

昭和63年度
帰国研修員フォローアップチーム報告書
——ハイウェイセミナー——

平成元年 2 月

国際協力事業団
東京国際研修センター

昭和63年度
帰国研修員フォローアップチーム報告書
——ハイウェイセミナー——

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国際協力事業団
東京国際研修センター

国際協力事業団

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はじめに

この報告書は国際協力事業団が実施したハイウェイセミナーに参加した帰国研修員に対するフォローアップ事業の一環として、帰国研修員の所属機関及び関連機関を訪問し、当設分野に関する技術指導、研修効果の確認、評価並びに本コースに関するニーズの調査等を目的にタイ、マレーシア、インドの3カ国に派遣した巡回指導班の調査報告書である。

本報告書において、当設分野における各国の実情、帰国研修員の活動状況及びコースの内容にかかる要望事項等を取りあげているところ、今後の研修実施にあたっての参考となれば幸いである。

本件の実施について、多大なご尽力を賜わった外務省、建設省及び各在外公館その他関係各位に対し、感謝の意を表します。

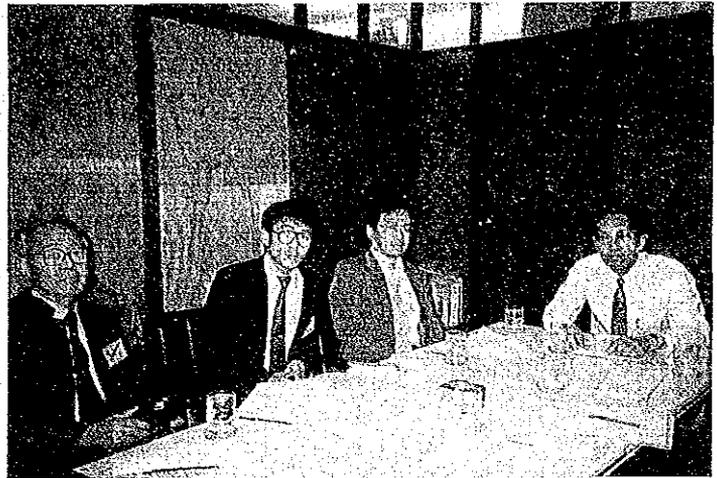
平成元年2月

国際協力事業団東京国際研修センター

所長 杉山亭造

※タ イ

(1)
Dept. of Technical and Economic
Cooperation(DTEC)にてMr. Tha-
wal Polpuech(Director of Exter-
nal Cooperation Div. I)と打合わせ
(11月22日)

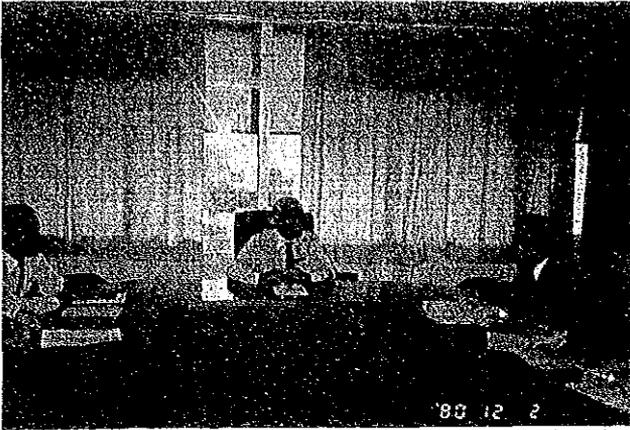


(2)
Dept. of Highway(DOH)へMr.
Sothien Vongvichien(Director
General)を表敬
(11月23日)



(3)
DOHにて帰国研修員12名と面談
(11月23日)





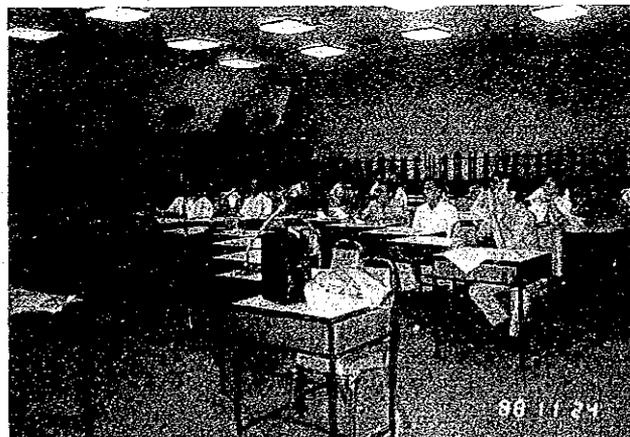
(4)
Expressway Rapid Transit Authority of Thailand(ETA)へ Mr. Siva Charoenpong(Deputy Governor for Operation)を表敬
(11月23日)

(5)
ETAにて帰国研修員1名と面談
(11月23日)



(6)
BMAにて帰国研修員Mr. Kanchai Nopakaew(Director of Construction Control and Supervision Div., of Public works)と面談
(11月24日)

(7)
特別講義 (於DOHセミナールーム)
(11月24日)



※マレーシア

(1)

Public Services Department(PS-D)を表敬

(11月28日)



(2)

Public works Department(PWD)にてMr. P. Sundramoorthy(Deputy Director of Road Div.)及び帰国研修員Mr. Goanananthan Kandiahと面談

(11月29日)

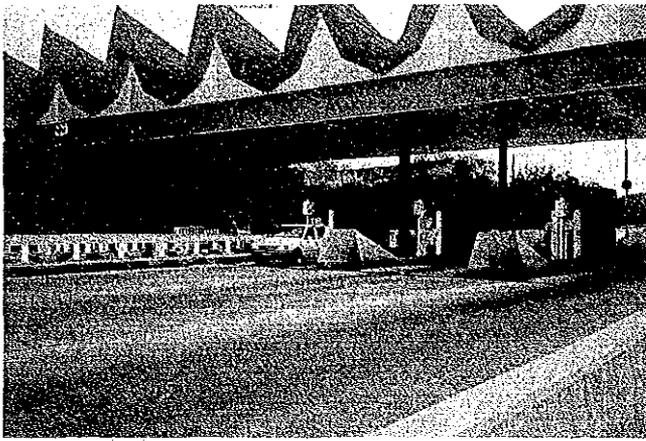


(3)

PWDにて帰国研修員Mr. Wan A. Rahman Yaacob(Deputy Director General I)と面談

(11月29日)





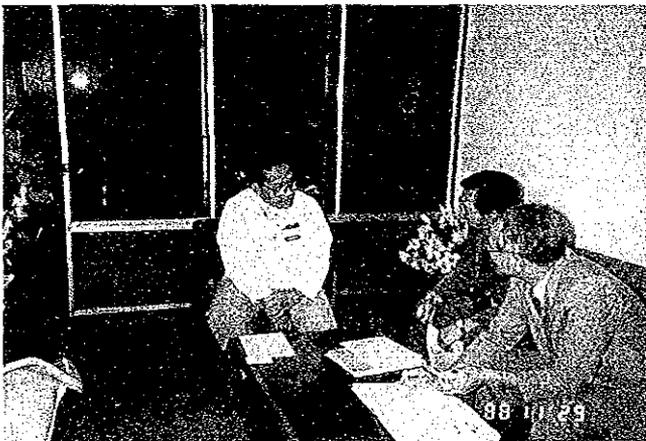
(4)

現場視察：マレーシア・ハイ
ウェイ有料道路のポイント

(5)

HAMにて帰国研修員Mr. Ghaza-
li B. Md. Nor, Mr. Ismail B. Md.
Sallehと面談

(11月29日)



(6)

University Teknologi Malaysiaに
て帰国研修員Mr. Ainuddin Bin
Abdulと面談

(11月29日)

(7)

特別講義（於Holiday Inn, City
Centre会議室）

(11月30日)



※インド



(1)
Ministry of Financeへ Mr. S. Varadhachary(Joint Secretary, Department of Economic Affairs)を表敬

(12月5日)

(2)
Ministry of Surface Transport(M-ST)にて帰国研修員4名と面談
(12月5日)



(3)
Municipal Corporation of Delhiを訪問

(12月5日)

(4)
Central Road Research Institute
訪問。Mr. M. P. Dhir(Director)と
面談

(12月6日)



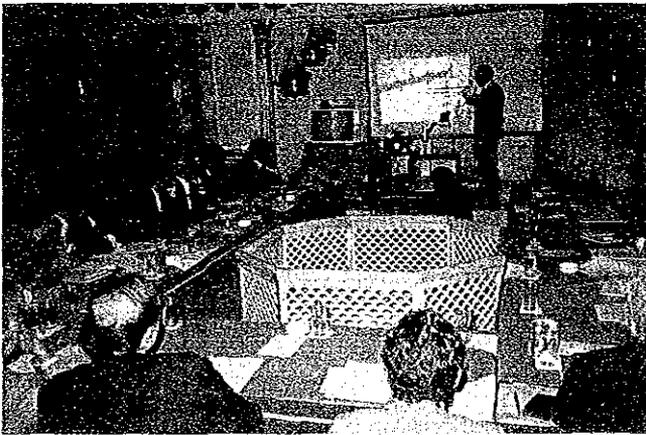


(5)
Delhi Administration Zone I訪問。
Mr. O. P. Goel(Chief Engineer,
PWD)と面談

(12月6日)

(6)
Ministry of Works and Housingへ
Mr. Harish Chandra(Director
General, Central Public Works
Department)を表敬

(12月6日)



(7)
特別講義（於Maurya Sheraton
Hotel会議室）

(12月7日)

(8)
特別講義後の質疑応答風景



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1. 巡回指導の概要

(1) 派遣の目的

国際協力事業団は建設省道路局ほか関係機関の協力を得て、開発途上諸国の人材育成に寄与することを目的として、昭和39年度から主として道路建設技術者を対象とするハイウェイセミナーを開催している。

昭和63年度までにハイウェイセミナーは24回開催され44ヶ国325名の研修員が参加している。

今回のフォローアップチームは、タイ、マレーシア及びインドの帰国研修員の所属機関及び道路行政を所管する関係機関を訪問し、また帰国研修員と懇談することによって、帰国研修員の動向、研修に対する評価、今後の研修計画に対する要望、提言、フォローアップ事業に対するニーズ、道路行政に係る問題点等を把握し、今後の研修員受入事業及びフォローアップ事業の向上改善に資することを目的として派遣されたものである。

(2) チームの構成

岡原 美知夫 建設省土木研究所構造橋梁部基礎研究室長
奥 脇 郁 夫 日本道路公団企画調査部企画課
島 田 喜 昭 国際協力事業団東京国際研修センター業務課

(3) 派遣国及び期間

派遣国 タイ、マレーシア及びインド
派遣期間 昭和63年11月21日～12月9日(19日間)

(4) 日 程

	月 日(曜日)	時 間	行 程	内 容
1	11月21日(月)	14:20	東京発	JL 471便
		19:05	バンコク着	
2	11月22日(火)	10:00	JICAバンコク事務所訪問	日程打合わせ
		11:15	在タイ国日本国大使館表敬訪問	松田一等書記官へ挨拶及び打合わせ
		13:30	Dept. of Technical & Economic Cooperation(DTEC) 訪問	Mr. Thawal Polpuech(Director of External Cooperation Div. I, DTEC) へ挨拶及び打合わせ

