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Document Date	Document Type	
30 April, 1970	Letter	
Correspondents / Participants To: S. C. Hardy Esq.,		
From: Rendel, Palmer & T	ritton	
		, 9
India - Proposed Second Hi	ighway Project - Consulting Services	
Exception(s)	ighway Project - Consulting Services	
India - Proposed Second Hi Exception(s) Personal Information	ighway Project - Consulting Services	
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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE C. F. B. F. B

OFFICE MEMORANDUM

TO:

Mr. A.F. Kirk

DATE: April 30, 1970

FROM:

M.R. Shroff

SUBJECT:

INDIA - Proposed Second Highway Project

Please refer to your telex of April 10 to Mr. Swaminathan. I attach a list of Indian road and bridge building contractors working in the States of Maharashtra, Tamil Nadu, Uttar Pradesh and Bihar.

Herm

Attachment:

CCS. gint Herry. Herry 4626

LIST OF INDIAN ROAD AND BRIDGE BUILDING CONTRACTORS WORKING IN THE STATES OF MAHARASHTRA, TAMIL NADU, UTTAR PRADESH & BIHAR.

Sr.		ual Capacit
1.	Name of contractor of firm y (Rs	in million
1.	M/S Ashok Construction Company, Station Road, Himatnagar, Gujarat State.	4 - 5
2.	M/S Engineering Construction Corporation Ltd., L&T House, Dougal Road, Ballard Estate, Bombay-1.	2 - 3
3.	M/S National Asphalt Products and Construction Company, Dhannur, Bombay.	2 - 3
4.	M/S Gordhandas & Co., Bouna Casa, 4th floor, Sir P.M. Road, Bombay-1.	2 - 3
5.	M/S G.S. Khanna & Co., Khana Construction House, Worli, Bombay-18.	7 - 8
6.	M/S M.S. Khanna, Gajanan Smriti, S.S.III, Ist Road, Chembur, Bombay-71.	7 - 8
7.	M/S Prem Constructions, 1050/2, Padampura, Aurangabad, Maharashtra.	2 - 3
8.	M/S R.J. Shah & Co. Ltd., 98, Surat Street, Bombay-9.	4 - 5
9.	M/S Visnagar Taluka Majool Sahakari Mandali Ltd., Bhandarwada Road, Shivaji Park, Dadar, Bombay-28.	7 - 8
10.	M/S Patel Engineering Co. Ltd., Jogeshwari, Bombay-60.	10 -15
11.	M/S Hindustan Construction Co. Ltd., Construction House, Ballard Estate, Bombay-1.	80-100
12.	M/S S.B. Joshi & Co. Ltd., 35, Dalal Street, Fort, Bombay.	40-50
13.	M/S Shah Construction Co. Ltd., 198, Churchgate Reclamation, J. Tata Road, Bombay-1.	30_40
14.	M/S Harbhagwan Harbhajanlal Engineering Contractors, H.O. Sadar Bazar, Karnal, Haryana	2 - 3
15.	M/S National Construction Co., Rajmahal, Ist floor, Bhuleshwar, Bombay-2.	2 - 3
		47

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1	2.	3.
16.	M/S L.R. Chawla & Co., 17 Navrang, 519 Linking Road, Khar, Bombay-52.	4 - 5
17.	M/S Gammon India Ltd., Gammon House, Cadell Road, Prabhadevi, Bombay-28.	80_100
18.	M/S Gamon Dunkerley & Co. Ltd., Chartered Bank Building, Fort, Bombay.	10_15
19.	M/S Jolly Brothers Pvt. &td., Lakshmi Insurance Building, Sir Pherozeshah Mehta Road, Fort, Bombay-1.	8 - 10
20.	M/S Kesarlal Thapar, 38 Clarke Town, Nagpur-4.	4 - 5
21.	M/S Gopaldas Vasudeo & Co., P.O. Box No.5575, 95, Dadasaheb Phalke Road, Dadar, Bombay-14.	2 - 3
22.	M/S New Consolidated Construction Co. Ltd., Rahimtoolas House, Homji Street, Bombay-1.	2 - 3
23.	M/S Tolani Pvt. Ltd., Prabhu Kutir, 15, Altamount Road, Bombay-26.	4 -5
24.	M/S Ram Richpal Jain & Co., Jain Ehavan 18-12 Lama Road, Deolali Camp, District Nasik, Maharashtra.	2 - 3
25.	M/S Continental Construction Pvt. Ltd., E-11, Defence Colony, New Delhi.	8 - 10
26.	M/S Khare & Tarkunde, Kamoria House, Palam Road, Nagpur-1.	2 - 3
27.	M/S Modern Construction Co., Pvt. Ltd., 2147, Orishnagar, Bhavnagar, Gujarat.	2 - 3
28.	M/S Ashok Construction Co. Pvt. Ltd., Rahimtulla House, 2nd floor, 7-Homji Street, Sir P.M. Road, Fort, Bombay-1.	2 - 3
29.	M/S M.A. Patel & Co., 7, Cresent Chambers, Tamrine Lane, Fort, Bombay-1.	2 - 3
30.	M/S Sadiq & Co., Kamtee Road, Nagpur.	2 - 3
31.	M/S New United Construction & Engineering Co. Pvt. Ltd., Churchgate, Bombay-1.	2 - 3
32.	M/S S.N. Khatri & Co., Baramati, District Poona.	2 - 3

-	CONTRACTOR	
1	2.	3.
33.	M/S Wadhumal K. Shahaney & Co., 8, Cannaught Road, Poona-1.	2 - 3
34.	M/S India Construction Co. Pvt. Ltd., Alli Chambers, Medows Street, Fort, Bombay-1.	2 - 3
35.	M/S J.S. Khanna, Indrapuri, Sion, Bombay-22.	4 - 5
36.	M/S Recondo Pvt. Ltd., Co-operative Insurance Building, Sir P.M. Road, Bombay-1.	15-20
37.	M/S Patel Engineering, United India Building, Sir P.M. Road, Bombay-1.	2 - 3
38.	M/S Mohanlal M. Mehta, C/o P.M. Zaveri & Co., 10, Princess Street, Bombay-2.	2 - 3
39.	M/S S.G. Phadke & Sons, 6, Meadows House, 38, Meadows Street, Bombay-1.	2 - 3
40.	M/S Engineers International, 25, Menna Sadan, Sion East Road, Bombay-22.	2 - 3
41.	M/S Mackenzies Ltd., King Edward Road, Sewri, Bombay-15.	4 - 5
42.	M/S Patel Construction Co., 1, Hira Villa, 3rd Road, Tejpal Scheme, Villeparle, Bombay.	2 - 3
43.	M/S Premier Construction Co., Construction House, Ballard Estate, Bombay.	4 - 5
44.	M/S Sewri Engineering Construction Pvt. Ltd., Savoy Chambers, West Wing, Wallace Street, Fort, Bombay-1.	7 - 8
45.	M/S Nandlal Mansukhlal & Co., Cool Mansion, Homji Street, Fort, Bombay-1.	2 - 3
46.	M/S Chamundi Construction Co., Co-operative Insurance Building, Sir P.M. Road, Bombay-1.	2 - 3
47.	M/S Teja Singh & Co., 68, Govind Sadan, Sion, Bombay-22.	2 - 3
48.	M/S Superior Construction Co., 197, Bazar Gate Street, Fort, Bombay-1.	2 - 3
49.	M/S Bharucha & Motiwala, 210, Hornby Road, Bombay-1.	2 - 3

1.	2.	3.
50.	M/S Chanara Construction Co., 38, Police Court Lane, Evans Frazer Annexe, Fort, Bombay.	2 - 3
51.	M/S Ratilal & Co., 17, Picket Cross Road, Kalbadevi Road, Bombay-2.	4 - 5
52.	M/S Govind Moti & Co., Chakala Road, Andheri East, Bombay-41.	2 - 3
53.	M/S Lakmichand Balchand, Engineers & Contractors, 3-4-849, Barakatpura, Hyderabad, Andhra Pradesh.	4 - 5
54.	M/S B.G. Shirke & Co., Engineers & Contractors, 120, Rao Bahadur Apte Road, Deccan Gymkhana, Poona-4.	7 - 8
55.	M/S Sindhu-Hochtief (India) Pvt. Ltd., Karinji House, Sir P.M. Road, Fort, Bombay-1.	2 - 3
56.	M/S Steelcrete Pvt. Ltd., Steelcrete House, 3, Dinshaw Wachha Road, Bombay-1.	8 - 10
57.	M/S Larsen & Toubro Ltd., I.C. House, Dougali Road, Ballard Estate, Post Box No. 278, Bombay-1.	8 - 10 .
58.	M/S C.K. Keshav Gopal Pithawala, 9, Shankar Niwas, 117, Shivaji Park Road No. 3, Dadar, Bombay.	2 - 3
59.	M/S Dixit & Apte, "Apka Ghar", Apte Road, Poona.	2 - 3
60.	M/S G.V. Reddy and M.L. Reddy, 5-5-926, Himayat Nagar, Hyderabad, Andhra Pradesh.	2 - 3
61.	M/S B.E. Billimoria & Co., 2nd floor, 11, Botawalla Building, Horniman Circle, Bombay-1.	2 - 3
62.	M/S G.M. Pai, Engineer & Contractors, "Shrudha" Mahim, Bombay-16.	2 - 3
63.	M/S J.H. Billimoria & Co., 25, New Charni Road, Bombay-4%.	2 - 3
64.	M/S Kushaldas Ottamal, Tulshi Bhavan, 1194/14-A, Shivajinagar, Poona-4.	2 - 3
65.	M/S Hazarat & Co., Warden House, 3rd floor, Sir P.M. Road, Fort, Bombay-1.	2 - 3
66.	M/S R.S. Menghani, 32, Laxmi Bhavan, Sindhi Society, Chembur, Bombay-71.	2 - 3
		5/-

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1	2.	3.
67.	M/S Atur India Pvt. Ltd., 16, Wellesley Road, Poona.	4 - 5
68.	M/S New Trio Builders, 381, Shanwar Peth, Poona-2.	4 - 5
69.	M/S Indian Hume Pipe Co., Construction House, Ballard Estate, Bombay.	4 - 5
70.	The Spunpipe & Construction Co. of India Ltd., Bamanpuri, Kurla Road, Andheri, Bombay-58.	4 - 5
71.	M/S S.N. Shrikantia, Gita, Matunga, Bombay-19.	2 - 3
72.	M/S R. Kirti Construction Co., Shriji Bhuvan, Ist floor, Lohar Chawl, Bombay-2.	2 - 3
73.	M/S Navandram & Sons, 5, Bund Garden Road, Poona.	2 - 3
74.	M/S H.K. Chauhan, Contractor, Shivaji Nagar, Ratnagiri, Maharashtra.	2 - 3
75.	M/S Modern Construction Co. Pvt. Ltd., 7, Homji Street, Fort, Bombay-1.	2 - 3
76.	M/S Bharat Construction Co., Construction House, P.B. No. 82, Baramati, Maharashtra.	2 - 3
77.	M/S Modern Builders, Extension, Shahupuri, Kolhapur, Maharashtra.	2 - 3
78.	M/S Haribhai B. Desai, 42, Walkeshwar Road, Bombay-6.	2 - 3
79.	M/S Cementation Co. Ltd., Steelcrete House, Dinshaw Wachha Road, Bombay-1.	8 - 10
80.	M/S Alcock Ashdown & Co., Pvt. Ltd., 16, Bank Street, Bombay-14.	2 - 3
81.	M/S Vidyut Construction Co., Pasta House, 10, Shivaji Nagar, Poona-5.	2 - 3
82.	M/S Golani & Co., 239, New Peth, Opp. Khandesh Mills, Jalgaon, Maharashtra.	2 - 3
83.	M/S P.P. Patel & Co., Thakkar Building, Panchavati, Ahmedabad-8.	2 - 3

1.	2.	3.
84.	M/S Obhroi & Co., Obhroi Blocks, Bhandawadi, Andheri, Bombay-58.	2 - 3
85.	M/S Kusumkant & Co., 505, Kalbadevi Road, Bombay-2.	2 - 3
86.	M/S National Engineer & Construction Co. Ltd., National Building, Race Course, Rajkot, Gujarat.	2 - 3
87.	M/S New Union Co., 2nd floor, Thaoomal House, Banaji Street, Bombay-1.	2 - 3
88.	M/S India Mercantile Corporation, 205-A, Neelkanth, 98, Marine Drive, Bombay-2.	2 - 3
89.	M/S Gandy Filters Pvt. Ltd., Forbes Building, House Street, Bombay-1.	2 - 3
90.	M/S Vishnudas Bhagchand, 96, Shivaji Nagar, Nagpur-1.	2 - 3
91.	M/S Indus Engineering Co., Opp. D.D. Chawl No. 114, Worli, Bombay-13.	2 - 3
92.	M/S Attar Singh Sethi & Sons, 5, Bezenabagh, Nagpur-4.	2 - 3
93.	M/S I.B. Patel & Co., 6, New Alkapuri, Ellis Bridge near Secretariat, Ahmedabad-6.	2 - 3
94.	M/S R.P. Dudami, 15, Fairfield Road-4, Churchgate, Bombay-1.	2 - 3
95.	M/S Shankarayan Construction Co., No. 7 Residency Road, Bangalore.	2 - 3
96.	M/S Geo Miller & Co. Pvt. Ltd., No. 10, Kempegowada, Bangalore-9.	2 - 3
97.	M/S Prakash Chandra & Co., Prakash Bhuvan Punjabi Colony, Nasik Road, Nasik, Maharashtra.	2 - 3
98.	M/S P.G. Bhatia & Co., 67, Commercial Chambers, Mohmedalli Road, Bombay-3.	2 - 3
99.	M/S Foundation Corporation of India Ltd., Meher House, 15, Cawasji Patel Street, Bombay-1.	4 - 5

