRU FY-69</u>	<u>TOTALS</u>
1957 - To Taipei for Comm. Ops. Training	8
1960 - To Singapore for Search & Rescue Training	4
1960 - To Singapore for Aeronautical Info Service Training	2
1960 - To Singapore for Airport Fire Officer Training	<u>4</u>
AGSI 3rd. Country TOTAL	<u>18</u>

U.S. Participants	1955-1969	131
3rd. Country Participants	1955-1969	<u>18</u>
		149

BANGKOK

JULY 14, 1969

AIRGRAM

DEPARTMENT OF STATE.

Country F

UNCLASSIFIED
CLASSIFICATION

2D

For each address check one ACTION | INFO

DATE REC'D.

450

DISTRIBUTION
ACTION
EAB
INFO.

TO - BANGKOK AIDTO A 47

X

DATE SENT

1-16-70

FROM - Washington

IS
AAPC

SUBJECT - PROP Approval for the ongoing project, Aeronautical Ground Services Improvement, 493-11-370-103
REFERENCE - TOAID A-1346

BANGKOK
NECTO
ATT

The Aeroground PROP was approved by the Assistant Administrator, EA, on January 7, 1970. Attached is one copy each of the Project Authorization and the covering Action Memorandum to the AA/EA.

DT
STATE

Attachments: a/s

ROGERS

PAGE 1 OF 1 PAGES

DRAFTED BY <i>mt</i> NTumavick:mk	OFFICE EA/SEA	PHONE NO. 29038	DATE 1/14/70	APPROVED BY: <i>[Signature]</i> EA/SEA: WMe1necke
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AID AND OTHER CLEARANCES
EA/SEA: GKPierson *90* date *1/15*

UNCLASSIFIED
CLASSIFICATION

PROJECT AUTHORIZATION

1. PROJECT NUMBER 493-11-370-103	3. COUNTRY Thailand	4. AUTHORIZATION NUMBER 0009
2. PROJECT TITLE Aeronautical Ground Services Improvement		5. AUTHORIZATION DATE 1/7/70
7. LIFE OF PROJECT		6. PROP DATED July 14, 1969

a. Number of Years of Funding: 16
Starting FY 1956; Terminal FY 1971

b. Estimated Duration of Physical Work
After Last Year of Funding (in Months): 6

FUNDING BY FISCAL YEAR (in U.S. \$ or \$ equivalent)	DOLLARS (000's)		P.L. 480 CCC + FREIGHT	LOCAL CURRENCY (\$000)			
	GRANT	LOAN		Exchange Rate: \$1 = 12 (฿)		HOST COUNTRY	
				U.S. OWNED	OTHER		
			GRANT	LOAN	JOINTLY PROGRAMMED	(Reg RTG budget)	
Prior through Actual FY 1969	6,203					7,441	18,983 1/
Operational FY 1970	424					230	7,350
Budget FY 1971	474					230	7,700
B + 1 FY							
B + 2 FY							
B + 3 FY							
All Subsequent FY's							
TOTAL	7,101					7,901	34,033

9. DESCRIBE SPECIAL FUNDING CONDITIONS OR RECOMMENDATIONS FOR IMPLEMENTATION, AND LIST KINDS AND QUANTITIES OF ANY P.L. 480 COMMODITIES

The U.S. funding total for "prior through actual FY 1969" above has been taken from the FY 1971 PBS to reflect actual obligations rather than an earlier estimate. The revised funding estimate for FY 1970 is \$420,000 as cited in Bangkok 15864.

1/ Figures prior to FY 1965 not available.

10. CONDITIONS OF APPROVAL OF PROJECT

There are no conditions of approval for this project.

Funding under this activity will terminate in FY 1971 as stated in the FY 1970 CP. The FY 1971 obligation will include six-months of forwarding funding into FY 1972 for the phase-out of the PASA air traffic controller team.

(Use continuation sheet if necessary)

11. Approved in substance for the life of the project as described in the PROP, subject to the conditions cited in Block 10 above, and the availability of funds. Detailed planning with cooperating country and drafting of implementation documents is authorized.

This authorization is contingent upon timely completion of the self-help and other conditions listed in the PROP or attached thereto.

This authorization will be reviewed at such time as the objectives, scope and nature of the project and/or the magnitudes and scheduling of any inputs or outputs deviate so significantly from the project as originally authorized as to warrant submission of a new or revised PROP.

A.I.D. APPROVAL	CLEARANCES	DATE
	EA/SEA: GK [Signature] / WMS [Signature]	
	EA/ENG: PN Stearns [Signature]	12/29/69
	EA/DP: CH Breecher [Signature]	12/30/69
AA/EA: Roderic L. O'Connor [Signature]		
TITLE	A/CONT	