	月 日 (曜日)	時 間	行 程	内 容
3	11月23日 (水)	8:00	Dept. of Highway(DOH) 表敬訪問	Mr.Sathien Vongvichien(Director-General,DOH)へ挨拶
		9:00	帰国研修員と面談 (DOH)	帰国研修員(DOH 所属)12名、議長MR.C. Pichien(Director of Training Div.)
		14:00	Expressway Rapid Transit Authority of Thailand(ETA) 表敬訪 問	Mr.Siva Charoenpong(Deputy Governor for Operation)へ挨拶
		14:20	帰国研修員と面談 (ETA)	帰国研修員(ETA 所属)6名
		16:00 ~	現地視察	バンコク市内道路事情視察
4	11月24日 (木)	9:00	帰国研修員と面談 (BMA)	昭和42年帰国研修員Mr.Kanchai Nopaka- ew(Director of Construcion Control & Supervision Div., of Public Works, BMA)
		10:30	資料整理	業務報告書作成
		14:00	特別講義	最近の道路建設技術に関する講義及び討 論(帰国研修員27名参加)於DOH セミナ ールームAmbassador Hotel (18名参加、 うち帰国研修員14名)
		18:30	団長主催夕食会	
5	11月25日 (金)	10:30	日本大使館及びJICA 事務所訪問	業務報告及び報告書提出
		13:00 ~	現地視察	バンコク周辺道路及び工事現場視察
6	11月26日 (土)	13:35	バンコク発	BA33便
		20:35	クアラルンプール着	
7	11月27日 (日)	8:00	現地視察	クアラルンプール市内道路視察
8	11月28日 (月)	9:00	在マレーシア国日本国 大使館表敬訪問	三村・大西一等書記官へ挨拶及び打合わ せ
		9:30	JICAクアラルンプール 事務所訪問	日程打合わせ
		14:00	Public Services De- partment(PSO) 表敬訪 問	Mr.Azizan Bin Ayob(Deputy Director of Training & Career Dept.Division) Mr.Mohd Nadzir Bin Don(Asst. Director, Training Division)へ挨拶
		15:30	Public Works Depart- ment(PWD) 表敬訪問	Mr.Alexius Loo(Director of Highway Planning Unit)へ挨拶
9	11月29日 (火)	9:00	PWD 表敬訪問	Mr.P.Sundramoorthy(Deputy Director of Road Division)へ挨拶

	月 日 (曜日)	時 間	行 程	内 容
10	11月30日 (水)	9:30	帰国研修員と面談 (PWD)	昭和47年度帰国研修員Mr.Goanananthan Kandiah(Asst. Director of Road Bran- ch,PWD)
		10:15	帰国研修員と面談 (PWD)	昭和49年度帰国研修員Mr.Wan A.Rahman Yaacob(Deputy Director General I,PWD)
		14:30	Highway Authority of Malasia(HAM)表敬訪問	Mr.Dato Mustapha Ahmad(Director Gene- ral)へ挨拶
		15:15	HAM 表敬訪問	Mr.Chua Lee Boon(Director of Operat- ions Division)へ挨拶
		15:20	帰国研修員と面談 (HMA)	昭和60年度帰国研修員Mr.Ghazali B.Md Nor(Director of Operations Division) 昭和61年度帰国研修員Mr.Ismail B.Md. Salleh(Senior Civil Engineer, Penand Bridge Project)
		16:00	帰国研修員と面談(Un- iversity Technologi Malaysia)	昭和43年度帰国研修員Mr.Ainuddin Bin Abdul(Vice-Chancellor)
		14:00	K.L.City Hall 表敬訪 問	Mr. K. Ariyathavaratham (Director of Civil Works & Traffic Department)へ 挨拶
		14:30	帰国研修員と面談	Mr.Goanananthan Kandiah, Mr.Ismail Bin Md Sallen (2回目)
		15:30	特別講義	最近の道路建設技術に関する講義及び討 論(16名参加) 於Holiday Inn, City Centre会議室
		17:00	団長主催レセプション	Holiday Inn, City Centre レセプション ルーム
11	12月1日 (木)	8:00 午後	現地視察 資料整理	クアラランプール周辺道路視察 業務報告書作成
12	12月2日 (金)	9:30	日本大使館及びJICA事 務所訪問	業務報告及び報告書提出
13	12月3日 (土)	19:15	クアラランプール発	SQ 113便 シンガポール経由KL840 便
		1:00	デリー着	JICAインド事務所倉林所長と日程打合わ せ
14	12月4日 (日)	10:30	現地視察	デリー市内道路視察
15	12月5日 (月)	10:00 ~	現地視察	デリー～アグラ間道路視察(国道2号線)
		9:30	Ministry of Finance 表敬訪問	Mr.S.Varadhachary(Joint Secretary, Department of Economic Affairs)

	月 日 (曜日)	時 間	行 程	内 容
16	12月6日(火)	10:30	在インド国日本国大使館表敬訪問	菅野参事官、西郷一等書記官へ挨拶
		11:00	JICAインド事務所訪問	倉林所長と打合わせ
		14:30	Ministry of Surface Transport(MST)表敬訪問 帰国研修員と面談(MST)	Mr.K.K.Sarin(Director General,Road Department & Additional Secretary to the Govt.of India)へ挨拶 昭和43年度帰国研修員Mr.R.P.Sikka (Chief Engineer) 昭和47年度帰国研修員Mr.V.K.Arora (Chief Engineer) 昭和48年度帰国研修員Mr.R.K.Saxena (Chief Engineer) 昭和63年度帰国研修員Mr.Sham Sunder (Chief Engineer)
		16:30	Municipal Cooperation of Delhi訪問	Mr.G.R.Ambwani(Engineer In-charge, Engineering Department),Mr.D.R.Sharma(Chief Engineer,Construction Unit)と面談
		17:20	現地視察	デリー市内道路工事現場視察
		9:30	Central Road Research Institute訪問	Mr.M.P.Dhir(director)へ挨拶及び研究所内見学
		12:00	Delhi Administration Zone I 訪問	Mr.O.P.Goel(Chief Engineer,Public Works Department)と面談
		14:30	Ministry of Environment & Forest 訪問	Mr.K.K.Madan(Chief Engineer of Construction Unit)と面談
		15:00	Ministry of Works & Housing 表敬訪問	Mr.Harish Chandra(Director General, Central Public Works Department)Mr.V.K.Kapool(Suptt.Engineer,CPWD)と挨拶
		17	12月7日(水)	11:00
18	12月8日(木)	12:30	団長主催レセプション	於Maurya Sheraton Hotel
		10:00	現地視察	デリー近郊道路視察
		14:00	日本大使館及びJICA事務所訪問	業務報告及び報告書提出
19	12月9日(金)	3:30	デリー発	JL 494便 バンコク経由
		16:30	東京着	

(5) 調査方法

フォローアップチームが出発する前に、現地JICA事務所を通じて、タイ、マレーシア及びインドの帰国研修員にハイウェイセミナーに関する質問書（資料-2）を送付し、面接時に回収し、主としてこれをもとに面接による調査を行った。

また、帰国研修員の所属する期間の上司と懇談し、あるいは各国の道路事情、道路建設等を視察して、ハイウェイセミナー及びフォローアップサービスに関するニーズの把握に努めた。

2. ハイウェイセミナーの概要と経緯

(1) ハイウェイセミナーの概要

ハイウェイセミナーは昭和39年度に発足した。以来、昭和44年度を除いて毎年開催されており、昭和63年度で通算第24回目を迎えている。1回当たりの研修員数は当初8人程度であったが、最近では15～16人前後に増員されており、昭和63年度までに参加した研修員の総数は44ヶ国325名に達している。

本セミナーは当初ハイウェイセミナーとして出発したが、アジア太平洋地域経済社会委員会(ESCAP)の要請により、昭和43年度にアジアハイウェイセミナーと改称し、アジアハイウェイ関係国を中心に研修員を要請した。その後昭和47年度に再びハイウェイセミナーと改称し、アジア地域以外の中近東、アフリカ、中南米からも研修員を招請している。

本セミナーの目的は、道路の建設と維持に関する技術の研修と新知識の習得を通じて、研修員の道路技術と道路の行政全般に関する実務能力の向上を図ることにある。したがって、本セミナーが対象としているのは、大学卒業程度以上の学力を有し、5年以上の経験のある40才以下の中堅技術者である。

研修期間は約50日間で、その内容は大きく分けて、日本事情オリエンテーション、講義、現場見学、研修旅行より構成されている。資料-7に昭和63年度のハイウェイセミナースケジュールを示す。

(2) 研修員受入の概要

次表にハイウェイセミナーの年度別、国別研修員一覧表を示す。

國別研修員參加実績表

地域	國名	'64	'65	'66	'67	'68	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	計	
ア	マレイシア	1	1		3	1		1	1	1		1	1	1	1	1	1	1		1	1	1	1	1	1		22	
	タイ	1		1	2	1			1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1	2	1	27	
	フィリピン	1	1	3	1							1	1	1	1	1	1					1		1			15	
	ラオス	1		1	1																						3	
	インドネシア	1	2		1	1		1	2	1	1	1	1	1	1	1	1	1	1			1					18	
	グアテマラ	1				1		1	1	1	1	1															7	
	シンガポール					1		1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	18	
	インド				2	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
	ビルマ				2	1										2	1	1	1	1	1	1		1	1	1		14
	スリランカ				1						1	1	1	1	1	1	1	1	1	1	1	1					1	12
	バンダラデシユ										1	1	2	1	1	1	1					1						7
	ネパール									1	1	1	1	1	1	1	1	1	1	1	1	1	1					13
	パキスタン	1				1			2	1					1									1	1			8
	韓国					1					1																	2
	カンボディア									1	1	1	1															3
	台湾																											2
	中華人民共和國																			1				1	1	1		5
小計		6	5	5	15	9		7	10	8	10	9	8	9	10	10	7	8	8	7	10	7	7	7	8	6	196	
中近東(8)	アフガニスタン	1				1			1			1	1	1	1	1											9	
	イラン	1				1		2	1		1	1	1	1	1	1	1									1	11	
	シリア			1																								1
	トルコ			1	1						1	1	1	1	1				1	1	1	1	1	1	1	2	1	15
	サウディアラビア														1						1	1						3
	エジプト											1					1	1	2	1	1	1	2	1	1	1	1	12
	イラク																			1	1	1	1	1				5

地域	国名	'64	'65	'66	'67	'68	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	計	
中近東 (8)	バハレーン																			1							1	
	小計	2	2	1	2			2	2		2	3	3	3	4	2	4	1	3	4	4	3	3	2	2	3	57	
	ザイール																								1		1	
	ナイジェリア				1																						1	
	ケニヤ								1						1	1	1	1	1	1	1	1	1	1		1	10	
	エチオピア								1	1	1	1	1	1													6	
	タンザニア								1	1	1	1	1				1										6	
	リベリア														1												1	
	スーダン																1		1	1	1						4	
	セネガル																			1	1	1					3	
(10)	ガーナ																			1			1	1	1		4	
	コートジボワール															1										1	3	
	小計				1					3	2	2	2	2	1	3	2	2	4	4	1	1	1	2	2	3	2	39
	アルゼンチン																										1	
	ブラジル									1				1	1		1	2	1	1	1	1	2	1		1	13	
中南米 (8)	ボリビア											1		1					1								3	
	コロンビア																1	1	1	1	1	1	2	1			8	
	エル・サルバドル																			1							1	
	チリ																								1		1	
	ヴェネズエラ																							1	1	1	3	
	エクアドル																							1			1	
	小計								1		1	1		2	1			2	3	4	2	2	4	2	3	1	3	31
	パプアニューギニア																									1	1	2
(1)	小計																								1	1	2	
	計	8	5	7	17	11		9	12	12	14	15	13	16	16	15	15	14	19	17	17	15	14	15	15	14	325	

3. 各国別調査内容

(1) 概 要

ハイウェイセミナーの帰国研修員の数は、タイ31名、マレーシア22名、インド17名であり、今回の巡回指導において面談することができた者は、このうちタイ19名、マレーシア5名、インド4名であった。

また、巡回指導班の出発に先立って送付した質問書については、タイ20名、マレーシア3名、インド7名から回収することができた。

(2) タ イ

1) 調査の概要

タイの帰国研修員は、合計31名であるが、そのうち、Department of Highways (DOH) に所属する12名(表-2)、Expressway and Rapid Transit Authority of Thailand (ETA) に所属する6名(表-3)、及びBMAに所属するMr. Kanchai Nopakaew (Director of Construction Control and Supervision Div, 昭和42年度帰国研修員)の計19名に面談し、調査することができた。

Department of Highwaysはタイの都市間高速道路を建設・管理する機関であり、その組織図を図-1に示す。DOHにおいては、Mr. Sathien Vongvichien (Director of General) と懇談する機会を得、その後、Mr. C. Pichien (Director of Training Div.) の司会のもと、帰国研修員と面談した。