1.	2.	3.
100.	M/S Rodio Foundation Engineers Ltd., & Hazarat & Co., 254-D, Dr. Annie Basent Road, Band Box House, Worli, Bombay-18.	4 - 5
101.	M/S K.V. Ranga Reddy, Construction Co., Engineers & Contractors, 3-6-692, Himayatnagar, Hyderabad.	2 - 3
102.	M/S New United Construction & Engineer Co. Pvt. Ltd., Engineers & Contractors, Industrial Assurance Building, Churchgate, Bombay-1.	2 - 3
103.	M/S Paul Construction Co., 3-A, Sheikh Colony, Nagpur.	2 - 3
104.	M/S K.L. Swami & Co., Malegaon Motor Stand, Panchwati, Nasik, Maharashtra.	2 - 3
105.	M/S Ajmera & Co., 200, Kika Street, Kalbadevi, Bombay.	2 - 3
106.	M/S C.S. Sanghavi, 318-19, Chatursingh Road, Poona-16.	2 - 3
107.	M/S Udami Engineering Co., 1-3-27/19, Chikadpatty, Hyderabad.	2-3
108.	M/S Structural Engineering Works Ltd., Maneckji Wadia Building, 127, Mahatma Gandhi Road, Fort, Bombay.	2 - 3
109.	M/S Oricon Pvt. Ltd., 14, Rampart Row, Bombay-1.	2 - 3
110.	M/S Gulraj Engineering Construction Co., 16-A Trilok Building, Dr. Ambedkar Road, Bandra, Bombay-50.	2 - 3
111.	M/S Karta Singh Sethi & Sons, Ramdaspeth, Nagpur-1.	2 - 3
112.	M/S Popular Construction Co., Popular Chambers, 86, Rajendra Prasad Road, Nagpur-2.	2 - 3
113.	M/S K.B. Chinchankar & Co., Shanti Niketan, Poona-4.	2 - 3
114.	M/S Ajit Construction Co., Anujit 1775/2/ Deccan Gymkhana, Opp. Kamla Nehru Park, Poona-4.	2 - 3

1.	2.	3.
115.	M/S Patel, Vasa, Vira & Co., Green Market, Jamnagar, Gujarat.	2 - 3
116.	M/S Hydraulic & General Engineers (Pvt.) Ltd., Victoria House, Victoria Road, Bombay-27.	2 -3
117.	M/S Dodsal Pvt. Ltd., Mafatlal House, Backbay Reclamation, Bombay-1.	7 - 8
118.	M/S Deoram Dagadu Mistry, Congress Bhavan Compound, Dhulia, Maharashtra.	2 - 3
119.	M/S Makhija & Co., 201, Prabhu Kunj, 5 Pedder Road, Bombay-26.	2 - 3
120.	M/S Maharashtra Construction Corporation, Bombay Agra Road, Dhulia, Maharashtra.	2 - 3
121.	M/S Central Engineering Syndicate, 32, Ganesh Chandra Avenue, Calcutta-13.	2 - 3
122.	M/S Golani Brothers, 16, Silk House, Hamalwada, Girgaum Road, Bombay-2.	2 - 3
123.	M/S K.M. Gunjal & Co., 11/4 Raj Bhavan, Bungalow Ganeshkhind Road, Poona-16.	2 - 3
124.	M/S New Asian Construction Co., 263, Shaheed Bhagat Singh Road, Fort, Bombay-1.	2 - 3
125.	M/S V.B. Patel & Co., Bell Building, Sir P.M. Road, Fort, Bombay-1.	2 - 3
126.	M/S Adke Construction Co., Prem Kutir, Powai, Bombay-76.	2 - 3
127.	M/S Palmoon Engineering Co., P.O. Mahbubmagar, Andhra Pradesh.	2 - 3
128.	M/S Prabhakar Construction, 227 Howson Road, Deolali Camp, Maharashtra.	2 - 3
129.	M/S Malik Chand Gulati, 6-34, Rajouri Garden, New Delhi-27.	2 - 3
130.	M/S R.N. Ghanekar, 128, Prakash Kotnis Marg, Mohim, Bombay-16.	2 - 3
131.	M/S Madhavdas Skhurama, 304, Neelkantha, Marine Drive, Bombay-1.	2 - 3
132.	M/S Ohirajlal M. Mehta & Jaising Construction Co., 311 Mehta Building, 12th Road, Khar, Bombay-52.	2 - 3

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1.	2.	3.	
133.	M/S Talib Constructions, Talib House, 104, Nagdevi Street, Bombay-3.	2 - :	3
134.	M/S Navleeka Constructions, Engineers & Contractors, 6, New Alkapuri Society, Gulbar's Tekara, Ellis Bridge, Ahmedabad-6.	2 - :	3
135.	M/S J.B. Patel & Co., Engineers & Contractors, 6, New Illkapuri Society, Gulbar's Tekara, Ellis Bridge, Ahmedabad-6.	2 -	3
136.	M/S Ganapathi Subramanian, 39, Kangasabai Nagar, Chidambaram, Tamil Nadu.	2 -	3
137.	M/S Raghave & Veera and Sons, 74, Bishop Wallers Road, Mylapore, Madras-4.	8 -	10
138.	M/S Engineering Construction Corporation Ltd., 4 & 5 Club House Road, Madras-2.	10 -	20
139.	M/S East Coast Construction Co., 1, Moore Road, Numgambakkam, Madras-6.	8 -	10
140.	M/S Nilakantan Bros, 14/31, Eldams Road, Madras-18.	8 -	10
141.	M/S Associated Engineering Syndicate, 80, Lloyds Road, Madras-14.	8 -	10
142.	M/S Subba Rac, 3/4, College Road, Madras-6.	8 -	10
143.	M/S K.S. Gurisamy Gounder, K.S. Krishna Raja Engineering Contractors, Mettur Dam, Salem, Tamil Nadu.	8 -	10
144.	M/S M.R. Viswanathan & Sons, 5, Rama Rao Agraharam, Tirchirapalli-17, Tamil Nadu.	8 -	10
145.	M/S K.S. Gurusamy Gounder, Engineering Contractor, High Ground, Palayamkottai, Tamil Nadu.	8	10
146.	M/S R1 Muthusamy, 12, Thennampalayam, Tiruppur-4, Tamil Nadu.	8 -	10
147.	M/S K.S. Radhakrishnan, 49, Seetharamanagar, Guddalore, Tamil Nadu.	8 -	10
148.	M/S S. Bakthavathsalu, Cross Road, Vadalur, Tamil Nadu.	8 -	10
149.	M/S M. Karuthasamy Thevar, Engineering Contractor Chokkanathampuram, Chekkanurani, P.C. Tirumangalam Taluk, Maduraa Distt., Tamil Nadu.	8 -	10

		NAME AND POST OF THE PERSON NAMED IN COLUMN 2 IN COLUM
1.	2.	3.
150.	M/S K. Sivalinga Nadar, Contractor, Manalikarai, Meykkamandapam, Kanyakumari, District, Tamil Nadu.	4 - 5
151.	M/S Uttam Singh Duggal & Co. Ltd., ll, Marina Arcade, New Delhi.	15 - 20
152.	M/S Kalooram Kailash Chandra, Roorkee, U.P.	3 - 4
153.	M/S D.P. Chopra, Bareilly, U.P.	4 - 5
154.	M/S Goel Brothers, 6, Civil Lines, Bareilly, U.P.	3 - 4
155.	M/S National Project Construction Corporation, E-2, Jhandealan Estate, New Delhi.	7 - 8
156.	M/S Lal Umrao Singh, Daliganj, Lucknow.	4 - 5
157.	M/S L.S. Achariya, Faizabad, U.P.	3 - 4
158.	M/S Om Prakash Baldev Krishna, 8C/6, W.E.A. Karol Bagh, New Delhi.	3 - 4
159.	M/S Inderjit Singh Autar Singh, Government Contractor, 566 Sector 8B, Chandigarh.	3 - 4
160.	M/S Mahant Singh & Sons, New Hydrabad, Lucknow.	3 - 4
161.	M/S Amar Nath Charanji Lal, Ist floor, Sun-light Building, Asaf Ali Road, New Delhi.	3 - 4
162.	M/S Vig Brothers, 113/61, Swrup Nagar, Kanpur.	4 - 5
163.	M/S Multi Engineering & Scientific Co., Katari Hill Road, Gaya, Bihar.	4 - 5
164.	M/S Madnani Construction (R) Ltd., Club Road, Muzaffarpur, Bihar.	7 - 8
165.	M/S K.L. Bhasin & Co., Blessington House, Kanka Road, Ranchi, Bihar.	7 - 8
166.	M/S Rabindra Engineering Co., Kamalolay, North Office, Para Road, Deranda, Ranchi, Bihar.	4 - 5

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1.	2.	3.
167.	M/S S.R. Construction Co., P.O. Sonarpur (24-Pargana), West Bengal.	4 - 5
168.	M/S Narayan Das & Co., Durgapur, Katihar, District Purnea, Bihar.	4 - 5
169.	M/S Hind Construction & Engineering Co. Ltd., Bombay Mutual Building, 9, Baraborne Road, Calcutta.	8 - 10
170.	M/S Bharat Engineering Co., Lalji Tola, Patna, Bihar.	4 - 5
171.	M/S R.C. Banerjee & Co., Engineers & Contractors, Dhupguri, Jalpaiguri, West Bengal.	4 - 5
172.	M/S Son Dutt Builders (P) Ltd., Kanke Road, Ranchi, Bihar.	7 - 8
173.	M/S Ramlal Contractors, South Office Para, Doranda, Ranchi, Bihar.	6 - 7
174.	M/S Madan Builders, Office Para North, Doranda, Ranchi, Bihar.	3 - 4
175.	M/S R. Sahu, Nivaranpur, Ranchi, Bihar.	3 - 4
176.	M/S Jeevanlal & Co., C/o Firangalal & Co., Ranchi, Bihar.	6 - 7
177.	M/S Kalsi Construction, Heavy Engineering Corporation Contractor, Ranchi, Bihar.	5 - 6
178.	M/S Azad Builders, H.E.C. Contractors, Ranchi, Bihar.	3 - 4.
179.	M/S S. Lakhmi Singh, Builders Corporation Pepee Compound, Ranchi, Bihar.	7 - 8
180.	M/S Premier Construction Co., Baryatu Road, Ranchi, Bihar.	3 - 4
181.	M/S Arvind Brothers, Patna/Calcutta	7 - 8
182.	M/S Satram Das, Amlatola, P.O. Katihar, District, Purnea, Bihar.	3 - 4
183.	M/S Haroomal, P.O. Katihar, District Purnea, Bihar.	3 - 4

1.		3.
184.	M/S Narain Dass & Co., P.O. Kathiar, Purnea, Bihar.	2 - 3
185.	M/S Ranjan Construction Co., Club Road, Muzaffarpur, Bihar.	2 - 3
186.	M/S Singh Builders Syndicate, P.O. Bermo, Hazaribagh, Bihar.	2 - 3
187.	M/S Nawraja Construction Co., Club Road, Muzaffarpur, Bihar.	3 - 4
188.	M/S Perumal Construction Corporation, Kankerbagh Road, Patna, Bihar.	2 - 3
189.	M/S Raitmal, P.O. Kathiar, Purnea, Bihar.	2 - 3
190.	M/S Prem Chand, P.O. Kathiar, Purnea, Bihar.	2 - 3
191.	M/S S.P. Consolidated, Gulabbagh, Purnea, Bihar.	2 - 3
192.	M/S Shalimar Construction Co., Calcutta.	4 - 5
193.	M/S Pioneer Engineering Syndicate, Hyderabad.	6 - 7
194.	M/S K. Nagebhushanam & Co., Vijayawada, Andhra Pradesh.	3 - 4
195.	M/S Shiv Bannerjee & Co., Calcutta.	3 - 4
196.	M/S Shanda Engineer's (India) Ltd., Calcutta.	5 - 6

India - highway gent . 7 Des BGRH/JD RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS TELEPHONE: 01-834 8494 MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS TELEGRAMS: RENDELS, LONDON, SWI PARTNERS H. SCRUTTON, F.I.C.E., F.I.STRUCT.E., M. INST. PET.
B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT.E.
F. IRWIN-CHILDS, F.I.C.E.
P. M. FRAENKEL, F.I.C.E., F.I.STRUCT.E.
P. A. COX, F.I.C.E. 125, Victoria Street, Westminster, London, s.w.1. J. C. MUNRO, F.I.C.E., K. E. AINSCOW, F.I.C.E., M.I.STRUCT, E. D. M. S. FAIRWEATHER, F.I. MECH.E. R. DOWNHAM, M.R.I. N.A., M.I. MAR.E. CONSULTANTS

J. E. G. PALMER, F.I.C.E., F.AM. Soc.C.E.

T. T. LAMBE, F.I.C.E., F.I. MECH.E.

H. F. MERRINGTON, F.I.C.E., M.I.W.E. YOUR REF. OUR REF. 02136/14119 29th April, 1970 W.S. Humphrey Esq., World Bank, 7, Sardar Petel Road,

W.S. Humphrey Esq., World Bank, 7, Sardar Petel Road, Margh, New Delhi, India.

Dear Sir,

INDIA - HIGHWAY APPRAISAL

Further to your discussion with our Mr. K.E. Ainscow in Delhi on the 21st April, we should like to confirm that, in accordance with the terms of our Agreement with the Bank dated 14th November 1969, we will meet the cost of any local income tax obligations incurred by our staff whilst employed on the Highway Appraisal project in India.

We understand that you will supply our Mr. Pilditch and Mr. Trnka with the necessary income tax forms to complete and that you will subsequently lodge them with the Revenue Department in India. We assume that your submission of the completed forms on behalf of these personnel is best carried out at the end of their contract in India taking into account their proposed withdrawal from India in the near future, and the intended return visit for a further short period about August/September of this year.

We would also take this opportunity of thanking you for your kind co-operation in this matter.

Yours faithfully, RENDEL, PALMER & TRITTON

B.G.R. Holloway

(2)

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

-> Nepal Tof Ref

OFFICE MEMORANDUM

TO:

Messrs. Dickerson and Neuner

DATE: April 29, 1970

FROM:

G. Mahoney

SUBJECT:

INDIA: Preappraisal of Second Highway Project (Dickerson and

Neuner)

NEPAL: Review of Status of Detailed Engineering for Highway

Project (Dickerson)

Terms of Reference

1. From about May 4 to about May 14, 1970 you will visit the above countries, to review the status of preparation for the subject projects.

2. In India you will:

- a) Debrief the engineers from the Bank's consulting firm (Rendel, Palmer & Tritton) prior to the completion of their initial assignment, paying particular attention to such items as their opinion on the likely completion of each stage of preparation work and the time most appropriate for appraisal;
- b) review progress of the additional work now being carried out by the consultant's economist on his extended assignment;
- c) meet with officials of the Central Roads Wing (CRW), obtain the data on the local contracting industry requested in our letters of January 22 and April 24, 1970 and, in the light of the consultants' findings, agree with CRW a program for completion of project preparation;
- d) assess the appropriate time for the return of the consultant's engineers to assist in completion of project preparation for appraisal;
- e) if time permits, you will visit one or more of the States to confirm personally the status of project preparation, to assess the validity of the CRW program for further project preparation and to explore issues of transport coordination with State governments; and
- f) while in the States you will endeavor to sample the ability and capacity of possible local contractors for the subject project.

- 3. On or about May 11, Mr. Dickerson will proceed to Kathmandu, Nepal for about two days to review the status of final detailed engineering on the proposed highway project and Mr. Neuner will proceed to Lahore, Pakistan according to separate Terms of Reference.
- 4. On your return to Washington you will prepare combined Back-to-Office and Full Reports on the subject matter of your missions.

MWD: fm IBRD

Cleared with and cc: Mr. Kirk (3)

cc: Messrs. Chadenet, Baum, Knox, Geolot, Mahoney, Karcher, Abd. El Aty, A. T. Davis (2) Finne, New Delhi Office Files Form No. 27 (6-69)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

IN Highways

OUTGOING WIRE

TO: HARDY

HOTEL AL URDON

AMMAN

DATE: APRIL 29, 1970

CLASS OF

SERVICE: LT

ROA

COUNTRY:

JORDAN

TEXT:

Cable No.: XXXX TWO

FOR HARDY REURCAB ONE DICKERSON NEUNER ARRIVING DELHI MAY 3 FOR ABOUT FIVE

DAYS TO REVIEW STATUS PROPOSED SECOND HIGHWAY PROJECT STOP RENDELS ADVISED

REGARDS

MAHONEY

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NAME G. Mahoney Mahoney	cc: Mr.Dickerson				
Transportation Projects 258 billion	CC. III DICKCIBON				
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G. Mahoney

AFR 29 6 28 PH 1970 COMMUNICATIONS

DISPATCHED

co: Mr.Dickerson

IN- Highway

Mr. M. R. Shroff

April 29, 1970

A. F. Kirk

INDIA - Proposed Second Highway Project

In order to review present status of preparation of the Proposed Second Highway Project the Association is sending a mission consisting of Mr. Maurice W. Dickerson (U.K.) and Mr. Tillman Neuner (U.S.). Mr. Dickerson will arrive in New Helhi by Flight AF 196 on May 3 at Oh: 45 and Mr. Neuner by Flight PA 2 o'clock on May 4 at 05:00 for about six days.

It will be appreciated if you inform officials of CRW of this visit.

MAbdel Aty: ank

cc: Messrs. Dickerson Neuner N.D.O.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: RENDELS LONDON

ASSOCIATION

April 29, 1970 DATE:

CLASS OF

LT

SERVICE:

COUNTRY:

ENGLAND

TFXT: Cable No .:

FOR HOLLOWAY REURCAB 141 MISSION COMPRISING MESSRS. DICKERSON AND NEUNER ARRIVING DELHI MAY 3 FOR ABOUT 5 DAYS STOP PLEASE ADVISE YOUR TEAM CONTACT DICKERSON INTERCONTINENTAL HOTEL AROUND 3 P.M. THAT DAY FOR PRELIMINARY DISCUSSIONS STOP SUGGEST PILDITCH TRNKA SCHEDULE DEPARTURE AFTER MAY 8 REGARDS

MAHONEY

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AUTHORIZED BY:

G. Mahoney

NAME

Transportation Projects

DEPT.

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE) LICEX LUNES

kerson: fm

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Kirk, Abd. El Aty, Neun-er.

For Use By Communications Section

Checked for Dispatch:



FOR HOLLOWAY REURCAR LEL MISSION COMPRESSING MESSES, DICKERSON AND MEDITER

AMERICATING DEELE MAY 3 POR ABOUT 5 DATE STOP PUBLISH ADVISE YOUR TEAM CONTACT

DECKERSON TWERCONTINENTAL HOTEL AROUND 3 P.M. WAAT DAY FOR PRELIMINARY

INDIA: Proposed Second Highway Projection to BE TRANSMITTED

G. Mahoney

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

APRIL 28, 1970

1503

LOG NO.:

RC 55/28

TO:

INTBAFRAD

FROM:

LONDON

TEXT:

ROUTING

ACTION COPY: TRANSPORTATION PROJECTS

INFORMATION

COPY:

DECODED BY:

4/28

IN Heghway

OM

141 URGENT FOR MAHONEY TRANSPORTATION DIVISION 1
RECEIVED CABLE TODAY HARDY INFORMING US THAT BANK
IS SENDING BRIEF MISSION INDIA NEXT WEEK. PLEASE
ADVISE DATES IN ORDER THAT PILDITCH TRNKA CAN
FINALISE THEIR DEPARTURE DATE FROM INDIA

HOLLOWAY

BF

Answered by Cable
Sim Jus Handy

Aspel Low does

is another recent financial piper next about their

APR 28 11 35 MM 1970

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

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INCOMING CABLE

DATE AND TIME OF CABLE:

APRIL 28, 1970 1000

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TO:

INTBAFRAD

FROM:

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ALPHA FIJI THEY WILL ENDEAVOUR COMPLETE FEASIBILITY REPORT BY END MAY
INCLUDING OUR LATEST REQUIREMENT ECONOMIC ANALYSIS

BETA INDIA SECOND HISHWAY PROJECT PILDITCH TRNKA HAVE OVER TAKEN INDIANS WORK ON TECHNICAL PREPARATION.

APPROPRIATE THAT TECHNICAL TEAM BREAKS SERVICE NOW AND RETURNS INDIA FOR FOUR TO SIX WEEKS AROUND AUGUST SEPTEMBER TO REVIEW WORK THEN COMPLETED. CRANAGE SHOULD COMPLETE HIS PRESENT ECONOMIC SERVICE AND FINISH. HAVE AGREED TECHNICAL TEAMS TERMINATION IN ABOUT ONE WEEK. CONSEQUENTLY DID NOT HAND RENDELS OURLET APRIL REGARDING EXTENDED SERVICE WHICH NEEDS REVISION RENDELS WILL SUBMIT LETTER ON SUGGESTED SCOPE REMAINING CONSULTING WORK WITH REMISED COST ESTIMATE. CONSEQUENTLY NOT ALL SUPPLEMENTARY BUDGETARY APPROPRIATION REQUESTED BY GEOLOT LAST WEEK NOW REQUIRED THIS FISCAL YEAR. SUGGEST BRIEF BANK MISSION INDIA BY DICKERSON NEAMER WITHIN NEXT WEEK TO ASSESS SITUATION BEFORE CONSULTANTS TEAM LEAVES. HAVE INFORMED RENDELS TENTATIVELY REGARDING BANK MISSION BUT MAHANAY SHOULD CONFIRM DETAILS

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APR 28 12 18 PH 1970 COMMUNICATIONS SECTION

(N Heghways April 24, 1970 Mr. S. N. Sinha Director General Central Roads Wing Ministry of Transport and Shipping Parliament Street New Delhi, India. Dear Mr. Sinha: Re: INDIA: Proposed Second Highway Project We have been meaning to write to you for some time on the technical and economic aspects of the proposed project as they are now emerging, but we awaited the return of Messrs. Knapp and Cargill before doing so. A separate letter is being addressed to Mr. I. G. Patel by Mr. Cargill on policy matters. First I wish to thank you, perhaps somewhat belatedly, for the kind reception given to Messrs. Mahoney, Karcher and Neuner during their February, 1970 visit to Delhi. As pointed out by the mission in their meetings with you, some considerable further project work remains to be completed and certain actions are required prior to appraisal. Below are some of the most important items which were discussed by the mission. Engineering We consider it is essential that, as a basis for design and cost estimates, major by-passes and relocations be staked out in the field. We would appreciate your confirmation that the outline of minimum survey requirements suggested by the consultants is acceptable to you and will be applied in preparation of the project. 2. We understand that pavement designs on the basis of the field tests conducted by the States, although promised for early April, will not now be ready for several months. We would like to receive as soon as possible typical drawings showing the proposed pavements and a summary of design procedures used. We also understood that firm cost estimates for major bridges 3. were to be completed in early April but that these are not yet

available. Please let us know the present status of this work and to what extent it will be possible for you to minimize the number of separate contracts for bridges and to include all except major riverbridges or unusually large and complex structures in a single package contract for a given stretch of road.

- b. We have not yet received the final draft of construction specifications and tender documents which you indicated to the mission were to be ready by the end of March. We would appreciate their early receipt.
- 5. Little progress appears to have been made in land acquisition. Please send us detailed information on the status of land acquisition already undertaken and the likely time-table for completion.

Moonomics

- 6. We have reviewed the final report of our consultants' economists. In general, the results of their analysis confirm the preliminary indications which the mission discussed with you. However, the conclusions are still nomenhat tentative, and we would like to carry out a sensitivity analysis for certain of the calculations, and to firm up some of the crucial assumptions by actual field survey. For this purpose, Mr. Granage has now returned to India for a brief period and we expect to have the necessary revisions in about two months. Because the findings are still not final, we would like to delay detailed discussion with you of the economic evaluation until more definitive material is in hand.
- 7. The basic economic approach remains the same as the mission outlined to you in February. The widening of roads from one to two lames is justified by the fact that vehicle speeds will be increased and vehicle operating costs correspondingly reduced. For example, on a road with a 12 foot carriageway and earth shoulders, commercial vehicles are said to travel about 15 km per hour (on the average) at traffic levels of 6,000 p.c.u. while on a road with a 23 foot carriageway commercial vehicles are thought capable of traveling at an average speed of 60 km per hour at p.c.u. levels of 6,000 or less. For trucks this would imply a reduction in operating costs from roughly 75 paise to 37 paise per km/ as the traffic on single lane roads becomes lighter, the average speed increases progressively to the point where operating costs as compared to costs on a two lane facility will be only marginally higher, not high enough to justify the investment.
- 6. The major segments which we believe should be excluded from the project are roads where traffic is relatively light and the present condition of the road approximates a two lane facility. This means that vehicle speeds will be rather high and that the wear and tear on the road will be light under the relatively sparse traffic. For this reason, we have suggested the elimination of the road from

Kampur to Varanasi and the road from Salem to Coimbatore. The same principle also would require that two lane portions of otherwise justifiable road sections should not be reconstructed at this time although perhaps resurfaced; for example, some 37 km of the Poons-Rolhapur-Mysore Border road and some 20 km on the Wasik-Dhulia road.