Expressway and Rapid Transit Authority of Thailandは、タイの都市内高速道路を建設・管理する機関であり、その組織図を図-2に示す。ETAにおいては、Mr. Siva Charoenpong (Deputy Governor for Operation) と懇談する機会を得、その後、帰国研修員と面談した。

BMAはあらゆる分野の公共事業を扱う機関であり、Mr. Kanchai Nopakaewの所属する部署では、地方道の管理を行っている。その組織図を図-3に示す。

また、帰国研修員との面談に先立ち、研修員派遣の窓口である、Dept. of Technical and Economic Cooperation (DTEC) を訪問し、研修に関する意見交換を行い、研修員選抜のための語学試験問題(英語)を入手した。(資料-6)

なお、バンコク滞在期間中に、バンコク市内及びバンコク〜アユタヤ間の道路視察を実施した。

2) 調査結果

① 研修員受入事業に関する提言

帰国研修員の研修に対する評価は非常に高いものがあったが、セミナーに関して次のよ

うな改善等の意見を得た。

- (イ) 講義は通訳を介せず英語で実施する。
- (ロ) 「用地取得、補償」に関する講義をとり入れる。
- (ハ) 建設工事現場への見学を増す。
- (ニ) 研修期間を1ヶ月延長する。

② フォローアップ事業に関する要望

- (イ) 高速道路に関する最新の情報、出版物を定期的に送付してほしい。
- (ロ) 下記の新設コースを設けてほしい。
 - ・道路の維持管理
 - ・長大橋の維持管理
 - ・有料道路の経営
 - ・トンネル建設技術
 - ・道路設計に関するコンピューター技術の応用
- (ハ) 帰国研修員を対象とした上級クラスを設置してほしい。
- (ニ) セミナーで使用したスライド、ビデオ等を入手したい。

タイで調査した内容については、業務の報告書を作成し、JICA現地事務所を通じてタイの関係期間へ提出した。(資料-3)

表-2

LIST OF EX-PARTICIPANTS
ON HIGHWAY CONSTRUCTION SEMINAR
DEPARTMENT OF HIGHWAYS
MINISTRY OF TRANSPORT AND COMMUNICATIONS

<u>Name</u>	<u>Participation</u> <u>Year</u>	<u>Present Office (Post)</u>
1. Mr. Kusol Khaimarn	1967	District Engineer, Pattani Highway District
2. Mr. Somsak At-ong	1967	District Engineer, Ratchaburi Highway District
3. Mr. Sombut Issarachai	1969	Professor, Khonkaen University
4. Mr. Siripongs Intuwong	1971	Area Engineer Highway Construction & Rehabilitation Sec. National Highway Construction Division
5. Mr. Chumchai Chumsri	1972	Project Engineer National Highway Construction Division
6. Mr. Sukree Dheeragooni	1972	Deputy Director-General for Engineering
7. Mr. Supon Yaipakee	1973	Director Aids Control Office
8. Mr. Winich Benjaponsa	1975	Division Engineer Suphanburi Highway District
9. Mr. Vicha Sappanukrau	1981	Secretary Office of Secretary
10. Mr. Aphisit Wichyanrat	1984	Chief of Materials Testing Section, Chiang Mai Highway Field Division

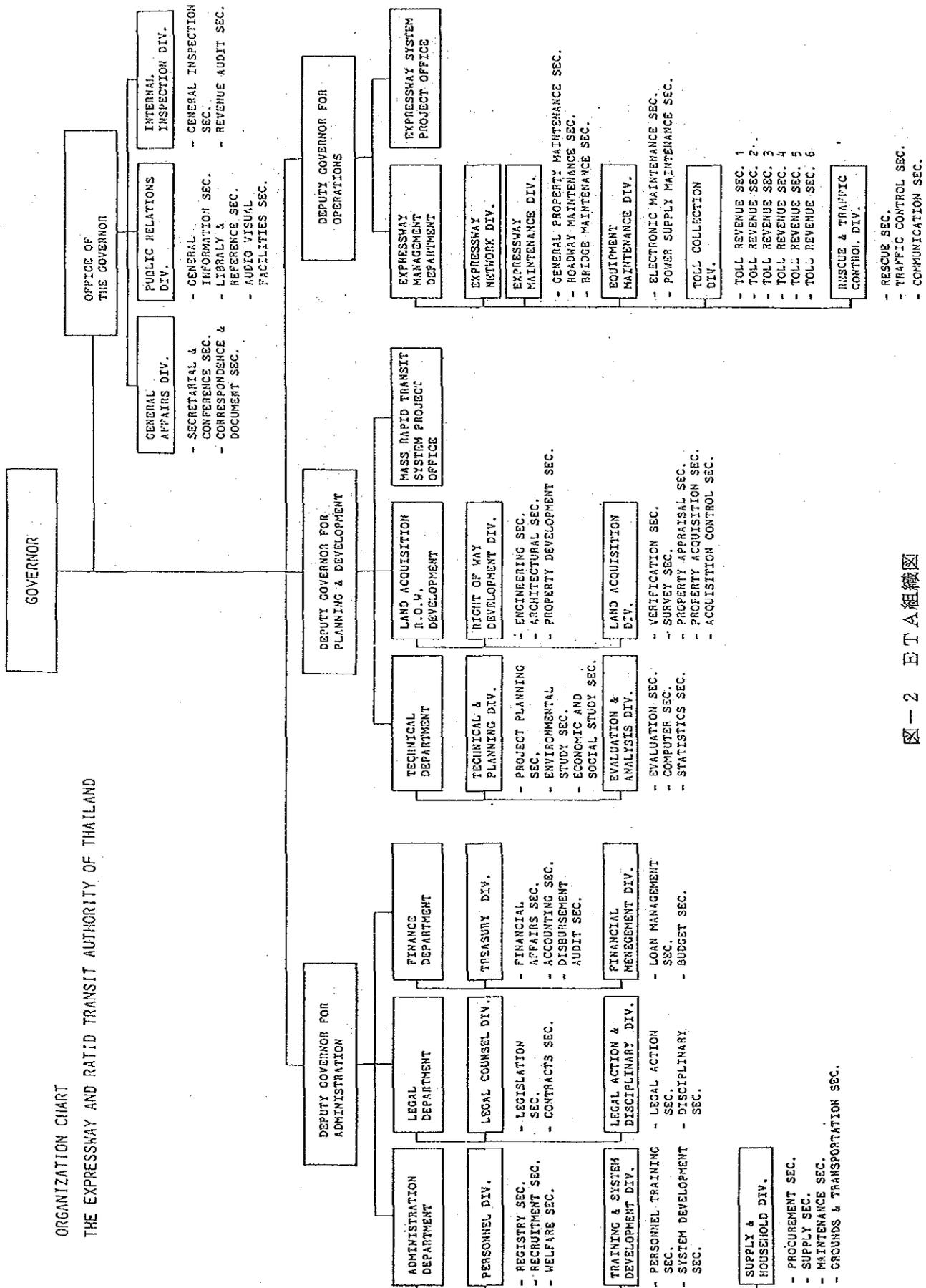
- | | | |
|---------------------------------|------|---------------------------------------------------|
| 11. Mr. Uthai Patrasook | 1987 | Technical Assistant,
Loan Control Office |
| 12. Mr. Prapan Tuntisaewe | 1987 | Project Engineer
Feeder Road Construction Div. |
| 13. Mr. Chakorn Ratchatatevintr | 1988 | District Engineer
Uttaradit Highway District |

表-3

LIST OF EX-PARTICIPANTS
ON HIGHWAY CONSTRUCTION SEMINAR
EXPRESSWAY AND RAPID TRANSIT AUTHORITY OF THAILAND (ETA)

<u>Name</u>	<u>Participation</u> <u>Year</u>	<u>Present Office (Post)</u>
1. Mr. Pridi Chantaravitoon	1976	Director of Expressway Management Department, ETA
2. Mr. Somchai Jarukasemratana	1981	Director, Expressway Maintenance Division, ETA
3. Mr. Sintop Sirisingha	1982	Administrator Grade 7, ETA
4. Mr. Sutas Sutanchinont	1984	Director, Expressway Network Division, ETA
5. Mr. Pachearn Pirotesak	1985	Chief of Project Planning Sect. ETA
6. Mr. Akanit Ampawasiri	1986	Engineer Grade 7, ETA

ORGANIZATION CHART
THE EXPRESSWAY AND RAITID TRANSIT AUTHORITY OF THAILAND



図一 2 E T A組織図

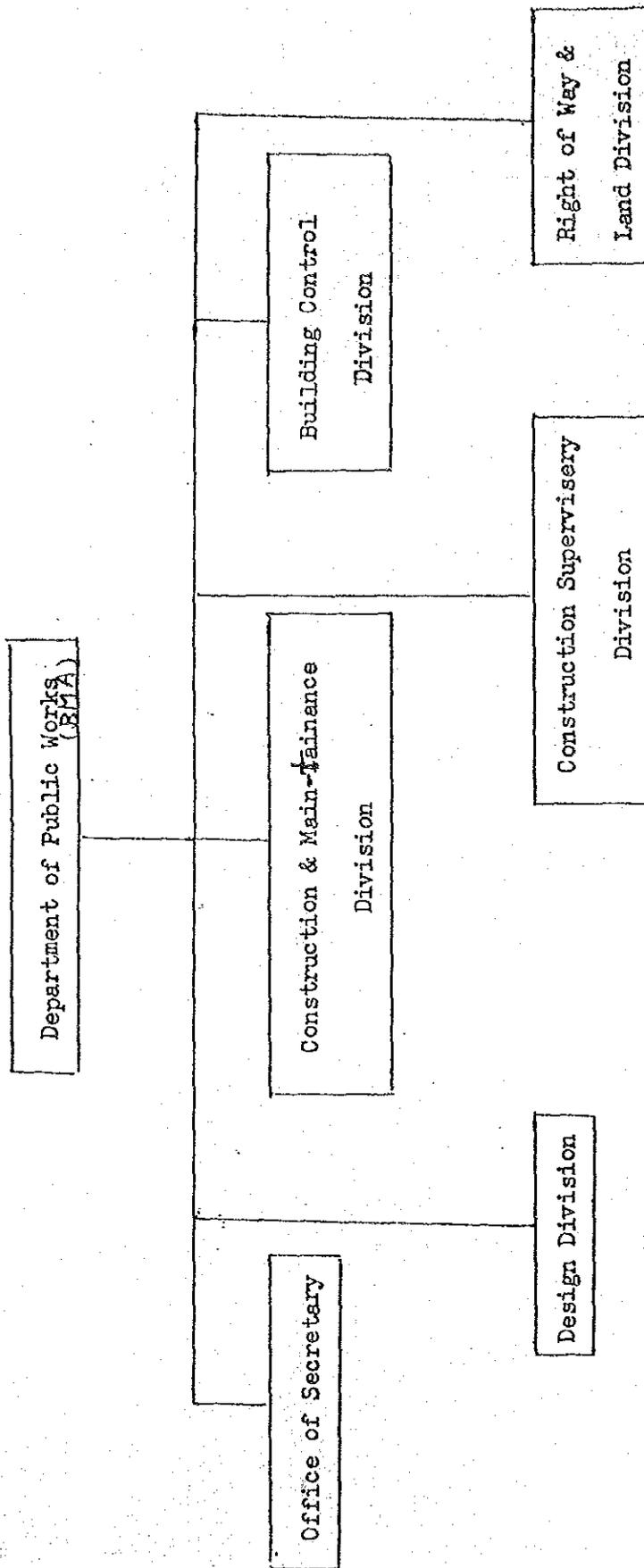


圖-3 BMA組織圖

(3) マレーシア

1) 調査の概要

マレーシアの帰国研修員は、合計22名であるが、以下の5名に面談し調査することができた。

Mr. Gouananthan Kandian (昭和47年度帰国研修員)	Asst. Director of Road Branch, Public Works Department(PWD)
Mr. Wan A. Rahman Yaacob (昭和49年度帰国研修員)	Deputy Director General I, Public Works Department(PWD)
Mr. Ghazali B. Mb. Mor (昭和60年度帰国研修員)	Director of Operations Div. Highway Authority of Malaysia(HAM)
Mr. Ismail B. Md. Sallen (昭和61年度帰国研修員)	Senior civil Engineer, Penang Bridge Project, Highway Authority of Malaysia(HAM)
Mr. Ainuddin Bin Abdul (昭和43年度帰国研修員)	Vice-Chancellor, University Technology Malaysia