- 9. Some sections are excluded because the best solution would require lengthy engineering studies for which there is insufficient time; we would suggest that economic and engineering work on these be included in the proposed project with a view to considering their construction under a future IDA project. The segments we have in mind are the two ghat sections on the Poons-Kolhspur-Hysore Border road and the road from Chas to Earkendra where there are difficult alignment problems.
- 10. Several other projects are quite marginal but they do justify further economic investigation for final determination at the time of appraisal; these are the road from Gobindbur to Chirkunda, the Boshay-Nasik road (except for 20 km of improved road), the Kampur Bridge, and the road from Mysore Border to Salem. Also, we think that the road from Navadeh to Baktispur may not be justified as a whole although improvement of selected sections and bypass may be appropriate. These works, however, are small and widely scattered and, in our opinion, not suitable for construction under an IDA project. A final decision on this might best be made at the appraisal visit.
- Pinally, there are a number of bypasses which may have attractive returns even though the road section in which they occur are not, as a whole, justified at this time. These include, among others, the Selem and Bhavani bypasses in Tamil Madu, and possibly two bypasses in Dihar, the one around Chirkunda and the road from Karkendra to Gobindbur via Barwa which constitutes, in effect, a bypass around Chambad.

Contractors

12. We now urgently require the list of road contractors requested in our letter of Jamuary 22, 1970. This list should consist of firms (including joint ventures) who are capable of acting as prime contractors to undertake all works on a given length of road. We also require an indication of the annual volume of work (expressed in rupees) which each prime contractor (or joint venture) could undertake.

To summarize, we list the economic status of all project elements in the attachment to this letter. We would suggest that preparation work be concentrated on the elements listed in A and B. Although the elements under B are considered marginal at this time, we think that additional investigation is warranted and that a final determination should be made at appraisal.

We would appreciate early receipt of the data requested in this letter and an indication from you of the timing for completion of the engineering work. We would also appreciate any comments you may have on the economic aspects.

Sincerely yours,

S. C. Hardy

Chief, Highways Division I Transportation Projects Department

\$

ce: Messre. Rendel Palmer & Tritton, Consultants 125 Victoria Street London, S.W.l. England

Cleared with and ec: Mr. Abu El Aty cc: Mesers. Votaw, Hahoney, Dickerson, Karcher, Neuner.

IN Highways INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files (through Mr. G. Votaw)

DATE: April 24, 1970

FROM: M. Abd El Aty M.A.

SUBJECT: INDIA - Proposed Second Highway Project

- The Projects Department has now received Report No. 4 dated April 1, 1970 from the Association's consultants. The consultants state that project preparation is proceeding slowly and that CRW is unlikely to complete detailed engineering until December 1970.
- Appraisal cannot therefore start before December, 1970, and in view of the pace at which work proceeds on this project, Projects Department does not expect presentation to the Board until August 1971.
- This project would thus slip from FY 1971 to FY 1972. This would also avoid continuous need for changing the timetable.
- Mr. Hardy is writing to the consultants extending their services for six more weeks; and is writing to CRW;
 - (a) outlining further work necessary before appraisal;
 - (b) informing them of the continuation of consultants work;
 - (c) giving preliminary suggestions on the choice of project elements, reserving final judgment until appraisal, and
 - (d) reiterating the request for the list of road contractors with indication of their capacity.
- Projects Department has prepared a status report on project preparation which includes the latest findings of the consultants (to be distributed later today.) A mission is tentatively scheduled to visit India in June, before completion of consultants assignment, to review their latest findings and prepare with CRW a plan for the completion of project preparation.

MAbdElAty/pop

Cleared with and cc: Mr. Dickerson

cc: Messrs. Cargill, Votaw, Melmoth(o.r.), Kirk(o.r.), Hardy, Mahoney, Karcher, Neuner

IN Highway

FILES

April 24, 1970

M. W. Dickerson

INDIA: Proposed Second Highway Project Consultants' Income Tax Status

The object of this memorandum is to indicate the problems that arose concerning the visa and tax status of Bank-financed consultants in India and their position as of mid April, 1970.

Rendel, Palmer and Tritton (Consultants) London, were engaged by the Bank late in 1969 to provide about 15 man-months of appraisal assistance services for the above project at a cost of US\$69,000. They were pressed into service at short notice (our first choice of consultants having backed down), a Letter of Agreement was signed November 14, 1969 and the three members of the team (two engineers for six months and an economist for two months) arrived in India between November 20 and December 1, 1969. Two members of the team, Mr. Pilditch (engineer) and Mr. Cranage (economist) being British required no visas to enter India but Mr. Trnka (engineer) being a Czechoslovakian national obtained an entry visa (valid for three months but normally renewable).

During February, the team (now Pilditch and Trnka) became concerned about unforeseen income tax liabilities and were informed by the UN and the Department of Economic Affairs (through the Bank's New Delhi office) that they might be personally liable for Indian income tax (on salaries and subsistence) if they remain in the country beyond 90 days in any one fiscal year (commences 1st April). Due to his being the longer stay in India, Mr. Trnka's period was up first, but his ease might also have been highlighted by his type of visa, and the possible need to renew it. The Bank approached the Indian Government both through the Alternate Executive Director and through the New Delhi office for clarification of the consultants' tax status and their possible exemption under a "technician" classification. The team members also sought guidance from both the Indian authorities and our New Delhi office but apparently received little conclusive advice. Finally, they decided to leave India before the 90 days was up and, on February 25th, they crossed into Pakistan.

London office to request the team to return to New Delhi soonest in order to continue their work, and we intimated that, in the uncertain tax circumstances, we would be responsible for any financial consequences. Accordingly, after receiving a cable from their London office, they returned to New Delhi on March 1, 1970 with Pilditch, as before, requiring no visa, but with Traka obtaining a tourist visa (valid to end May) and signing an undertaking that he would not work in India. We have received further word from our New Delhi office that the Government is not prepared to class them as technicians and also that, should we wish to withdraw the team, taxes due may have to be paid before they are allowed to leave. The Letter of Agreement between Rendels and ourselves contains the usual clause that all taxes will be for the account of the consultant but we believe that Rendels' offer

April 16, 1970, that if the 90-day ruling is observed, then it is possible that some of the temm members will be liable for income tax. However, if tax is charged on the basis of their original assignment (180 days) plus an extension of about 18 days (requested by the Bank), then the total liability will be of the order of \$3\$10,000 equivalent. We have accordingly informed Rendels in London that we are prepared to consider assisting the temm to meet these possible tax liabilities, and an item for this amount has been included in a request for additional funds to cover the extended assignment.

Cleared with and cos S. C. Hardy

co: Mesere. Enon, Geolot, Mahoney, Kirk, Denton/Singh

Milita fin

IN Highways

Mr. A. F. Geolot

April 24, 1970

S. C. Hardy

INDONESIA: Proposed Second Highway Project - Financing of Detailed Engineering

- 1. You asked me to advise you of the situation regarding interim financing of the detailed engineering, for which retroactive financing was recommended in the back-to-office report, dated April 20, of the recent mission to Indonesia.
- 2. The proposed Second Highway Project contains detailed engineering as follows:

		Estimated Cost USS Equivalent million	Foreign Exchange Component US\$
(1)	Sidjungjung-Lubuklinggau Sections I and II (206 Kms)	1.4	1.1
(ii)	Sidjundjung-Lubuklinggau Section III (292 Km)	1.7	1.4
(111)	Amurang-Duadulu (160 Kms)	1.0	0.8
((iv)	Bridge Replacement - Sulawes:	0.35	0.3

- 3. Fessibility study of (i) will be completed in May, by the UNDP financed Highway Services consultants (KAMPSAK/Berger), who will then continue with the study of (ii) and commence studies for (iii) and (iv). It is anticipated that the studies for (ii), (iii) and (iv) will be completed within the time and financing of the UNDP service.
- Bovernment has informed the Bank, through the Bank mission in Djakarta, of their intention to allocate US\$1.5 million in their fiscal year 1970/71 for interim financing of detailed engineering of Sidjundjung-Lubuklinggau, pending reimbursament. A copy of the letter concerned is attached. This highway has already been the subject of a preliminary study by the UNDP services consultant, in which Sections I and II were indicated as having a probable rate of return of 35% and Section III of 22%. Sections I and II were, therefore tentatively placed in the proposed Second Highway Project, at the time of the supervision mission in December 1969, and arrangements made for the UNDP services consultant to do a more detailed feasibility study, on which to base a definite investment decision. In view of this, initial arrangements were therefore made for Government to provide interim financing.

- 5. During the March/April 1970 mission the Director of Planning of the Highway Department (Mr. Karnadi) also undertook to obtain interim financing in fiscal 1970/71 of the detailed engineering of Section III of the Sidjundjung-Lubuklinggau, pending reimbursement from the Second Highway Project. It is estimated that up to 20% of this work would need to be so financed at a foreign exchange cost of US\$0.28 million. This is in fact covered by the US\$1.5 million for which a written assurance has already been received (para. 4).
- 6. At the time of writing the back-to-office report detailed engineering of the Americang-Duadulu highway and the bridge replacement in Sulawest (items (iii) (iv) para. 2) were under consideration for bilateral financing by Canada. They were both identified as possible parts of the proposed Second Highway Project by Bank Resident Staff and the mission, partly from field inspection and partly from a report on bridges in Sulawesi prepared by KAMPSAX/Berger. As different from items (i) and (ii) (para. 2) therefore, we do not yet have even a probable rate of return for items (iii) and (iv).
- 7. We now understand that Canada is prepared to finance detailed engineering and supervision of construction of the Sulawesi bridges (item (iv) of para. 2) only. Previously a figure of US\$6.0 million was mentioned by Mr. H. J. Van Helden as being available, now apparently the amount for highways is limited to US\$0.6 million. In the event, therefore, that the feasibility study shows it to have a sufficient rate of return them it would be necessary for Government to consider interim financing detailed engineering of the kewrang-Duadulu highway, at an estimated foreign exchange cost of US\$0.8 million, (of which up to US\$0.5 million would be required in their fiscal 1970/71) pending reimbursement through the proposed Second Highway Project.

JRHowerd:pg

co: Masers. Knox, Van Helden, Tolbert

IN Highways

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Mr. S.C. Hardy

DATE: April 24, 1970

FROM: Messrs. G. Mahoney, M. Karcher and T. Neuner

SUBJECT: INDIA - Proposed Second Highway Project Status Report (mid-April, 1970)

This report summarizes the present status of preparation of the above project and is based on our visit to New Delhi in February, 1970 (Terms of Reference, January 26, 1970), and on subsequent discussions within the Bank and with the Bank's consultants (Rendel, Palmer and Tritton, U.K.) up to mid-April 1970.

Summary

- 1.1 Project preparation has been much slower than expected. Principal engineering items causing delay are slow Central Roads Wing (CRW) approval of road alignments and their failure to establish standards for design surveys and basic cross section elements (paras. 3.1 3.3). There has been no progress in right-of-way acquisition and, although CRW assured us that this would not be a delaying factor, we have serious doubts; this matter should be reviewed carefully during appraisal (para. 3.6).
- 1.2 Economic analyses by the Bank's consultants shows that some project elements cannot be justified and others have only marginal returns. Additional information is required for some elements to verify principal assumptions made in the analyses (paras. 4.1 4.3).
- 1.3 Further consultants' assistance in project preparation is needed prior to appraisal; this will involve two months of economist's and three months of engineers' time. The cost of these added services will require about US\$14,000 in addition to the US\$80,000 already allocated; the Bank's agreement to meet the consultants' staff possible Indian income tax liabilities will require an additional US\$10,000, making a total additional commitment of US\$24,000 on Bank funds. So far, the consultants have had fair cooperation from the CRW and States on technical matters (para. 5.1).
- 1.4 From a technical standpoint, based upon the consultants' latest report, it does not appear possible to appraise until towards the end of 1970. In any event, appraisal should not take place until the Bank reaches an agreement with the Government of India on major policy issues (para. 7.1).

Recommended Action

2.1 We recommend that the Association write to Mr. S.N. Sinha, Director General, CRW, on the following points:

- (a) CRW will expedite approval of proposed road locations;
- (b) CRW will use the consultants' proposed minimum design survey requirements;
- (c) CRW will establish, as soon as possible, major cross section elements and complete pavement designs;
- (d) CRW will complete basic designs and firm cost estimates for all major bridges as soon as possible;
- (e) CRW will consider including all except major river bridges or unusually large or complex structures as part of a package contract for a given road length;
- (f) CRW will expedite right-of-way acquisition;
- (g) advise CRW of our selection of project elements to be considered during appraisal;
- (h) CRW will forward to the Bank, at the earliest opportunity, the list of contractors (with annual capacity) requested in our letter of January 22, 1970;
- (i) advise CRW that appraisal will be delayed several months due to outstanding policy matters.
- 2.2 The Association should attempt to reach early agreement with the Government on the outstanding policy matters and approve an additional US\$24,000 for further consultants' services and Indian income tax liabilities.

Status of Project Preparation

Engineering

- 3.1 Preparation by the States of detailed engineering for road elements is proceeding slower than expected. They are following their normal practice of preparing plans and estimates on the basis of paper locations without field staking of new alignments for major by-passes and relocations. Most of these paper locations have not yet been approved by the CRW or reviewed by the consultants. Based on the few location plans seen by the consultants, it is their opinion that the basic engineering can be considerably improved in several cases.
- 3.2 The consultants feel that plan and estimate preparation without alignment approval and field staking could result in delays and wasted design effort where changes are necessary and will produce estimates of questionable accuracy. We agree fully with their evaluation. We urged the CRW to expedite approval of proposed locations and recommended they work closer with the consultants on this by way of joint review of State proposals.

We also advised CRW that field staking of major by-passes and relocations would be required as a basis of designs and cost estimates before appraisal. The consultants had furnished CRW an outline of minimum survey requirements which we advised them to follow.

- 3.3 The States have completed pavement design field tests for all roads. Pavement design will be done by the CRW and although they estimated this work would be completed by about mid-March, the consultants now report that only pavement design guidelines have been prepared so far. These guidelines have been reviewed by the consultants but several months of further work will be required by the States to prepare actual designs from these guidelines. In December 1969, the consultants furnished the CRW a drawing showing their suggestions on general pavement type and width, slopes and other principal cross-section elements for the various roads. The CRW had not reviewed this drawing but agreed to discuss it with the consultants and incorporate agreed items in their final pavement designs.
- 3.4 For major bridges, basic data is collected by the States and the CRW prepares all designs. This work appeared to be proceeding well and firm cost estimates were expected by early April, but are now delayed several months. Plans and estimates for minor bridges are prepared by the States from standard bridge plans. These are expected to be completed concurrently with road plans.
- 3.5 We asked the CRW to reconsider their present practice of advertising practically each bridge as a separate contract and to consider including all except major river bridges or unusually large and complex structures as a part of the package contract for a given length of road. They agreed to consider this but suggested an alternative of grouping several bridges in a separate contract. On this latter idea we pointed out the problems of scheduling and coordinating separate road and bridge contractors working on the same stretch of road. This is a matter which must be reviewed in depth during appraisal.
- 3.6 For all practical purposes, there has been no progress in right-of-way acquisition during the past 12 months. The Director General of CRW stated in August 1969 that acquisition might be expedited by obtaining early sanction for land costs alone but this apparently is not possible or hasn't been pressed. The CRW again assured us that right-of-way acquisition would not be a delaying factor, but we have serious doubts. According to the consultants, no right-of-way plans have been prepared by the States; this is understandable in view of the fact that major alignments have not yet been approved (para 1.1). We urged the CRW to expedite land acquisition and this matter should be reviewed carefully during appraisal.
- 3.7 The States have submitted their comments and suggestions on standard construction specifications and tender documents. The CRW will consolidate these comments and expected to complete the final draft by the end of March (to date we have no indication that this work is completed). Here again we recommended that CRW work closely with the consultants and hold joint meetings during the draft preparation.

Economics

- the consultants' economists have submitted their final report on the economic justification of the project. They have revised practically all cost and benefit factors used in their preliminary rate of return calculation and have produced new rates of return for the 19 elements into which they divided the project for analysis. Rates shown are much lower than those produced by the Ministry of Transport and Shipping (which were between 15% and 75%), and now range between 0% and 42% excluding allowances for time savings of passengers in vehicles. Some elements have such low rates as to indicate non-feasibility of those sections under any realistic economic assumptions; as indicated below, we propose to drop these elements from the project.
- 4.2 Further economic work will be required to (a) clarify or adjust some aspects of the economists' report which appear doubtful to us; and (b) to gather information in the field and substitute actual data for assumption used in the calculation. The principal points which appear doubtful to us in the report are:
 - (a) the extraordinarily large highway maintenance costs;
 - (b) the consistently high growth rates for traffic;
 - (c) the apparent failure to apply shadow pricings to benefits; and
 - (d) the inclusion of time savings of passengers in the benefits, at least at the values shown.

We have now, however, received the economists' working papers and are reviewing the above points.

- 4.3 Additional field information is being gathered on the following points:
 - (a) the actual transit time for vehicles:
 - (i) through towns which are to be by-passed;
 - (ii) over road sections which are to be improved; and
 - (iii) over sample roads of the standard to which improvements are to be made (the heart of the economic analysis is the savings in vehicle operating costs due to increased vehicle speeds; the report is based on assumed increases in speed); and
 - (b) estimation (by O/D survey) of the amount of traffic likely to be using the by-passes and certain bridges included in the project.

Additional Consultants' Services

- 5.1 To date the quality of the consultants' services has been good. They have had fair cooperation from the States and CRW on technical matters and have been of considerable help to them in advancing project preparation. Further assistance by the consultants is needed and we have requested them to undertake the following extension of their present contract:
 - (a) one Transport Economist 3 months; 2 months in the field (which commenced April 13) followed by 1 month home office work; and
 - (b) two Highway Engineers 3 months; about 12 months each in the field beginning about mid-May which is their termination date under the present contract.

The consultants advise that the above extension will cost US\$24,000 equivalent and that the total cost of their original contract will be about US\$70,000 equivalent. Thus, it will be necessary to request an additional US\$14,000 to supplement the present allocation of US\$80,000 for the consultants' services. The Bank has been advised that the consultants' staff in India may be subject to Indian income taxes and the Bank has agreed to meet their net out-of-pocket costs which, based on information furnished by the consultants, will require a further budget increase of US\$10,000.

Contractors

6.1 We have been trying to assemble information on the quality and capacity of the Indian road contracting industry and have requested the help of both our consultants and CRW in this connection. The consultants have provided some valuable data indicating the undeveloped state of the industry (see memorandum from Mr. Dickerson to Mr. Hardy, dated March 23, 1970) but we have so far had nothing from CRW. By letter of January 22, 1970 and again orally during our February visit we asked CRW for a list of contractors. Mr. Sinha stated that information had been received from the states which CRW was consolidating prior to submission to us. We should again remind Mr. Sinha to submit the list as he had promised.

It is our impression at this time that there are only 3 or 4 large general civil contractors in India who, even though inexperienced in the type of road construction envisaged in this project, could be expected to execute such work on the basis of their overall record. While there are many other Indian construction firms, they are unfamiliar with large scale road work and do not have the wide general experience and substantial resources which qualify the 3 or 4 large firms just mentioned.

Appraisal Date

7.l Although we estimated that the additional engineering and economic work to prepare the project might be completed by the end of May, the consultants in their latest report (No. 4, April 1, 1970) drew attention to the backward state of detailed engineering and expressed the opinion that this work will not be completed until December 1970. From a technical point of

view, appraisal could not therefore be scheduled until towards the end of 1970. CRW objected to a late appraisal when this was proposed to them but the issue has become mute since other policy considerations are likely to be a critical factor in the timing of appraisal. The major policy issues are: international bidding and construction supervision, and must be resolved between the Association and the Government of India, a process which most likely will not be completed until about Fall of this year at the earliest.

Research Project

8.1 We met with the Director of the Central Road Research Institute (CRRI) to discuss a possible highway research project which would obtain data on vehicle operating costs under varying road and traffic conditions, indices of pavement performance, and costs of road construction and maintenance by various blends of labor and equipment. The CRRI has already formulated plans for such a project and has furnished a summary of their proposal and estimated costs (US\$11 million equivalent). Dr. Millard of the U.K. Road Research Laboratory expressed interest in participating in such a project and has furnished his comments and suggestions.

Transport Policy Matters

9.1 We met with Mr. Baveja of the Planning Commission to review progress in transport coordination and to inform him of the Bank's likely requirements in connection with the proposed highway credit. Mr. Baveja noted the Bank's requirements and said he would shortly forward to the Bank a report on transport coordination as agreed during the 10th Railway Credit negotiations. He agreed with us that there was a definite need for improving highway planning procedures.

GMahoney/MKarcher/TNeuner/kms IBRD

cc: Messrs. Chadenet, Baum, Knox, Geolot, Lipkowitz, Baldwin, Engelmann, Piccagli, Rovani, Davis, Votaw/Kirk, Abd. El Aty, Gilmartin (New Delhi Office), Dickerson,

INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: FILES

DATE: April 24, 1970

FROM: M. Dickerson

SUBJECT: INDIA: Proposed Second Highway Project

Consultants' Income Tax Status

The object of this memorandum is to indicate the problems that arose concerning the visa and tax status of Bank-financed consultants in India and their position as of mid April, 1970.

Rendel, Palmer and Tritton (Consultants) London, were engaged by the Bank late in 1969 to provide about 15 man-months of appraisal assistance services for the above project at a cost of US\$69,000. They were pressed into service at short notice (our first choice of consultants having backed down), a Letter of Agreement was signed November 14, 1969 and the three members of the team (two engineers for six months and a economist for two months) arrived in India between November 20 and December 1, 1969. Two members of the team, Mr. Pilditch (engineer) and Mr. Cranage (economist) being British required no visas to enter India but Mr. Trnka (engineer) being a Czechoslovakian national obtained an entry visa (valid for three months but normally renewable).

During February, the team (now Pilditch and Trnka) became concerned about unforeseen income tax liabilities and were informed by the UN and the Department of Economic Affairs (through the Bank's New Delhi office) that they might be personally liable for Indian income tax (on salaries and subsistence) if they remain in the country beyond 90 days in any one fiscal year (commences 1st April). Due to his being the longer stay in India, Mr. Trnka's period was up first, but his case might also have been highlighted by his type of visa and the possible need to renew it. The Bank approached the Indian Government both through the Alternate Executive Director and through the New Delhi office for clarification of the consultants' tax status and their possible exemption under a "technician" classification. The team members also sought guidance from both the Indian authorities and our New Delhi office but apparently received little conclusive advice. Finally, they decided to leave India before the 90 days was up and, on February 25th, they crossed into Pakistan.

After further discussion in the Bank, we advised the consultants' London office to request the team to return to New Delhi soonest in order to continue their work, and we intimated that, in the uncertain tax circumstances, we would be responsible for any financial consequences. Accordingly, after receiving a cable from their London office, they returned to New Delhi on March 1, 1970 with Pilditch, as before, requiring no visa, but with Trnka obtaining a tourist visa (valid to end May) and signing an undertaking that he would not work in India. We have received further word from our New Delhi office that the Government is not prepared to class them as technicians and also that, should we wish to withdraw the team, taxes due may have to be paid before they are allowed to leave. The Letter of Agreement between Rendels and ourselves contains the usual clause that all taxes will be for the account of the consultant but we believe that Rendels' offer

April 24, 1970

was made on the good faith assumption that they were exempt from taxes on this assignment (as with their other assignments in India) and we therefore are inclined to reimburse them for taxes.

Rendels have subsequently informed us, by their letter of April 16, 1970, that if the 90-day ruling is observed, then it is possible that none of the team members will be liable for income tax. However, if tax is charged on the basis of their original assignment (180 days) plus an extension of about 42 days (requested by the Bank), then the total liability will be of the order of US\$10,000 equivalent. We have accordingly informed Rendels in London that we are prepared to consider assisting the team to meet these possible tax liabilities, and an item for this amount has been included in a request for additional funds to cover the extended assignment.

Cleared with and cc: S. C. Hardy

cc: Messrs. Knox, Geolot, Mahoney, Kirk, Denton/Singh

MWD: fm

INCOMING CABLE

DATE AND TIME OF CABLE:

APRIL 23, 1970

1620

ROUT

CARGILL

LOG NO.:

WU 22/23

INTRAFRAD

FROM:

TO:

NEW DELHI

NFORMATION COPY: DECODED BY:

ACTION COPY: MR. VOTAW

TEXT:

FOR VOTAW

ALPHA

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE

OUTGOING WIRE

TO: RENDELS LONDON

DATE: APRIL 22, 1970

CLASS OF SERVICE: LT

COUNTRY: U.K.