Public Works Departmentは、マレーシアの公共事業全般を扱う行政機関であり、その組織図を図-4に、また道路局の組織図を図-5に示す。PWDでは、Mr. Alexius Loo (Director of Highway Planning Unit)、Mr. P. Sandramoorthy (Deputy Director of Road Division) と懇談する機会を得た。

Highway Authority of Malaysiaは、マレーシアの高速道路の建設及び維持管理を行う機関であり、その組織図を図-6に示す。HAMでは、Mr. Dato' Mustapha Ahmad (Director General)、Mr. Chua Lee Boon (Director of Operation Division) と懇談する機会を得た。

また、研修員派遣窓口であるPublic Services Department (PSD) 及びK. L. City Hallを表敬訪問する機会を得た。さらに、クアラルンプール周辺道路事情及びアジアハイウェイの一部であるクアラルンプール～マラッカ間の高速道路視察を実施した。

2) 調査結果

① 研修員受入れ事業に関する提言

マレーシアにおいても帰国研修員の研修に対する評価は非常に高いものがあったが、セミナーに関して次のような改善等の意見を得た。

- (イ) 講義は通訳を介せず英語で実施する。
- (ロ) 講義に下記の内容を含める。(あるいは充実する。)
 - ・トンネル建設技術
 - ・舗装のリサイクル
 - ・建設機械
 - ・道路の維持管理

・開発途上国において特有な課題

(イ) 現場見学を増す。

(ニ) セミナーの中で短期間（夜間等）の日本語コースを設ける。

② フォローアップ事業に関する要望

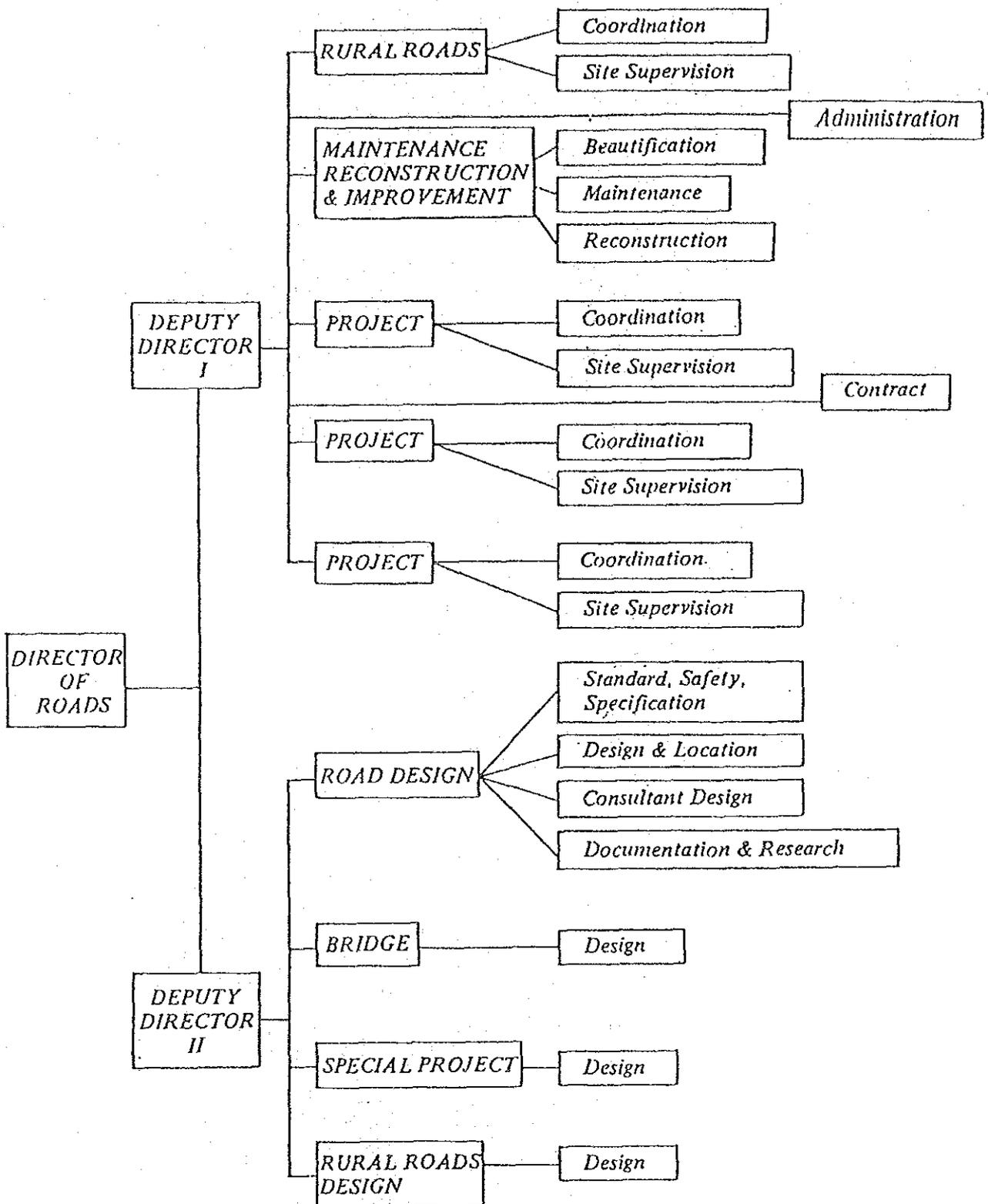
(イ) 道路建設に関する最新の情報、出版物を定期的に送付してほしい。

(ロ) 帰国研修員を対象とした上級クラスを設置してほしい。

(ハ) 個別コースの帰国研修員にもフォローアップサービスを願いたい。

(ニ) 日本における「On the Job Training」を増設してほしい。

マレーシアで調査した内容については、業務の報告書を作成し、JICA現地事務所を通じてマレーシアの関係機関へ提出した。（資料-4）



Organisation Chart of the Road Branch.

圖-5 道路局組織圖

MALAYSIAN HIGHWAY AUTHORITY
(Incorporated by Act of Parliament, 1980)

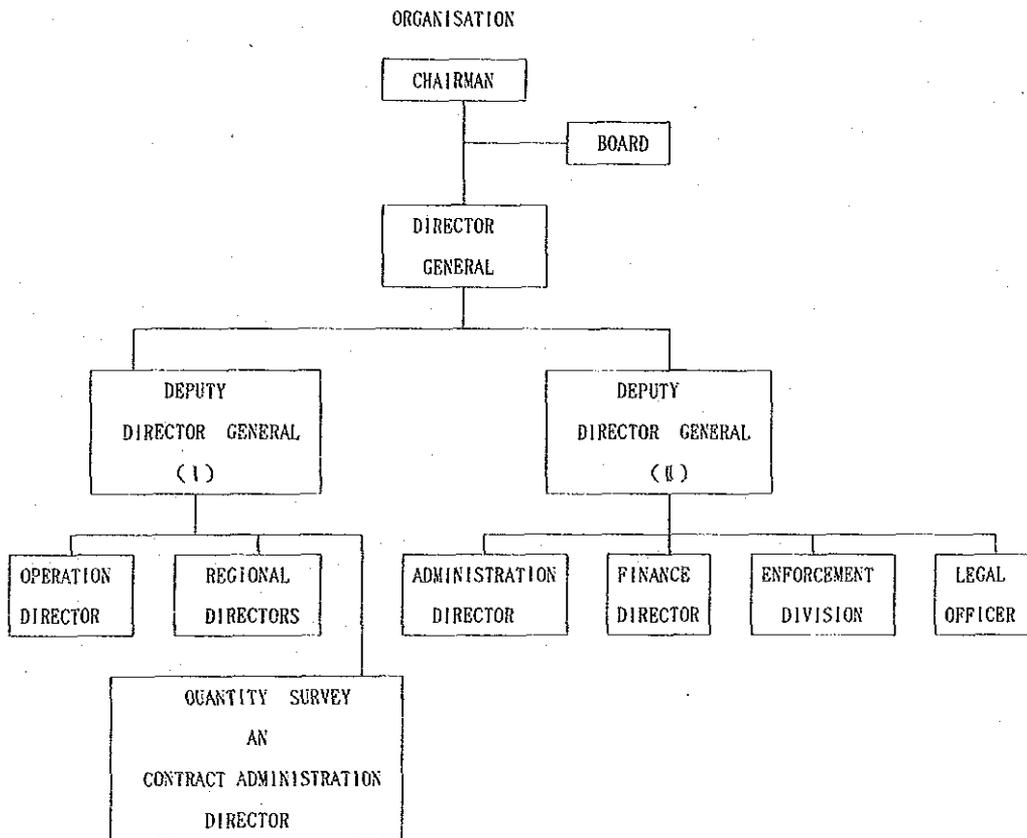


圖-6 MHA組織圖

(4) インド

1) 調査の概要

インドの帰国研修員は、合計17名であるが、Ministry of Surface Transport (MST) の Chief Engineerである以下の4名に面談し、調査することができた。

Mr. R. P. Sikka (昭和43年度帰国研修員)

Mr. V. K. Arora (昭和47年度帰国研修員)

Mr. R. K. Saxena (昭和48年度帰国研修員)

Mr. Sham Sunder (昭和63年度帰国研修員)

Ministry of Surface Transportは、海上(水上)交通及び道路交通を扱う行政機関で、その組織図を図-7に示す。MSTでは、Mr. K. K. Sarin (Director General, Road Department and Additional Secretary of the Govt. of India) と懇談する機会を得た。

また、研修員派遣窓口であるMinistry of Financeへの表敬、道路関係機関として、Municipal Cooperation of Delhi, Central Road Research Institute, Delhi Administration Zone I, Ministry of Environment and Forest, Ministry of Works and Housingを訪問した。さらに、デリー市内の道路事情、建設工事現場、デリーとアグラを結ぶ国道2号線の道路視察を実施した。

2) 調査結果

① 研修員受入れ事業に関する提言

インドにおいても帰国研修員の研修に対する評価は非常に高いものがあったが、セミナーに関して次のような改善等の意見を得た。

- (イ) 専門分野別に共通講義ではなく、個別講義を設ける。(2週間程度)
- (ロ) 配布資料は英訳されたものにする。
- (ハ) 建設工事現場見学を増す。
- (ニ) 最新技術に関する講義を設ける。

② フォローアップサービスに関する要望

- (イ) 帰国研修員を対象とした2週間程度の上級クラスを設置してほしい。内容としては、舗装補修、建設施工管理に関するものが望ましい。
- (ロ) 年報等の道路関係出版物を定期的に送付してほしい。

③ その他フォローアップサービスとは直接関係しないが、下記の様な要望が出た。

- (イ) 高速道路の維持、管理、設備に関する日本人専門家の派遣。
- (ロ) 高速道路の管理、交通管制に関する日本でのOJTの実施。
- (ハ) 日本の土木研究所、日本道路公団試験所等へのインド人研究者の派遣。

インドで調査した内容については、業務の報告書を作成し、JICA現地事務所を通じてインドの関係機関へ提出した。(資料-5)

ORGANISATION CHART OF MINISTRY
OF SURFACE TRANSPORT

APPENDIX-II
(Para. 1.3.4)