175

TEXT:

Cable No.: FOR HOLLOWAY AM PASSING THROUGH LONDON MORNING MONDAY APRIL 27 AND WILL

ENDEAVOUR VISIT YOU DISCUSS LATEST STATUS PROPOSED HIGHWAY PROJECT INDIA

AND OTHER MATTERS

HARDY INTBAFRAD

	INDIA: Prop Hwy Proj. NOT TO BE T	RANSMITTED
AUTHORIZED	BY:	CLEARANCES AND COPY DISTRIBUTION:
NAME DEPT.	S. C. HARDY TRANSPORTATION PROJECTS	cc: Messrs. Mahoney, Dickerson, Neuner, Kirk, Ahlstrand, Mulligan
SIGNATURE	(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE	5 op FH 1970
SCHardy:		For Use By Communications Section
	ORIGINAL (File Copy)	ICDVI CITED
	(IMPORTANT: See Secretaries Guide for preparing form)	Checked for Dispatch:

1.K.

ENDEAVOUR VISIT YOU DISOUSS LATEST STATUS PROPOSED REGIONAL PROJECT INDIA

INDIA: Prop Hwy Proj. NOT TO BE TRANSMITTED

5. G. HARDY

Apr. 22 5 00 PH 1970

COMMUNICATIONS

DISPATCHED

on: Messrs, Mahoney, Dickerson, Meuner,

INTERNATIONAL BANK FOR SECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE

OUTGOING WILE

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APAGE 21 1970

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AUTHORIZED BY:

NAME

B. Votar

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

REFERENCE

Kuriyama/amp ORIGINAL (File Copy)

Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cleared in substance with and

copy for: | Mr. Goffin

For Use By Communications Section

Checked for Dispatch:

IN Highway.

Mr. J. Blaxell
A. F. Geolet

April 21, 1970

INDIA: Proposed Second Highway Project Consulting Services

- The purpose of this memorandum is to request an increase of US\$24,000 in the allocation (originally US\$60,000) for consulting services for the proposed second highway project in India.
- As you are aware, the Bank engaged consultants (Rendel, Palmer and Tritton, London) to provide a team to assist the Central Roads Wing (CRW) of the Indian Government in the preparation of a highway project and to provide appraisal assistance to the Bank. The team was due to complete the assignment in May, 1970, but project preparation by the States and the CRW has been slower than anticipated and further consultants' services are needed prior to appraisal. To undertake the assignment originally envisaged, about US\$70,000 will be expended out of the allocation of US\$80,000. The additional work will involve a total of about 3 man-months of engineer's and 2 man-months of economist's time at an estimated cost of US\$24,000, requiring a net additional allocation of US\$14,000 on this account.
- 3. Further funds will be required to enable the consultant's staff to meet possible Indian income tax liabilities, which the Bank has agreed to pay. Based on information furnished by the consultant, we estimate that US\$10,000 may be required for such taxes including possible obligations under the proposed extension of services.

The financial position is therefore as follows:

2 (2)		US\$
(1)	Estimated cost of consulting services as per original Letter of Agreement	70,000
(11)	Estimated cost of necessary additional services (as per letter Rendels/Bank February 27, 1970).	24,000
(111)	Provision for consultants' tax lisbilities	10,000
	Total	104,000
(iv)	Original allocation (memorandum Adler/Sadove, September, 1969).	80,000
(v)	Additional funds required	24,000

May the approval of Programming and Budgeting please be given for a further allocation of US\$24,000 for the cost of the additional consulting services.

MWDickerson/fm



Record Removal Notice



File Title India - Second Highways Project	Correspondence 1969 / 1971 - Volume 2		Barcode No. 1847189
Document Date 16 April, 1970	Document Type Letter	8-3	
Correspondents / Participants To: S. C. Hardy Esq., From: Brian (Rendel, Palme	r & Tritton)		
Subject / Title India - Highway Appraisal			*
	X = .		
Exception(s) Personal Information			
Additional Comments		accordance with The V	bove has/have been removed in Vorld Bank Policy on Access to y can be found on the World Bank website.
*		Withdrawn by Chandra Kumar	Date 02-Mar-15

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

APRIL 16, 1970

1415

ROUTING

LOG NO.:

RC 37 / 16

TO:

INTBAFRAD

FROM:

LONDON

ACTION COPY:

TRANSPORTATION PROJECTS

INFORMATION

COPY:

DECODED BY:

are to when

TEXT:

104 URGENT FOR HARDY CHIEF TRANSPORTATION DIVISION I add to

RE YOUR CAB 15TH APRIL MATTER INVOLVED AND REPLY BY EXPRESS LETTER FOLLOWS

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CONSULTANTS

J. E. G. PALMER, F.I.C.E., F. AM. SOC. C. E.
T. T. LAMBE, F.I.C.E., F.I. MECH.E.
H. F. MERRINGTON, F.I.C.E., M.I.W.E.

R. DOWNHAM, M.R.I. N.A., M.I. MAR.E.

YOUR REF.

Westminster, London swi

OUR REF.

15th April, 1970.

Dear Sir,

DOCUMENT Nº3

INDIA - HIGHWAY PROJECT APPRAISAL Report on Economic Aspects

02136/14072

Further to our letters of the 3rd March and 19th March 1970, we now enclose three copies of our Report on the Economic Aspects of the Indian Highway Project, complete with Appendices 1 to 4. In view of the large amount of data incorporated in the Appendices, we considered it best to bind the Report and Appendices in one volume for convenience of reference.

We also take this opportunity to confirm our cable to you of the 10th April 1970 as follows:-

"REFERENCE YOUR TELEPHONE CALL YESTERDAY CRANAGE LEAVING FOR INDIA APRIL TWELFTH STOP YOUR OTHER COMMENTS NOTED AND APPROPRIATE ACTION TAKEN".

We acknowledge receipt of your own cable of the 10th April to us and confirm that Mr. Cranage left for India on the 12th April with a letter for Mr. Pilditch instructing him to contact Mr. Swami Nathan concerning the issue of a new visa for Mr. Trnka and advising him of the required continuation of their work in India until the end of June, i.e. a six-week extension of their original contract.

Your sympathetic decision with regard to the possible tax liability of the team members is much appreciated, and in the event of their becoming liable for Indian tax over and above that calculated under U.K. tax laws we shall advise you as soon as possible of the amount of their obligation.

Yours faithfully, for RENDEL, PALMER & TRITTON

G . Miller-Richards

APR 2 2 1970

S.C. Hardy Esq., Chief Transportation Division 1, I.B.R.D., 1818H Street, N.W., WASHINGTON, D.C., U.S.A.

DATE

12 1/5/10

Projects Dept. Correspondence

Enc.

RENDEL PALMER & TRITTON

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Form No. 27 (3-70)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

RENDELS

LOND ON

DATE:

APRIL 14, 1970

CLASS OF

SERVICE: L'

ITI

COUNTRY:

Cable No.:

U.K.

TEXT:

SPONEST ON

FOR HOLLOWAY REURCAB APRIL 3 WOULD APPRECIATE INFORMATION APPROXIMATE

AMOUNT TEAMS INDIAN INCOME TAX LIABILITY

HARDY INTBAFRAD

INDIA: Prop 2nd Hwy Proj NOT TO BE TRANSMITTED

AUTHORIZED BY:

S. C. Hardy

DEPT.

NAME

Transportation Projects

SIGNATURE.

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROV

REFERENCE:

SCHardy: dfw

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Mahoney, Dickerson

For Use By Communications Section

Checked for Dispatch: _

and

U.K.

FOR HOLLOWAL REURCAB APRIL 3 WOULD APPRECIATE INFORMATION APPROXIMATE SPONEST ON

AROUNT TEAMS INDIAN INCOME TAX LIABILITY

INTRAFRAD

INDIA: Prop 2nd May Proj NOT TO BE TRANSMITTED

S. C. Hardy

Transportation Projects

COMMUNICATIONS co: Messrs. Mahoney, Dickerson

INTERNATIONAL FINANCE (2)

OFFICE MEMORANDUM

TO: Files (through Mr. A. Airk)

DATE: April 14, 1970

FROM: M. Abd El Aty MA.

SUBJECT: INDIA - Proposed Second Highway Project

- 1. A meeting was held in Mr. Knapp's office on April 7, 1970. Messrs. Aldewereld, Cargill, Knox, Votaw, Hardy, Kirk and Abd El Aty attended.
- 2. There was general agreement on:
 - (a) the need for developing road transport (including road construction) as an essential part of the economic development effort;
 - (b) the persistence of GOI in attempting to reserve road construction for Indian contractors;
 - (c) the advisability of seeking a project directed towards developing Indian contracting industry, possibly through technical support on joint ventures with foreign countries;
 - (d) the need to continue the study on transport coordination in India;
 - (e) the need for supervision of road construction with foreign consultant participation.
- 3. No clear agreement, or answer, was found with regard to the extent to which Indian contractors could undertake a road program. (The formula for a possible project as proposed by the Projects Department has not yet been discussed with GOI.) A project to develop the industry would presumably be directed toward building up the capacity of the Indian road contracting industry.
- 4. A further meeting was held the following day in Mr. Cargill's office. Messrs. Knox. Votaw. Hardy. Kirk. Mahoney and Abd El Aty were present.
- 5. After reviewing the general points raised in the former day's meeting, it was decided that the Area Department should send a new letter to GOI stating IDA's views on international competitive bidding and the need to develop Indian road contracting industry. A new project should have the objective of developing both the roads and the industry.

- 6. In order to meet the Indian point of view a part of the project might be reserved for local competition.
- 7. No compromise could be made on the issue of supervision. It is also part of the process of developing the Indian contracting industry.
- 8. If GOI agrees with the principles, work can be pursued on this proposed project and a mission could be set up to visit India for further discussions.
- 9. It was agreed that the Association should reimburse the consultants (assisting GOI prepare the project) their out-of-pocket tax payments.

Cleared with and cc: Mr. S. C. Hardy

cc: Messrs. Knox

Cargill Votaw Mahoney

Kirk

MAbdELAty/pop

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME

OF CABLE:

APRIL 10, 1970

1413

ROUTING

LOG NO.:

RC 41/10

TO:

INTBAFRAD

FROM:

LONDON

INFORMATION COPY: DECODED BY:

ACTION COPY:

TRANSPORTATION PROJECTS

TEXT:

86 FOR HARDY CHIEF TRANSPORTATION DIVISION I. REFERICE YOUR TELEPHONE CALL YESTERDAY CRANAGE LEAVING FOR INDIA APRIL 12TH. YOUR OTHER COMMENTS NOTED AND APPROPRIATE ACTION TAKEN.

RENDELS

BF

APR 10 10 24 AM 1970 COMMUNICATIONS

REMEDIALS

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DEMONSTRATE DEPARTMENTS OF SECTIONAL PROPERTY.

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

RENDELS LONDON

DATE:

APRIL 10, 1970

CLASS OF SERVICE:

COUNTRY:

U.K.

TEXT: Cable No .:

> FOR HOLLOWAY INDIA HIGHWAY PROJECT CONFIRMING DISCUSSION APRIL 9 WITH YOUR MILLAR RICHARDS STOP RENDELS SERVICES IN INDIA SHOULD BE CONTINUED AS PLANNED STOP PLEASE ARRANGE CRANAGE VISIT AND ALSO ENDEAVOUR SETTLE INDIAN INCOME TAX OBLIGATIONS PILDITCH AND TRNKA SOONEST STOP BANK PREPARED REIMBURSE YOU OUT OF POCKET TAX PAYMENTS ARISING FROM SERVICES STOP SWAMINATHAN JOINT SECRETARY DEPARTMENT OF ECONOMIC AFFAIRS FINANCE MINISTRY/WHO HAS BEEN APPROACHED BY BANK COMMA SHOULD BE CONTACTED REGARDING ISSUANCE CORRECT VISA FOR TRNKA STOP LETTER FOLLOWS REGARDING EXTENSION SERVICES

> > HARDY INTBAFRAD

INDIA: Proposed Second Highway ProjectNOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

S.C. HARDY

DEPT.

TRANSPORTATION PROJECTS

SIGNATURE.

SCHardy/MWDickerson/ec

ORIGINAL (File Copy)

(SIGNATURE OF INDIVIDUAL AUTHORIZED

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared with & cc: Messrs. Geolot, Kirk

Messrs. Mahoney, Dickerson, Neuner

For Use By Communications Section

Checked for Dispatch:

POHIDON MEMBER

APRIL 10, 1970

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE

OUTGOING WIRE

TO: SWAMINATHAN

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APRIL 10, 1970

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TEXT:

Cable No.:

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TO SETTLE ANY OUTSTANDING INCOME TAX OBLIGATIONS SOONEST AND THUS WOULD
APPRECIATE YOUR ASSISTANCE IN OBTAINING CORRECT VISA FOR CONSULTANTS
TEAM MEMBER TRNKA IN ORDER ENABLE HIM CONTINUE WORK OF PROJECT
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AUTHORIZED BY:

NAME

A. F. Kirk

DEPT.

South Asia

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cc: Messrs. Hardy, Mahoney, Dickerson

New Delhi office

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APREL 10, 1970

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

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TRANSPORTATION PROJECTS

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DATE AND TIME

OF CABLE:

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TO:

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Form No. 27 (3-70)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: RENDELS LONDON

DATE:

APRIL 2, 1970

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COUNTRY: U.K.

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AUTHORIZED BY:

NAME

S. C. HARDY

DEPT.

TRANSPORTATION PROJECTS

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

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cc: Messrs. Mahoney, Dickerson, Kirk

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AUTHORIZED BY:

S. C. HARDY

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

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DATE AND TIME

OF CABLE: APRIL 2, 1970

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TO:

INTBAFRAD

FROM:

LONDON

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URGENT FOR HARDY CHIEF TRANSPORTATION DIVISION 1 58

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WITHIN 90 DAY LIMIT FOR TAX LIABILITY

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CRANAGE VISITED INDIA ON SHORT TERM CONTRACT AND HAS PAID NORMAL UK TAX HERE.

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DATE AND TIME OF CABLE:

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LOG NO.:

RC 58 / 2

TO:

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I.D. A. Appraisal Assistance Team, IN Highway, Central Roads Wing, Ministry of Transport & Shipping, 1, Parliament Steet, New Delhi.

Ref: IDA/India/20

1 April, 1970.

The International Development Association, 1818 H Street, N. W., Washington, DC. 20433, U.S. A.

For the attention of S.C. Hardy, Esq., Highway Division I, Transportation Projects Department.

Dear Sirs,

INDIA: ASSISTANCE IN HIGHWAY PROJECT APPRAISAL

PROGRESS REPORT NO. 4.

In accordance with the Terms of Reference contained in the Consultants' Proposal dated 11 November 1969 and I.B.R.D. letter dated 14 November 1969, we submit herewith our Progress Report No. 4 in quadruplicate.

A. STATUS OF EACH PROJECT ELEMENT.

- (1) Roads
 The latest progress figures are not available from CRW as States have not completed their returns. It is anticipated that the information will be received within one week, and as soon as to hand will be forwarded (as Annex 1).
- (ii) Bridges
 The up-to-date situation reported by CRW is given in Annex 2. The position is little changed from that reported last month, except for some marginal improvement in the data collection for widening and strengthening structures in Bihar.

B. ASSISTANCE TEAM'S PROGRESS

(i) <u>Visits</u>
No visits have been undertaken by the Team outside
New Delhi since the submission of Progress Report
No. 3.

Proposed Visits
CRW have been requested to assist in making arrangements for the Team to visit a major bridge construction site and a major roadwhorks contract in progress, not necessarily in any of the Project States. It has been suggested that Buxar Bridge over the Ganga River and Patna By-pass may be suitable for visiting.

Central Road Research Institute
Three visits have been made to CRRI in New Delhi
to obtain the Institutes views on the Team's
pavement proposals which were submitted to CRW in
Jammary. Talks were held with the Director and
the Road Scientist.

(11) Central Roads Max As a preliminary to discussions on pavement design CRW have submitted to the Team "Guidelines for the Design of Flexible Pavements" prepared by the IRC. This document has been reviewed and the following comments are made:

IRC recommendations give, in general, useful guidelines for pavement design. The Team suggest that some new aspects could be incorporated culled from Road Note 29 and RRL Report LR 279, in particular the undermentioned.

- (a) All elements of the Second IDA Highway Project have more than 500 c.v./day in 10 years, and thus a relatively thick bituminous surfacing will be required. The Team consider that efficient drainage and rigorous quality control during construction are essential. To ensure good drainage characteristics, impermeable surfacing, stabilized shoulders with sufficient crossfall and wider base course layers are considered necessary.

 We also recommend that pavement design should be based on natural or equilibrium moisture content in the subgrade, as a corollary to effective drainage.

 (ref. para. 3.2.2)
- (b) It is accepted that dense premix bituminous carpet or premix carpet with seal coat may be considered as impermeable surfacing.

 (ref. para. 3.2.5)
- (c) For Second IDA Highway Project elements the thickness of sub-base should not, in the Team's opinion, be less than 15 cm constructed from materials with minimum 30% CBR. (ref. para. 4.2.1)
- (d) The use of dry-bound or wet-mix macadam is preferred to water-bound macadam. Where heavy traffic stresses occur wet-mix macadam in two layers, the upper one being stabilized with 5% cement, should be considered. (ref. para. 4.3.1)

- (e) The Team proposes that the thickness of bituminous binder course should be 5 cm for traffic between 500 to 1500 c.v./day, and 7.5 cm for traffic over 1500 c.v./day. (ref. para. 4.3.5)
- (F) For traffic over 1500 c.v./day the Team recommends dense asphaltic concrete for the wearing surface. (ref. para. 4.4.1)

The "Guidelines" are in final draft form only, and it is not proposed at this stage to send a copy to the Bank. If, however, a copy is particularly required arrangements can be made to provide it.

Pavement Proposals
Pavement design proposals have been submitted to
the Team for widening and strengthening (not for
new construction) for Elements Bl, B3 and B4 in
Bihar, and our comments given to CRW are thus:

- (a) The use of asphalt concrete for the purpose of providing an impervious wearing course only, without traffic justification, is considered uneconomical. Cheaper mixtures with surfacedressing seal should be used.
- (b) Laying asphalt concrete or semi-dense carpet wearing course directly on the stone base course is unsatisfactory. A good part of this expensive material will be used to cover irregularities in the base course, and will pehetrate into it. To meet the requirements of the traffic volumes on these roads and to provide strength for bullock carts, a thicker bitumen-bound top layer is needed in any case, and thus a binder course of bitumen macadam under the wearing coat should be laid.
- (c) Water-bound macadam over lime-stabilized sub-base is not satisfactory. Dry-bound macadam (or other crushed stone base material with limited water) should be used.
- (d) Over-burnt brick metal should be avoided in Bihar owing to its doubtful quality in this State.
- (e) The sub-base layer of gravel/sand material proposed for B 1 should be considered as a cut-off layer, if its characteristics show it to be fully pervious, and the pavement should be designed for CBR of the sub-grade at natural or equilibrium moisture content.
- (f) B4 between Bakhtiapur and Barauni will, in places, be new construction in order to raise the level of the pavement above monsoon flooding, and the design of such sections will depend on the

Paper Alignments
The total length of paper alignments (by-passes and major realignments) to be reviewed and vetted for Appraisal is 159.7 km. 55% 51.2
To date 38.3 km have been reviewed (50%) and 56.0 km finally agreed with CRW (26%).
Details are as under: 32%

Serial No.	Project Element	Location	ength ka	Remarks
1	B 1	Chirkunda by-pass (West Approach to Baraker Bridge)	8.0	Alignment agreed
0	B 3	Aurangabad by-pass	6.4	Alignment agreed
2	B 4	Navada by-pass	8.0	Alignment agreed
4	13 -8	Biharshariff by-pass	8.3	Not seen
**	n	Athmalgola by-pass	2.6	Not seen
0	n	culabbagh by-pass	0.8	Not seen
234567	n	Pandarak by-pass	1.8	Alignment agreed
8	и 1	Kolhagur by-pass	5.0	Not seen
8	**	Satara by-pass	8.5	Not seen
10	M S	Vashind by-pass Asangaon/Shahamur	2.4	Alignment agreed
11		by-pass	5.0	Reviewed - further investigation required
78		Kasara by-pass	5.0	Reviewed - major problem of valley crossing needs further investigation
13	*	Igatpuri by-pass	5.5	Reviewed - end of by-pass requires further investigation
14	n	Ghoti by-pass	2.5	Reviewed - improved alignment to be investigate
15	44	Pimpalgaon by-pass	2.4	Alignment agreed
16	**	Malegaon by-pass	4.3	Reviewed - improved align- ment to be investigated
17		Chandor Ghat		
18		re-alignment Laling Ghat re-alignmen	4.0	Not seen
79		Davent Ame I f. Gredman	4.0	Not seen
		Marine has make	1.7	Alignment agreed
19 20	Tl	Hosur by-pass Hosur Chat re-alignmen		Reviewed - alternative alignment to be investigate
21	4	Thoppur Village		
		re-alignment Thoppur Ghat	3.0	Alignment agreed
85		re-alignment	2.2	Reviewed - improved alignment to be investigate
23	**	Krishnagiri by-pass	4.7	Alignment agreed
24	*	Kaveripatnam by-pass	3.9	Reviewed - two schemes satisfactory, but dependent on investigation of further extension of by-pass
25	er	Salem by-pass	9.0	Alignment agreed
				economic assessment.

(cont'd)

Serial No.	Project Element	Location	Longth ka	Remarks
26	72	Kumarapalayam/Bhavani by-pass	3.0	Reviewed - final alignment dependent on further investigation into possibility of extension of by-pass at south end.
27 28 29 30 31	 a.s	Staum by-pass Auriyah by-pass Kanpur by-pass Pukrayan by-pass Sengar River re-alignment	13.7 4.5 22.5 4.0 2.0	Not seen Alignment agreed Not seen Alignment agreed Not seen
		Total length	159.7	
		Total reviewed Total agreed Total not seen	88.3 51.2 71.4	55% 32% 45%

Eridges

(a) <u>Manuary Bridge - W2BS</u>

The preliminary design and cost estimate have been perused, and the following comments have been passed to CRW for consideration:

Chida Band
The hydraulic model test has not yet been carried out, and the design of the bund is tentative.
The estimated cost of this tentative design is approximately & 147 lakes, compared with a bridge structure cost of about & 91 lakes. It has been agreed with CRW to visit The Irrigation Research Institute at Roorkeed as soon as possible to check progress on the model test and examine the flow characteristics of the Ganga River at Kanpur.

The somewhat elaborate cellmlar design proposed
is an thought to be expensive, and it has been agreed to investigate a simpler form before going to tender.

Abutments
The proposal for a shallow abutment with simple spread feeting resting on filling between HFL and LWL is not favoured, and a was

well foundation with cantilwered box wingwalls and hinged transition slab is a sounder solution.

Approach Hoadworks
Included in the preliminary estimate is a sum
of h 11 lakhs for heavy earthworks and paving, etc.
for approaches on either bank over a total length
of 2.4 km. The actual length of approaches is
about 20 km and to avoid either duplication
of cost estimates or an omission CRW have been
abked not to include any road approaches in
bridge estimates

- (b) Kalvi Bridge U2Bl
 The design of plers, abutments and superstructure
 is the same for both Kalpi and Kanpur Bridges,
 and the same remarks apply.
- (c) <u>Midenius Brick Arch Bridges Ul and U.2</u>
 A set of standard proposals have been prepared for widening brick arch bridges in the following categories:

Arch span	Existing clear width between parapets	New clear width between kerbs
15 ft 15 ft 15 ft 20 ft 25 ft	16 ft 18 ft 16 ft 16 ft	7.50 m 7.50 m 7.50 m 7.50 m

- (d) <u>Iharus Wals Svides Ul</u> Details of widening and cost estimate.
- (e) Pandu Nadi Bridge U2
 Details of widening and cost estimate.
 - (f) Age of Bridges Ul and UE
 Jenerally the age of brick are h bridges on Ul
 and UE is about 100 years, and CRW have been
 requested to arrange for the physical check
 on the condition and depth of foundations in
 the absence of any drawings of the original
 atructures, in a few selected cases.
- In the Team's Progress Report No. 3 it was incorrectly stated that "DG, CRW, felt that ... roads would be ready by mid-April and everything would be ready by 31 March". These dates should be interchanged.

from the review of paper alignments and the status of bridges it will be seen that the above dates are not being met, and appraisal before June will not be possible.

D. CONTRACTORS.

E. GENERAL

In reference to your letter of 22 January to the Consultants in London we have the following observations to make further to those given in previous Progress Reports.

- 3.1 Study of a set of tender documents recently issued for contract bidding in connection with 46 miles of 12-ft wide National Highway to be strengthened and widehed to 23 feet carriageway reveals the need for improved quality of documentation.

 Apart from undesirable conditions, dated specifications and archaic billing, all of which will be dealt with when CRW drafts are considered, it is recommended that a better format should be adopted. To assist CRW in this matter a set of tender documents prepared by the Consultants in London for an overseas road project in the Middle East has been passed to them as being typical of the type of documentation which would be acceptable to the Bank.
- F. PUTULE PROGRAMME FOR ASSISTANCE OF PROJECT APPRAISAL AND DETAILED ENGINEERING.

In accordance with the staffing schedule in the Consultants' Proposal the assignment of the Team in India will terminate mid-May. The Bank's visiting mission in February, headed by Mr. Mahoney, intimated the desirability of the present Team members extending their assignment to cover Appraisal, say, until July, and this will be a matter for agreement between the Bank and the Consultants in London.

The Team, however, wishes to draw attention to the backward state of detailed engineering, etc., as sutlined under Phase II of the Proposal, and, based on experience gained so far in India, predicts that this work will take a further 6 months, i.e. until December 1970, and will require consultant participation if standards acceptable to the Bank are to be assured.