AS ON 29-2-1988

MINISTER OF STATE

DEPUTY MINISTER

SECRETARY

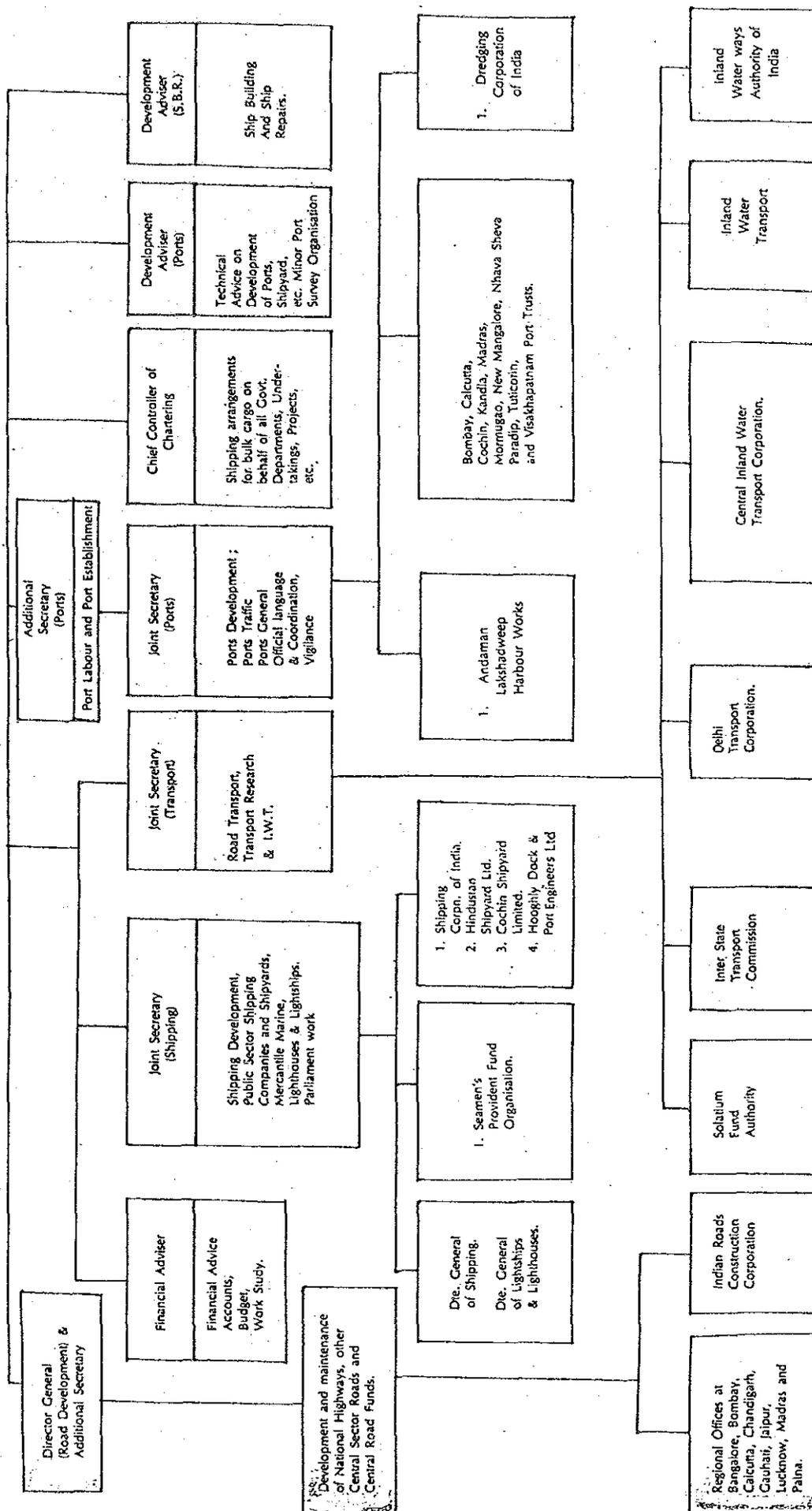


图-7 Ministry of Surface Transport 組織圖

4. 調査結果のとりまとめ

今回のタイ、マレーシアおよびインドでのハイウェイセミナー帰国研修員に対する巡回指導による調査結果をとりまとめるとつぎのとおりである。

(1) 帰国研修員の活動状況とハイウェイセミナーに対する評価

今回面談することのできた帰国研修員はいずれもそれぞれの機関において重要なポストにあり、研修結果をその業務に活用している。したがってハイウェイセミナーは帰国研修員および所属機関の上司等から高く評価されており、今後の継続ならびに内容の充実の要望が強い。

(2) 研修員受入事業に関する提言

今回面談することのできた3ヶ国の帰国研修員の研修員受入事業に関する意見を取りまとめると下記のとおりである。

1) 期間及び時期

時期については現状が望ましいとしているが、期間は現在の2ヶ月間を3ヶ月間に延長し、内容を充実してほしいという意見が多く聞かれた。

2) 講義及びテキスト

現在、講義については、日本語でなされたものを通訳を介して研修生に伝えられるものが多いが、講義の効率の向上また、特に専門分野については、正確に内容を伝える必要性から、英語で実施されるべきであるという意見が多く聞かれた。さらに、配布される資料についても、それを有効に利用するために英語で用意する必要がある。

3) 講義科目

講義科目については、各国の事情、帰国研修員の専門分野が多様であり、さまざまな意見が出たが、まとめると下記の様な意見が多く聞かれた。

① 新設もしくは充実すべき講義内容

- ・用地取得、補償に関する講義
- ・トンネル建設技術、舗装のリサイクル技術、建設機械等の最新技術に関する講義
- ・道路の維持管理に関する講義

② 共通講義だけでなく、専門分野別に個別の講義を設ける。

③ 開発途上国において特有な問題に関する講義を設ける。

4) 現場見学

ハイウェイセミナーにおける現場見学の評価は非常に高いものがあり、最新技術、工法を駆使した道路建設現場への見学を今後より充実してほしいとの要望が多く聞かれた。

5) その他

その他の意見として日本語の講座を設けてほしいという意見が聞かれた。

(3) フォローアップ事業に関する要望

1) 情報提供

最新の技術情報、出版物を定期的に送付してほしい。

2) 上級コースの設置

帰国研修員を対象とした上級コースを設けてほしい。

上記の要望については、今回調査した3ヶ国になおいて、共通して出されたものであり、強い要望事項として報告したい。

3) その他

その他の要望として、研修員が帰国後、各関係機関に研修内容を伝えるために、研修で使
用したスライド、ビデオ等の教材を入手したいとの意見が出た。

5. 特別講義の概要

今回の巡回指導では、各国において「最新の道路建設技術」と題する特別講義を実施した。その概要は下記のとおりである。

(1) 日 時

タ イ	昭和63年11月24日	14:00 ～	於 DOHセミナールーム
マレーシア	昭和63年11月30日	15:30 ～	於 Holiday Inn, City Centre会議室
イ ン ド	昭和63年12月7日	11:00 ～	於 Maurya Sheraton Hotel 会議室

(2) 出席者

タ イ	27名
マレーシア	16名
イ ン ド	18名

(3) 特別講義の内容

今回の巡回指導で実施した特別講義の内容は下記のとおりである。

1) 「R I計器による盛土の品質管理」、「鉄筋による法面の補強土工法」等の日本の道路建設における最新技術の紹介。

2) 本州四国連絡橋（瀬戸大橋）の建設に関するビデオ上映

本特別講義は好評のうちに実施され、特に瀬戸大橋の建設に関するビデオについては、入手希望が多かったため、各国においてタビングし提供した。

6. 結 論

ハイウェイセミナーは、昭和39年以来、世界各地の発展途上国からこれまでに合計325名の研修員を受入れ、これらの国々における道路技術者の養成に貢献してきている。

今回の巡回指導により、タイ、マレーシアおよびインドの合計28名の帰国研修員をはじめ、これらの国における道路行政関係機関の要人と面談する機会を得たが、これらを通じて帰国研修員の活躍状況やハイウェイセミナーに対する高い評価を知ることができた。

今回得られた調査結果をもとに、ハイウェイセミナーの研修員受入れ事業およびフォローアップ事業に関して次のような提言をしたい。

(1) 研修内容に関する提言

現在実施されている研修内容については、各国の帰国研修員いずれからも高い評価を得ているが、より一層、効果の大きいものとするために、現在開発途上国がハイウェイの整備を実施していく上で必要な内容についてより充実していくべきであろう。また、講義及びテキスト等の資料については、可能な限り英語を使用すべきであろう。

また、現場見学は、日本における新工法、新技術を採用している現場を中心により一層の充実が必要と思われる。

(2) フォローアップ制度の確立

帰国研修員のほとんどが日本の最新技術情報もしくは出版物の定期的な送付を強く望んでいる。今後、これを可能にする制度の確立を検討すべきであろう。

また、帰国研修員を対象とした上級コースの設置要望についても、その内容含めて検討していく必要がある。

上記の他にも、種々の要望が帰国研修員から出されたが、今後その実現の必要性も含めて検討していくべきであろうと考える。

今回のタイ、マレーシア及びインドにおける巡回指導において、数多くの有益な意見を聞くことができた。今回の提言がハイウェイセミナーの今後の一層の充実に役立てられれば幸いである。

最後に、今回の巡回指導に際して御協力を賜った現地の大使館ならびに JICA 事務所の関係各位に対して感謝の意を表します。

資料1 旅行経路図



資料 2 QUESTIONNAIRE

Please fill in the following and reply to the questions.
In order to improve the future programme of the Seminar, your
frank opinions and suggestions are highly appreciated.
(Please write in block letters or typewrite.)

I. General question

(1) Your Name Mr./ Ms. _____

(2) Year you participated in the Seminar
19_____

(3) Occupation & Position

A. At the time when you participated in the Seminar.

Position _____

Organization _____

B. At present

Position _____

Organization _____

* Please describe your duty in detail.

(4) Address of your Office & residence

A. Office _____

Residence _____

(5) Please draw a chart of the organization to which you
belong and indicate your section in annexed paper.

- (6) If you are facing any technical problem at present, please describe it.

II. Questions on the Seminar you attended

- (1) Was the Seminar efficient to your job after returnig home ?

A. Yes. In what aspects ? _____

B. No. For what reason ? _____

- (2) Do you have any proposal or suggestions for the improvement of the Seminar ?

A. Duration and season to be held

B. Lecture

C. Observation Trip

D. Accommodation

E. Other Comments

III. Questions on the follow-up service for JICA ex-participants

- (1) What kind of follow-up service do you expect ?

- (2) Others, if any

VI. Do you have any other requests to the Japan International Cooperation Agency (JICA) or Ministry of Construction (MOC) concerning the Seminar ?

Thank you for
your kind cooperation

Nov. 26, 1988

To whom it may concern:

Summarized Report on activities conducted in Thailand by Follow-up Team of Highway Construction Seminar for ex-participants of JICA.

1. Objectives:

The Follow-up Team visits Ex-participants' organizations and related organs for the purpose of offering guidance through consultation, holding a seminar, evaluating the results of training in Japan and assessing problems and needs in participants's countries as well as improving JICA's training programmes.

2. Period:

From Nov. 21, 1988 to Nov. 26, 1988

3. Members:

(1) Mr. Michio Okahara

Head, Foundation Engineering Division
Structure & Bridge Engineering Department
Public Works Research Institute
Ministry of Construction

(2) Mr. Ikuo Okuwaki

Civil Engineer, Planning Division
Planning & Research Department
Japan Highway Public Corporation

(3) Mr. Yoshiaki Shimada

Training Officer, Operation Division
Tokyo International Center (TIC)
Japan International Cooperation Agency

4. Activities:

- Nov. 21 (Mon.) Arrived in Bangkok at 19:05 by JL 471, met by Mr. Uo, JICA Office
- Nov. 22 (Tue.) *Briefing session at JICA Office at 10:00
- *Courtesy call to Japanese Embassy, met by Mr. H. Matsuda, First Secretary of the Embassy at 11:15
- *Call to Dept. of Technical and Economic Cooperation (DTEC) at 13.30, met by Mr. Thawal Polpuech, Director of External Cooperation Div. I, DTEC
- Nov. 23 (Wed.) *Courtesy call to Mr. Sathien Vongvichien, Director-General, Dept. of Highway (DOH), at 8:00
- *Meeting with 12 exparticipants of DOH (refer to attached list) at 9:00, with Mr. C. Pichien, Director of Training Div., as Chairman
- *Courtesy call on Mr. Siva Charoenpong, Deputy Governor for Operations, Expressway Rapid Transit Authority of Thailand (ETA) at 14:00
- *Meeting with 6 exparticipants of ETA (refer to attached list) at 14:20, led by Mr. Pachearn Pirotesak, Technical and Planning Div., ETA.
- *Observation of roads in and around Bangkok at 16.00

- Nov. 24 (Thur) *Meeting with Mr. Kanchai Nopakaew (exparticipant in 1967). Director of Construction Control and Supervision Div., Dept. of Public Works, BMA at 9:00
- *Report making at Hotel at 10:30
- *Special lecture titled "Current Topics on Highway Construction Technology" lectured by Mr. M. Okahara, head of the Team, attended by 27 exparticipants (DOH, ETA, BMA, ARD), followed by disscussion, at Seminar Room, DOH, at 14:00
- *Reception by Head of Follow-up Team at Ambassador Hotel at 18:30, with attendants of 18 person (including 14 ex-participants)
- Nov. 25 (Fri) *Courtesy call to Japanese Embassy and JICA Office at 10:30 respectively
- *Observation of roads and constriution sites at 13:00
- Nov. 26 (Sat) *Due to leave Bangkok for Kuala Lumpur at 13:35 by BA33

5. Comments in Summary:

- (1) Among thirty-one (31) ex-participants of Highway Construction seminar in Thailand, we could meet nineteen (19) ex-participants during our stay. Through meeting with them, we could see their activiejs and obtain their proposal for improvement of the seminar and needs to follow-up services on the seminar.
- (2) They are assigned to important positions of their own Organization in the field of highway construction and operation It is of the team's conviction that they have been engaging in

- Nov. 24 (Thur) *Meeting with Mr. Kanchai Nopakaew (exparticipant in 1967). Director of Construction Control and Supervision Div., Dept. of Public Works, BMA at 9:00
- *Report making at Hotel at 10:30
- *Special lecture titled "Current Topics on Highway Construction Technology" lectured by Mr. M. Okahara, head of the Team, attended by 27 exparticipants (DOH, ETA, BMA, ARD), followed by discussion, at Seminar Room, DOH, at 14:00
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5. Comments in Summary:

- (1) Among thirty-one (31) ex-participants of Highway Construction seminar in Thailand, we could meet nineteen (19) ex-participants during our stay. Through meeting with them, we could see their activities and obtain their proposal for improvement of the seminar and needs to follow-up services on the seminar.
- (2) They are assigned to important positions of their own Organization in the field of highway construction and operation. It is of the team's conviction that they have been engaging in

their activities effectively using their knowledges and technics acquired in Japan.

(3) Although seminar they had attended was very useful, they made some opinions and suggestions for the further improvement of the seminar as follows:

a) Lecture should be given in English without aids of interpreter.

b) Subjects on "Land Acquisition" should be included in curriculum of the Seminar together with "Compensation Problems" thereof.

c) More observation trips to construction site should be arranged in connection with lectures given.

d) Duration of the Seminar should be extended to another month.

(4) Their suggestions on follow-up service are as follows:

a) Technical informations, documents and publications at the latest on highway construction be regularly sent to the ex-participants

b) New courses be set up with coverage of road maintenance for ordinary highway and long span steel bridge, toll road management, tunnel construction and computer application to highway design respectively.

c) An advance seminar be set up with short term for ex-participants.

d) Visual aided materials used in the Seminar, such as slides & videos be distributed to participants.

- e) The video tape on the Seto Ohashi Bridge be requested to be copies. The request was granted.

Finally, we would like to express our heartfelt gratitude to 19 ex-participants and authorities concerned for their kind arrangement and hospitality. We hope that seminar will be improved in the near future on the result of our activities.

LIST OF EX-PARTICIPANTS
ON HIGHWAY CONSTRUCTION SEMINAR
DEPARTMENT OF HIGHWAYS
MINISTRY OF TRANSPORT AND COMMUNICATIONS

<u>Name</u>	<u>Participation Year</u>	<u>Present Office (Post)</u>
1. Mr. Kusol Khaimarn	1967	District Engineer, Pattani Highway District
2. Mr. Somsak At-ong	1967	District Engineer, Ratchaburi Highway District
3. Mr. Sombut Issarachai	1969	Professor, Khonkaen University
4. Mr. Siripongs Intuwong	1971	Area Engineer Highway Construction & Rehabilitation Sec. National Highway Construction Division
5. Mr. Chumchai Chumsri	1972	Project Engineer National Highway Construction Division
6. Mr. Sukree Dheeragool	1972	Deputy Director-General for Engineering
7. Mr. Supon Yaipakee	1973	Director Aids Control Office
8. Mr. Winich Benjapansa	1975	Division Engineer Suphanburi Highway District
9. Mr. Vicha Sappanukrau	1981	Secretary Office of Secretary
10. Mr. Aphisit Wichyanrat	1984	Chief of Materials Testing Section, Chiang Mai Highway Field Division

- | | | |
|---------------------------------|------|---------------------------------------------------|
| 11. Mr. Uthai Patrasook | 1987 | Technical Assistant,
Loan Control Office |
| 12. Mr. Prapan Tuntisaewa | 1987 | Project Engineer
Feeder Road Construction Div. |
| 13. Mr. Chakorn Ratchatatevintr | 1988 | District Engineer
Uttaradit Highway District. |

LIST OF EX-PARTICIPANTS
ON HIGHWAY CONSTRUCTION SEMINAR
EXPRESSWAY AND RAPID TRANSIT AUTHORITY OF THAILAND (ETA)

<u>Name</u>	<u>Participation</u> <u>Year</u>	<u>Present Office (Post)</u>
1. Mr. Pridi Chantaravitoon	1976	Director of Expressway Management Department, ETA
2. Mr. Somchai Jarukasemratana	1981	Director, Expressway Maintenance Division, ETA
3. Mr. Sintop Sirisingha	1982	Administrator Grade 7, ETA
4. Mr. Sutas Sutanchinont	1984	Director, Expressway Network Division, ETA
5. Mr. Pachearn Pirotesak	1985	Chief of Project Planning Sect. ETA
6. Mr. Akanit Ampawasiri	1986	Engineer Grade 7, ETA

Dec. 2, 1988

To whom it may concern :

Summarized Report on activities conducted in Malaysia by Follow-up Team of Highway Construction Seminar for ex-participants of JICA.

1. Objectives :

The Follow-up Team visits Ex-participants' organizations and related organs for the purpose of offering guidance through consultation holding a seminar, evaluating the results of training in Japan and assessing problems and needs in participant's countries as well as improving JICA's training programmes.

2. Period :

From Nov.26, 1988 to Dec. 2, 1988.

3. Members :

- (1) Mr. Michio Okahara
Head, Foundation Engineering Division
Structure & Bridge Engineering Department
Public Works Research Institute
Ministry of Construction
- (2) Mr. Ikuo Okuwaki
Civil Engineer, Planning Division
Planning & Research Department
Japan Highway Public Corporation
- (3) Mr. Yoshiaki Shimada
Training Officer, Operation Division
Tokyo International Center (TIC)
Japan International Cooperation Agency

4. Activities :

- Nov. 26 (Sat.) * Arrival in Kuala Lumpur at 20:35 delayed (due to arrive at 16:40) by BA-033.
- Nov. 27 (Sun.) * Road inspection of Main Roads and Toll Roads at 8:00.
- Nov. 28 (Mon.) * Courtesy Call to Japanese Embassy, met by Mr M. MIMURA and Mr H. OHNISHI, 1st Secretary respectively, at 9:00.
- * Visit to JICA office, Briefing Session at 9:30.
- * Courtesy Call to Public Services Department (PSD), met by Mr AZIZAN BIN AYOB, Deputy Director of Training and Career Dept. Division, and Mr MOHD NADZIR BIN DON, Asst. Director, Training Division at 14:00.
- * Courtesy Call on Mr ALEXIUS LOO, Director of Highway Planning Unit (HPU), Public Works Department (PWD) at 15:30.
- Nov. 29 (Tues.) * courtesy Call on Mr P. SUNDRAMOORTHY, Deputy Director of Road Division, PWD, at 9:00.
- * Meeting with Mr GOANANANTHAN KANDIAH (an ex-participant in 1972), Assistant Director of Road Branch, PWD, at 9:30.

- * Courtesy Call on Mr WAN A. RAHMAN YAACOB (an ex-participant in 1974), Deputy Director General I, PWD, at 10:15.
- * Courtesy Call on Mr Dato' MUSTAPHA AHMAD, Director General of Highway Authority of Malaysia (HAM) at 14:30.
- * Courtesy Call on Mr CHUA LEE BOON, Director of Operations Division, HAM at 15:15.
- * Meeting with Mr GHAZALI B. MD. NOR (an ex-participant in 1985), Assistant Director of Operations Division, HAM and Mr ISMAIL B. MD. SALLEH (an ex-participant in 1986), Senior Civil Engineer, Penang Bridge Project, HAM, at 15:20.
- * Meeting with Mr AINUDDIN BIN ABDUL WAHID (an ex-participant in 1968), Vice-Chancellor, University Teknologi Malaysia, at 16:00.

Nov. 30 (Wed.)

- * Courtesy Call on Mr K. ARIYATHAVARATNAM, Director of Civil Works and Traffic Department, K.L. City Hall, at 14:00.
- * Meeting with Mr GOANANTHAN (an ex-participant) and Mr ISMAIL BIN MD. SALLEH in 1972 and in 1986 respectively, 2nd interview at 14:30.

* Special Lecture & Discussion titled "Current Topics on Construction Technology", aided with Video, OHP and Slide Projector at conference room of Holiday Inn, City Centre, attended by 16 persons (refer to attendant list attached) at 15:30.

* Reception (High Tea style) by Head of Follow-up Team at Restaurant of the above-mentioned Centre, at 17:00.

Dec. 1 (Thurs.)

* Road Inspection in the southern and northern part of Kuala Lumpur at 8:00.

* Report Making at Pan Pacific Hotel in the afternoon.

Dec. 2 (Fri.)

* Courtesy Call to Japanese Embassy at 10:30.

* Visit to JICA office at 9:30.

Due to leave Kuala Lumpur for India by SQ 113.

5. Comments in Summary :

(1) Among twenty-two (22) ex-participants of Highway Construction seminar in Malaysia, we could meet six (6) ex-participants during our stay. Through meeting with them, we could see their activities and obtain their proposal for improvement of the seminar and needs to follow-up services on the seminar.

- (2) They are assigned to important positions of their own Organization in the field of highway construction and operation. It is of the team's conviction that they have been engaging in their activities effectively using their knowledge and technics acquired in Japan.
- (3) Although seminar they had attended was very useful, they made some opinions and suggestions for the further improvement of the seminar as follows :
- (a) Lecture at the seminar be given in English without aids of interpreters.
 - (b) "Tunnel construction", "Recycling of pavement", " Machinery ", "Highway maintenance" and "Road construction problems peculiar to developing countries" be included in the training content of the Seminar.
 - (c) More field trips be arranged in the Seminar.
 - (d) Evening class of Japanese language be arranged at the short term in the Seminar.
- (4) Their suggestions on follow-up service are as follows:
- (a) Informations, documents and publications on latest developments in the field of highway construction be regularly sent to ex-participants.
 - (b) More "On the job training" be adopted in the Seminar.
 - (c) An advance course of the Seminar be organized for upgrading technical level of ex-participants.

(d) Follow-up services be applied to ex-participants of individual courses in the field of highway construction.

(e) A Video tape "On the Seto-Ohashi Bridge" used in the Lecture be copied for use of Malaysian side. The request was granted.

Finally, it is regrettable to mention that we couldn't meet with the respected number of ex-participants and also couldn't retrieve their "Questionnaire" of satisfactory number (6 ex-participants and 3 Questionnaire), however, we would like to express our heartfelt gratitude to 6 ex-participants and authorities concerned for their kind arrangement and cooperation. We hope that the Seminar will be more improved in the near future on the result of our activities.

ATTENDANT LIST AT SPECIAL LECTURE

- (1) Mr GOANANTHAN KANDIAH, Assistant Director of Road Branch, PWD.
- (2) Mr ISMAIL B. MD. SALLEH, Senior Civil Engineer, Penang Bridge Project, HAM.
- (3) Mr YUSOH HASHIM, District Engineer, PWD.
- (4) Mr GHAZALI B. MD. NOR, Assistant Director of Operation Division HAM.
- (5) Mr THAM KUM WENG, Senior Assistant Director of Bridge Unit, JKR, H.Q.
- (6) Mr LIANG HIAN CHING, Civil Engineer, JOR, Op. Div., PWD.
- (7) Mr K.J.R. SINGAM, Civil Engineer, JOR, Op. Div., PWD.
- (8) Mr SAFFIAN N. ALI, Senior Civil Engineer, JKR Selangor.
- (9) Mr WAN AHMAD, Civil Engineer, DBKL.
- (10) Mr RAMAN ABDUL, Civil Engineer, DBKL.
- (11) Mr TAKEO KAI, Japanese Expert, Bridge Unit, JKR.
- (12) Mr KAZUO FURUGANE, Colombo Plan Expert, PWD.
- (13) Mr HIROTAKA YAMAMURA, Japanese Expert, PWD.
- (14) Mr TAKEICHI SEKIGUCHI, Japanese Expert, HAM.
- (15) Mr SHIGESHI MIMURA, 1st Secretary, Embassy of Japan.
- (16) Mr TAICHI SEKI, Colombo Plan Expert, Ministry of Works.

Dec. 8, 1988

To whom it may concern:

Summarized Report on activities conducted in India by Follow-up Team of Highway Construction Seminar for ex-participants of JICA.

1. Objectives:

The Follow-up Team visits Ex-participants' organizations and related organs for the purpose of offering guidance through consultation, holding a seminar, evaluating the results of training in Japan and assessing problems and needs in participant's countries as well as improving JICA's training programmes.

2. Period:

From Dec. 3, 1988 to Dec. 8, 1988.

3. Members:

- (1) Mr. Michio Okahara
Head, Foundation Engineering Division
Structure & Bridge Engineering Department
Public Works Research Institute
Ministry of Construction
- (2) Mr. Ikuo Okuwaki
Civil Engineer, Planning Division
Planning & Research Department
Japan Highway Public Corporation
- (3) Mr. Yoshiaki Shimada
Training Officer, Operation Division
Tokyo International Center (TIC)
Japan International Cooperation Agency

4. Activities :

- Dec. 3 (SAT) * Arrival at Delhi by KL-840 at 0100, met by Mr.T.KURABAYASHI, Resident Representative of JICA India Office.
- * Observation of roadway in and around Delhi at 1030.
- Dec. 4 (SUN) * Observation of main road to AGRA at 1000.
- Dec. 5 (MON) * Courtesy call on Mr.S. Varadhachary, Joint Secretary, Department of Economic Affairs, Ministry of Finance at 0930.
- * Meeting with Mr.R.P. Sikka, Chief Engineer, Ministry of Surface Transport (JICA Ex-participant in 1968) at 0940.
- * Visit to the Embassy of Japan at 1030, met by Mr.Y.SUGANO, Counsellor and Mr.M.SAIGO, 1st Secretary, and JICA India Office at 1100, met by Mr.T. KURABAYASH, Resident Representative.
- * Courtesy call to Ministry of Surface Transport, met by Mr.K.K. SARIN, Director General, Road Department and Additional Secretary to the Govt. of India, at 1430.

Meeting with JICA Ex-participants:

- (1) Mr.R.P. SIKKA (in 1968), Chief Engineer (M.S.T.), Roadways.
- (2) Mr.V.K. ARORA (in 1972), Chief Engineer (MST), Roadways.
- (3) Mr.R.K. SAXENA (in 1973), Chief Engineer (MST), Roadways.

(4) Mr.SHAM SUNDER (in 1988), Chief Engineer (MST), Roadways.

* Visit to Municipal Corporation of Delhi, Town Hall at 1630.

Meeting with:-

(1) Mr.G.R. AMBWANI, Engineer In-charge, Engineering Department (Ex-participant of JICA Sewage Waste Disposal Course in 1968)

(2) Mr.D.R. SHARMA, Chief Engineer, Construction Unit.

* Observation of Road Construction Site under Railway Bank at 1720 (accompanied by Mr.AMBWANI and Mr.SHARMA).

Dec. 6 (TUE)

* Visit to Central Road Research Institute at 0930.

Meeting with Mr.M.P. DHIR, Director, followed by observation of Research Work at the Institute.

* Meeting with Mr.O.P. GOEL, Chief Engineer, Public Works Department, Delhi Administration Zone I, at 1200.

* Meeting with Mr.K.K. MADAN, Chief Engineer of Construction Unit, Ministry of Environment & Forest, at 1430.

* Courtesy call to Central Public Works Department, Ministry of Works and Housing, at 1500.

Meeting with Mr.HARISH CHANDRA, Director General, and Mr.V.K. KAPOOR, Supdt. Engineer (Ex-participant of JICA Sewage Waste Disposal Course).

Dec. 7 (WED)

- * Special Lecture & Discussions titled "Current Topics on Construction Technology", aided with Video, OHP and Slide Projector, at Conference Room of Maurya Sheraton Hotel, lectured by Mr.M.OKAHARA, Head of the Follow-up Team and attended by 18 persons (refer to attendant list attached), at 11.00.

Reception by Head of the Team being followed at 12.30.

Dec. 8 (THU)

- * Observation of construction sites of roads and bridges at 1000.

- * Visit to the Embassy of Japan and JICA India Office at 1400.

Due to leave Delhi for Japan at 0330 by JL-494.

5. Comments in Summary:

- (1) Among seventeen (17) Ex-participant of Highway Construction Seminar in India, we could meet four (4) Ex-participants during our stay. Through meeting with them, we could see their activities and obtain their proposal for improvement of the Seminar and needs to follow-up services on the Seminar. Further, we would like to mention that the Team had chances to hear opinions from other people of related organs in addition to those of Ex-participants.
- (2) They are assigned to important positions of their own organisation in the field of Highway Construction and Operation. It is the Team's conviction that they have been engaging in their activities effectively using their knowledge and technics acquired in Japan.

- (3) Although the Seminar they had attended was very useful, they made some opinions and suggestions for the further improvement of the Seminar as follows:
- (a) The last 2 weeks of training period be spent for individual study by courses divided in accordance with their specialities.
 - (b) The teaching materials at lecture be the English-written. (Japanese-written tests were often given at lecture with interpreters).
 - (c) More observations at construction site and lectures in the field of latest construction technology be arranged in caliculum.
- (4) Their suggestions on follow-up service are as follows:
- (a) Setting up of the Highway Construction Seminar at advanced level, period being 2 weeks,
 - 1st week for lectures centering on "pavement improvement" and "traffic safety"
 - 2nd week for On the Job Training centering on "Management of Construction".
 - (b) Periodical sending of publications on roads in Japan, such as "Annual Report".
- (5) Request to JICA and Ministry of Construction
- (a) Despatch of two (2) Japanese experts has been orally requested at the earlier possible sending in the field of maintenance, operation and equipments of expressways. The Team advised them to take necessary processives through appropriate channels.

Further, they added that they are considering to request receiving of participants for On-the-Job-Training concerning "Management and Control on Expressways in Japan".

- (b) There has been a keen desire for training of Indian Researcher at Japanese Research Organs, such as Japan Public Work Research Institute and research laboratories in Japan Highway Public Corporation.

They requested JICA and MOCs' help.

Finally, we would like to express our heartfelt gratitude to 4 Ex-participants and authorities concerned for their kind arrangement and hospitality. We hope that the Seminar will be improved in the near future on the result of our activities.

ATTENDANT LIST AT SPECIAL LECTURE

- | | |
|------------------------|----------------------------------------------------------------|
| (1) MR.V.K. ARORA | Chief Engineer, Ministry of Surface Transport (MOST) |
| (2) MR.R.L. KAPOOR | - do - |
| (3) MR.A.K. KAUL | - do - |
| (4) MR.J.K. DUGAD | - do - |
| (5) MR.R.K. SAXENA | - do - |
| (6) MR.K.K. SARIN | Director General, Road Development, MOST |
| (7) MR.N. KOSHI | Asst. Director General, Road Development, MOST |
| (8) MR.M.K. SAXENA | Director, Road Development, MOST |
| (9) MR.SHAM SUNDER | Chief Engineer, Chandigarh MOST |
| (10) MR.G. SINGH | Chief Engineer, Central Public Works Department (C.P.W.D.) |
| (11) MR.K.K. MADAN | Chief Engineer, Ministry of Environments and Forests |
| (12) MR.K.S. GANGADHAR | Chief Engineer, C.P.W.D. |
| (13) MR.S.K. DHAWAN | Superintendent Engineer, Ministry of Environment and Forests |
| (14) DR.M.P. DHIR | Director, Central Road Research Institute |
| (15) MR.R.P. SIKKA | Additional Director General, Ministry of Transport |
| (16) MR.M.K. BHALLA | Superintendent Engineer, Ministry of Transport |
| (17) MR.R.L. KOUL | Director (P.C.B.) |
| (18) MR.G.R. AMBWANI | Engineer-In-Charge, Municipal Corporation of Delhi, Town Hall. |

資料 6 語学試験問題 (タイ DTEC)

(1)

DTEC LANGUAGE TEST GUIDE

A. Introduction

1. Test Aim : The DTEC Language Test is prepared and administered by the staff of the DTEC Language Institute. The test is used with candidates who apply for scholarships under foreign technical assistance programs. It is designed to assess whether or not a candidate has sufficient English to meet the linguistic demands of his or her intended course of study or training.
2. Test Levels : There are three different versions of the test at differing levels of difficulty. The version used depends on the type of scholarship offered. The following table shows the main points, although these can vary depending on the requirements of the donor country.

LEVEL	CANDIDATES	Pass Mark
1. Academic A	Ph.d.; Masters; research work; seminars	70%
2. Academic B	Post graduate diplomas or certificates; Bachelors Course/parts; seminars	70%
3. Practical	Practical Training involving academic work	60%
	Practical Training or Observation Tours	70%
		50%

3. The Test : The test consists of three parts: Listening (50 minutes) reading (90 minutes) and usage (45 minutes). An answer sheet is provided for each part. Candidates should not write on the question papers.

B. Test Format

1. Listening Test : This test is given in the Language Laboratory. The listening test is divided into four parts. All four parts are taken by Academic level candidates, but Practical level candidates only take the first three parts. The listening test aims to present the candidate with a variety of realistic listening tasks in the form of monologues and dialogues. Candidates may be required to relate what is heard to a diagram or table, take notes or listen for relevant information. (FOR MORE INFORMATION AND EXAMPLES ATTACHED)

-2-

(2)

2. Reading Test :

- A. For academic level candidates there are six sections in the reading test, which aims to present the candidate with passages that vary in topic, style and length. Passages may include graphical information but specialist knowledge is not required as only topics suitable for a general reader are chosen. Candidates may be required to identify the main point of a passage, infer meaning from the context of a passage or complete a table. A variety of question formats are used. (FOR MORE INFORMATION AND EXAMPLES ATTACHED)
- B. For practical level candidates there are two sections in the reading test. There are questions on vocabulary, reference and general comprehension.

(FOR MORE INFORMATION AND EXAMPLES ATTACHED)

3. Usage Test : There are two parts to the usage test. For

practical level candidates both parts consist of multiple choice close test in which candidates are required to identify the most suitable alternative for each blank. Academic level candidates are required to do one multiple choice close test and one close test in which the candidate supplies the most appropriate word. The usage test aims to test the candidate's knowledge of the language, including grammatical knowledge.

(FOR MORE INFORMATION AND EXAMPLES ATTACHED)

The steam engine, 4. _____ was perfected by a Scotsman named James Watt, was the first 5. _____ provide power for the new trains. 6. _____ one time all locomotives had steam engines.

1. A been 2. A and 3. A or
 B just B they B especially
 C now C which C and
 D completely D these D mostly
2. A after 5. A which 6. A For
 B it B to B At
 C when C engine C That
 D which D that D Since

Answers: 1. been 2. which 3. or

PART TWO (For Academic Level)

You will be given a passage containing blanks. On your answer sheet you should write down one word for each blank.

EXAMPLE:

THE POSTAL SERVICE

Today over 100 countries are linked together in the Universal Postal Union, and the number of countries is constantly growing. Within each country mail is carried by the most efficient means possible - by dog sled in the polar regions, by native boat among the islands of the Pacific, by camel in the desert, by car where roads permit, and by train wherever rail schedules exist. In areas 1. _____ rail service is inadequate or 2. _____ been discontinued, highway postal routes have 3. _____ established. On 4. _____ routes buses or trucks carry 5. _____ mail.

1. _____ 13.
2. _____ 14.
3. _____ 15.

Answers: 1. where 2. has 3. been

CANDIDATES' GUIDE TO THE DTBC USAGE TEST

The Usage Test has two parts. Candidates should answer all the questions using their answer sheet. The Usage Test takes 45 minutes.

PART ONE

You will be given a passage to read with numbered blanks. From the multiple choice answers printed on the answer sheet you should select the best alternative. Draw a circle round the letter you choose for each question.

NOTE: For Practical candidates only, Part Two of the Usage Test consists of a similar exercise to Part One.

EXAMPLE:

TRANSPORTATION ON WHEELS: TRAINS AND AUTOMOBILES

It's hard to imagine a horse pulling a railroad car. But it wasn't long ago that horses did just that. Many of the early cars were pulled by horses. And these cars weren't easy to pull, either. They didn't have steel wheels that moved smoothly over steel rails. Both the wheels and the rails were made of wood.

Today the horses have 1. _____ replaced by giant locomotives 2. _____ are powered by steam, by diesel engine, 3. _____ by electricity.

Question Type Two

You will read a short passage in which certain words are underlined. You should match each underlined word with the word closest in meaning to it from a list printed below the passage.

EXAMPLE:
 Moreover, compared with the roads or railways, telecommunication routes inflict negligible (10) damage on their surroundings.

DEFINING WORD	WORD IN PASSAGE
importance	
process	
minor	negligible

Answer: 'minor' is the most suitable word and you should write this word in the space provided for question 10 on your answer sheet.

Question Type Three

You will read a longer passage and then complete a table or diagram based on it. You will only need to use one or two words for each question.

ACADEMIC A B LEVEL CANDIDATES GUIDE TO THE DTTC READING TEST.

The reading test for academic A and B level candidates has six parts made up of five different types of question. The test normally lasts 1 1/2 hours, and you should answer all the questions. You will be given a question booklet and an answer sheet.

Question Type One

You will read a short passage which contains some gaps. You should write a suitable word for each gap on your answer sheet.

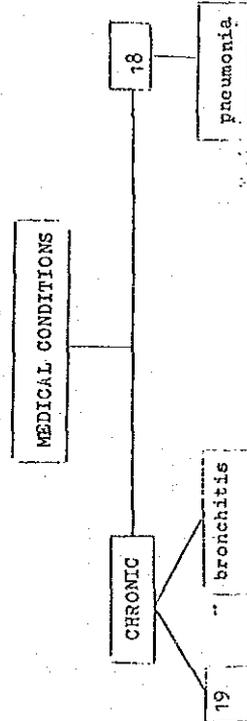
EXAMPLE:

Memory should not (1.) _____ regarded as a kind of store in (2.) _____ items are piled up on each (3.) _____.

Answers: 1. be 2. which 3. other

EXAMPLE:

Many medical conditions are labelled 'chronic'. Once present, such conditions are long term and the individual may never return to full physical health. Examples of this are chronic bronchitis, cirrhosis of the liver and chronic renal disease. Other conditions such as diabetes are also labelled chronic, though with well-controlled replacement therapy the individual may lead a perfectly healthy life. Such patients have a chronic condition but may object to being labelled 'chronically ill'. Other patients in hospital may be suffering from acute conditions such as pneumonia, gastritis or acute pyelitis. Acute conditions usually respond rapidly to treatment so that the hospital stay is shorter for these individuals than for these with chronic conditions.



Answers: (18) Acute (19) Diabetes

Question Type Four

You will read a passage and then write the answer to some questions based on it.

EXAMPLE:

There are several ways in which students and classes can find further information on those aspects of industry which interest them. Listed here are some suggestions about obtaining additional material, useful organisations and a few of the ways in which students can find out more about life in industry.

RESOURCE MATERIAL

Careers Research and Advisory Council

CRAC produces some very useful material, including a production game and business experience case studies. A catalogue is available from the Publications Department, Bateman Street, Cambridge CB2 1LZ.

Also available is a list of business simulations and case studies produced by other organizations which are suitable for use in colleges. The list gives the price and from where they can be obtained.

Question Type Five

You will read a passage and then choose the best answer to the multiple choice questions which follow it.

EXAMPLE:

Plants in Society

Ultimately, all human societies depend on plants. The destructive nature of modern agriculture, with its vast monocultures, and huge machines does them much damage.

Worse still, the acculturation of primitive peoples, ever accelerating in pace, often takes their irreplaceable knowledge from us for good. The plant world can probably supply answers to some of our most urgent problems - but we have to know where to look. Faced with the task of random screening thousands of untried plants, the botanist is like a person fumbling for a key in the dark. The indigenous peoples, however, have hundreds or thousands of years of knowledge to draw on. They hold the key to the plant storehouse.

But though their knowledge is deep, it is not inborn. As communities die out, or are absorbed into the wider society, the oral tradition is broken. When, for example, missionaries in 1959-60 came to aid the Tiliocs of Suriname, who were being decimated by introduced diseases, the medicine they offered persuaded people to abandon their

Company annual reports

Most large companies produce careers booklets and, often, illustrated annual reports. These contain information about their operation and products, together with their financial results which are useful as a basis for discussion. These are sometimes available on request in class sets.

Video Arts

Video Arts produce an excellent, simple and amusing film to explain profit and loss accounts, balance sheets and cash flow. It is called The Balance-Sheet-Barrier. Unfortunately it is not possible to rent this film, but a number of colleges might be able to get together and buy it or to borrow it from a local company which uses it in training. Telephone 01-7347671.

22. Where could somebody who wants to work in industry look for information?

23. What could be a suitable introduction to accounting?

Answers: 22. The CRAC catalogue and/or careers booklets.

23. The video "The Balance-Sheet-Barrier".

old way of life. The Tirios have now virtually ceased to use their old cures; the adults recall some details, but the children know practically nothing of the medicinal properties of their own flora.

27. The main point of the second paragraph (lines 12-21) is that

- (a) primitive peoples prefer modern medicines
- (b) the Tirios no longer know about their plant life
- (c) knowledge of plants can easily be lost
- (d) missionaries help to absorb primitive peoples into modern society.

28. The word "them" in line 3 refers to

- (a) human societies
- (b) plants
- (c) monocultures
- (d) machines

Answers: 27. (c) 28. (b)

CANDIDATES' GUIDE TO THE D.T.E.C. LANGUAGE INSTITUTE LISTENING TEST.

The test has four parts. If you are a candidate for 'academic' training you will take all four parts. If you are a candidate for 'practical' training you will take parts 1, 2 and 3 but not part 4.

PART ONE (approx. 10 mins)

You will hear a short talk. You have to listen to the talk and make some short notes in a table. You will have twenty seconds to study the table before you hear the talk. The first part of the talk is an example and the notes will have already been completed in the table to show you what to do. You will hear the talk once only. First you will have to complete the notes in column two, then in columns three and four together. The will not stop between each column. It is only necessary to write two or three words (or numbers) in each box of the table. Below is an example of the kind of table you might see.

(Jobs)	1	2	3	4
Working Hours (weekly)	(Example)			
Training or Qualifications	approx. 60 hours			
Wage or Salary	driving licence			
Possible disadvantages	average			
Main responsibilities	boring			
	delivery			
	(of goods)			

(2)

PART TWO (approx. 8 mins)

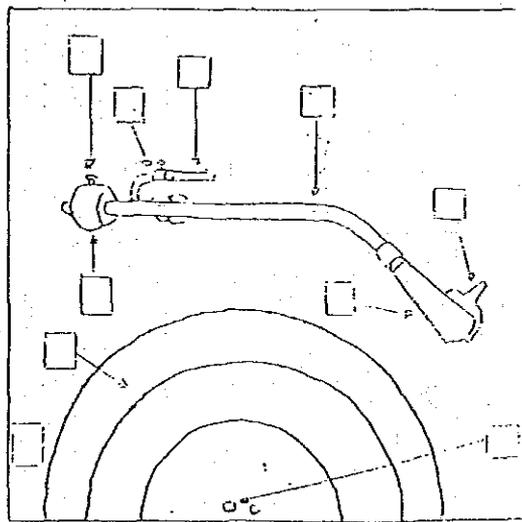
You will hear a short talk describing a diagram. You will have to listen to the talk and label the diagram by putting letters in the correct box on the diagram.
Before the talk begins you will be able to read the words and follow them as they are read on this tape. There will be twelve words.

So :

- A Spindle
- B Pick-up head
- C Large weight
- D* Volume control
- E Stereo deck
- F Rubber mat
- G Stylus lever
- H Flaying surface
- I Pick up arm
- J Small weight
- K Seals
- L Screw

After that you will have twenty seconds to study the diagram (and words again). You will hear the description once only. Each item will be described in the order given (A,B,C etc). You should note that there will be twelve words but only ten boxes to label. Two words will not be used.

Below is an example of the kind of diagram you might see.



(3)

PART THREE (approx. 10 mins.)

You will have three minutes to study a table. The table you see will look similar to this :

Table 1

Job	Salary	Post school qualifications	Hours	Advantages	Main Duties
A	Quite high	about 6-7 years	average long	good status	earing for people
B	low	none necessary	long	outside work	manual work
C	average	approx. 1 year	quit long	can be exciting	public protection
D	high	approx. 6 years	irregular	travel	Transporting people
E	low-average	none-1 year	average	clean	office work
F	average	approx. 2-4 years	average	good holidays	work with children
G	low-high	none necessary	short-long	"own boss"	business

You will then hear six conversations. (The first one will be an example). Between each conversation there is a thirty second pause. The conversations are about six different people. You have to listen to the conversation and match the person with the information given in table 1. To help you do this a second table is given in which you can make notes as you listen to the conversations. It is not essential to make notes but most students find it helps them match the person with the information. When each conversation has finished you should try and match the person with the correct letter. (A, B, C etc.) Write the letter in the bottom row of table 2 which will look similar to this.

(4)

Table 2

	1	2	3	4	5	6
	MRS HOPE (EXAMPLE)	MR KING	MR JOHNSON	MISS BURNS	MISS TAYLOR	MR. THOMAS
Qualifications						
Salary Required						
Working Hours						
Type of work Required						
Character						
Interests						
Job		(F)				

At the end of the last conversation you will have one and a half minutes to complete your answers. You will hear each conversation once only.

PART FOUR (not for 'Practical' training candidates. Approx. 14 mins)

You will hear someone being interviewed about his or her life and work. The interview is divided into five parts. You will hear each part once only. For each part you will have to answer two questions. The questions are multiple choice but you have time (1 min.) to read them before you hear each part of the interview. You can circle the correct answer either while you are listening to the interview or when that part has finished. Below are two examples of the kind of multiple choice questions you might have to answer.

1. The interviewee says that her childhood was unhappy because

- a) her mother did not love her.
- b) she was an ugly child.
- c) she had no father.
- d) she did not like school.

2. The interviewee says that to do her job the most important thing is

- a) qualifications.
- b) interest.
- c) experience.
- d) patients.

資料一7 1988年度(集団)ハイウェイセミナー・プログラム

月	日	曜		日		程		後			修		備	考	
		前	後	午	前	午	後	宿泊地	研修機関	研修窓口	担当者	電話番号			
9月	22日	木	来	日											
	23日	金	休	日	(秋分の日)										
	24日	土	JICA	ブリーフィング											
	25日	日	休												
	26日	月	JICA	オリエンテーション											
	27日	火	同上												
	28日	水	同上												
	29日	木	(講)	日本の道路											
	30日	金	(講)	道路構造令											
	10月	1日	休	日											
	2日	日	休												
	3日	月	(講)	都市内道路計画											
	4日	火	(講)	都市内高速道路											
	5日	水	(講)	沿道環境											
	6日	木	(講)	有料道路制度											
	7日	金	(講)	コンクリート構造物											
	8日	土	休	日											
	9日	日	休												
	10日	月	(体育の日)	移動(東京→つくば)											
	11日	火	(講)	アスファルト舗装											
	12日	水	(講)	建設機械											
	13日	木	(講)	橋梁下部工											
	14日	金	(講)	道路土工											
	15日	土	つくば学園	都市見学											
	16日	日	移動	(つくば→仙台)											

JICA