Por major bridges over about 400 ft long Indian practice is to permit contractors to submit bids based on alternative designs of their own conforming to certain basic requirements such as waterway, clearance, width and foundation depth, etc., but otherwise allowing considerable freedom of design choice. Decause of this practice the PWD does not prepare detailed drawings for tender purposes, and these will not be finalized until the contract is awarded. The Team strongly recommends that calculations and working drawings for actual construction, which may also include erection schemes, should be submitted by CRW to the Bank for review by consultants, as a Phase III operation. Such a review chould be conducted at the consultants' head office and not carried out solely by a bridge engineer visiting India.

Yours faithfully,

P. Pilditch, Team Leader.

cc. Rendel, Palmer & Tritton.

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INTERNATIONAL FINANCE CORPORATION

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OF CABLE:

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

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TO: RENDELS

LONDON

DATE: APRIL 1, 1970

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SERVICE: LT

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FOR HOLLOWAY

REURCAB 44 OUR DECISION REGARDING POSSIBLE CONTINUATION TEAMS SERVICES IN INDIA AND CRANAGE VISIT WILL BE CONVEYED TO YOU NEXT WEEK STOP IN MEANTIME PLEASE CABLE URGENTLY FOLLOWING INFORMATION ALPHA CURRENT VIZA STATUS TEAM MEMBERS BETA CIRCUMSTANCES SURROUNDING SUCH VIZA SELECTION GAMMA AMOUNT OF TAXES PRESENTLY ASSESSED BY INDIAN AUTHORITIES ON EMOLUMENTS TEAM MEMBERS INCLUDING CRANAGE

HARDY



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DEPT. TRANSPORTATION PROJECTS	
SIGNATURE (SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)	
REFERENCE: SCHardy: dfw	For Use By Communications Section

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

BOC

Form: No. 27 (3-70)

INTERNATIONAL DEVELOPMENT ASSOCIATION INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELORMEN

CORPORATION

OUTGOING WIRE

TO: RENDELS LONDON

DATE APRIL 1, 1970

CLASS OF

III

COUNTRY: U.K.

TEXT:

FOR HOLLOWAY

REURCAB LA OUR DECISION REGARDING POSSIBLE CONTINUATION TEAMS SERVICES IN INDIA AND CRANAGE VISIT WILL BE CONVEYED TO YOU NEXT WEEK STOP IN MEANTIME PLEASE CABLE URGENTLY FOLLOWING INFORMATION ALPHA CURRENT VIZA STATUS TEAM REMEMBERS BETA CIRCUMSTANCES SURROUNDING SUCH VIZA SELECTION CANNA AMOUNT OF TAXES PRESENTLY ASSESSED BY INDIAN AUTHORITIES ON EMOLUMENTS TEAM MEMBERS

HARDY

COMMUNICATIONS

RECEIVED

INDIA: Prop 2nd Hwy Proj. NOT TO BE TRANSMITTED

AUTHORIZED BY

S. C. HARDY

DEPT. TRANSPORTATION PROJECTS

sersence. Scelardy: dfv

APR 1 3 39 PH 1970

For Use By Communication Section

cc: Messre, Mahoney/Dickerson, Kirk

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

ROUTING

ACTION COPY: TRANSPORTATION / PROJECTS

INFORMATION

DECODED BY:

COPY:

IN Heapways

INCOMING CABLE

DATE AND TIME

OF CABLE: APRIL 1, 1970 1412

LOG NO.:

RC 40/1

TO:

INTBAFRAD

FROM:

LONDON

TEXT:

FOR HARDY CHIEF TRANSPORTATION DIVISION 1

URGENT 44/ REFERENCE YOUR TELEPHONE CONVERSATION HOLLOWAY 26TH MARCH WE

CONFIRM CRANAGES VISIT INDIA CANCELLED AS PER YOUR INSTRUCTIONS. WILL

AWAIT YOUR FURTHER INSTRUCTIONS BY CABLE

RENDELS

PJ

APR | 9 54 AM 1970 COMMUNICATIONS

CONTRA CRAWAGES WINE THEIR CONCERTAN AS PER WINE BUSINESSIONS, WILL

Form No. 27 (6-69) INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

IN Highways

OUTGOING WIRE

TO: INTBAFRAD NEW DELHI DATE: MARCH 27, 1970

CLASS OF

SERVICE: LT

COUNTRY: (INDIA)

MA

TEXT: Cable No.:

111 FOR GILMARTIN

REFUR 103 CONSULTANTS LONDON HEAD OFFICE ADVISED THEIR MEN IN INDIA

SHOULD BE READY TO DEPART ON SHORT NOTICE BUT FINAL DECISION DELAYED

UNTIL CARGILL'S RETURN WEDNESDAY STOP FULLY AGREE YOUR RECOMMENDATION

NOT TO BE TRANSMITTED

AND HOPE SOME FURTHER CABLE EARLY NEXT WEEK REGARDS

KIRK

AUTHORIZED BY:	Con SECUM.
NAME	A. F. Kirk
DEPT.	South Asia
SIGNATURE	SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Hardy

2V

Checked for Dispatch:

For Use By Communications Section

ORIGINAL (File Copy)

AFK/bj

(IMPORTANT: See Secretaries Guide for preparing form)

DATE: MARCH 27, 1970

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AND HOPE SOME FURTHER CABLE EARLY NEXT WEEK REGARDS

COMMUNICATIONS

W. F. Karke

MAR 27 6 28 PH 1970

cc: Mr. Hardy

OFFICE MEMORANDUM

TO: Files

DATE: March 26, 1970

FROM: S. C. Hardy

SUBJECT: India: Proposed Highway Project

Consultants 'Services

Acting on Mr. Votaw's memorandum dated March 25, 1970 to Mr. Knox, I today telephoned Mr. Holloway, partner of Rendel, Palmer and Tritton, the U.K. consulting firm which was assisting the Bank and India prepare a highway project for subsequent appraisal.

- I told Mr. Holloway to delay the departure of Mr. Cranage, transportation economist, who was scheduled to visit India again on March 29; I indicated that any expenses incurred in the delay would be met by the Bank. I further told Mr. Holloway that the situation regarding the tax status of his team in India seemed to be deteriorating and alerted him to the possibility of their early withdrawal; a definite decision would be taken soon after Mr. Cargill returned to the Bank on Tuesday, March 31. The Bank, through its office in New Delhi, might be prepared to assist the consultants in meeting any heavy financial payments needed to "release" the individual members of the team.
- Mr. Holloway said the firm had not met with such tax difficulties 3. in carrying out other consulting work in India because their contracts were with the Indian Government, and individuals had received "technician" tax-free status. It was because they were now under contract to the Bank and not to the Indian Government (notwithstanding their work was in the interests of the Indian Government) that the tax problems had arisen. The firm's original fee quotation had not taken into account the substantial amount of taxes apparently involved.

SCHardy: dfw

cc: Messrs. Knox, Geolot, Mahoney/Dickerson, Neuner, Cargill, Votaw, Kirk.

IN Heghways (2)

Mr. A. David Knox

March 25, 1970

Gregory B. Votaw

INDIA - Proposed Highways II

- 1. I understand from Mr. Kirk that Mr. Hardy wishes to have a written confirmation from me of a message that was relayed to him orally by Mr. Kirk.
- I wish to confirm that Mr. Cargill telephoned me from London to say that while in India he had discussed the question of the Rendel, Palmer and Tritton consultants continuing their work there. He (Cargill) felt strongly that the Bank should not become involved in the various tax and visa issues that were raised by the continued presence in India of these individuals. Accordingly, he said, Rendel, Palmer and Tritton should be advised that their representatives should leave India at the earliest possible moment to avoid further difficulties and possible embarrassment to the Bank. If at all possible while he is in London this week, Cargill will talk to R.P.T.'s London office about the problems their men are having in India.

Gopies for: Messrs. Hardy/Moloney (Trans.Projects)
Neuner (Trans.Projects)

AFKirk/bj/gs

Mr. S. Aldewereld

March 25, 1970

A. David Knox AM

India: Proposed Second Highway Project
International Competitive Bidding

- 1. You have asked a question as to the likely prospects of domestic road contractors executing satisfactorily a proposed IDA-financed road project in India totalling some US\$60-70 million. To the best of our knowledge the prospects are very slim, and substantial involvement by foreign contractors would, in our opinion, be essential to undertake such a volume of work and to "safeguard the integrity of the project".
- 2. The policies of the Indian Government have been such that domestic road contractors (as opposed to bridge and industrial civil works contractors) have not been provided with the opportunities to develop. The road contracting industry at present is in its infancy, and one of the objectives of the proposed highway project, and of subsequent projects, would be to develop the industry. The principal present constraints to such development are:
 - (a) no affirmation from Government that future road works would continue to be executed on a competitive contractual basis;
 - (b) no recognition of the road contracting "industry" as such, with consequent ineligibility for credit and tax concessions;
 - (c) difficulties in acquiring promptly Indian manufactured and foreign equipment; and
 - (d) cumbersome contracting and payment procedures.
- 3. If our normal prequalification procedures were to be followed, with the larger road sections (ranging in size from US\$5-10 million equivalent) broken down into smaller packages of about US\$1 million to provide small contractors with an opportunity to bid, we believe on the basis of present knowledge that only about three or four Indian road contractors would be prequalified to bid. The others would most likely be excluded on the basis of insufficient capacity and lack of previous experience in works of a similar nature. Any smaller subdivision of the project would begin to create problems in administering a large number of individual contracts. As mentioned in the previous paragraph, a prerequisite to any successful contracting operation would be a lifting of the constraints to development of the domestic industry.

- there are in addition a number of small, scattered items of roadworks that would not be attractive to foreign contractors and which might be tackled by the smaller Indian contractors. Such works typically involve the bypasses of congested towns and villages, with an average contract value of about \$% % million, and a total value of some \$4-5 million. We could include these works in the project and participate in their financing on the understanding that they would be reserved for bidding by Indian contractors only. We would have to accept lower prequalification criteria.
- 5. It should also be noted that if we succeed in persuading the Indians to accept the principle of international competitive bidding, we will have to discuss with them ways and means of making it effective. In particular we would need changes designed to facilitate importation of equipment and spare parts; clarify the tax status of foreign contractors and their personnel; provide for the repatriation of profits in a convertible currency; and assure equitable and competent supervision of their contracts, if necessary using foreign consultants.
- 6. Most of the points mentioned above are elaborated in the attached memo dated March 23, 1970 from Mr. Dickerson. A dossier of supporting material for his memorandum has not been attached but is available for reference if required.

Attachment.

ADKnox: SCHardy: dfw

cc: Messrs. Baum, Votaw, Geolot, Hardy, Mahoney/Dickerson

INTERNATIONAL BANK FOR FORM No. 75 RECONSTRUCTION AND DEVELOPMENT (2-60)INTERNATIONAL FINANCE INTERNATIONAL DEVELOPMENT **ASSOCIATION** Date April 14, 1970. ROUTING SLIP ROOM NO. NAME Mr. Dickerson C419 To Handle Note and File Appropriate Disposition Note and Return Prepare Reply Approval Per Our Conversation Comment Full Report Recommendation Information Signature Initial Send On REMARKS. I have seen this letter before. Love points could be of interest, genticularly page 2, is study of structured equivalencies. This may

help in the formulation of the labor equipment study. We should ash for more informational details on this aspect of their work.

im R. aropia.

(2-60)

FORM NO. 75 INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE

INTERNATIONAL DEVELOPMENT

CORPORATION	ASSOCIATION				
ROUTING SLIP	Date 4/13/70				
NAME	ROOM NO.				
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Dr. Bh. SUBBARAJU C. E., B.E., M. SC. Ph. D., M. PHI. KAPPA. PHI. M. I. E. (INDIA), M. I. A. B. S E. DIRECTOR

W. Walnut M. Dickerson P. 2 H. New TELEPHONE: 7295

TELEGRAM : 'ROADSEARCH' ENTRAL ROAD RESEARCH INSTITUTE

P. O. C. R. R. L.

NEW DELHI-2021st March, 1970

Chopra of prepare draps

Dear Mr. Hardy,

CRRI/DD/TTPr/66

This is in continuation of the discussion I had in my office on 18.2.1970 with Mr. T.H. Neuner and Mr. Martin Karcher of your organisation.

As desired during the discussions, I am enclosing herewith a brief note on the Indian Roads Congress Road Tests Project.

The off-road test series as contemplated in the enclosed note provides reasonable opportunity for studying vehicle operation costs for the types of vehicles and the types of surfacings involved in the test series.

With kind regards,

Yours sincerely.

sd /-(Bh. Subbaraju)

No reply required. Spoke persmally in the Dr. Subbaraju on July 3, 1970. See my Back to Office I fell Report deted Flely 17, 70, TN.

Mr. S.C. Hardy, Chief, Highway Division No. I, Transportation Projects Department, International Bank for Reconstruction & Development. 1818 H Street, N.W. Washington, D.C. 20433 U.S.A. MECEIAED

Sopy to Mr. George Mahoney, International Bank for Reconstruction and Development, 1818 H Street, N.W., Washington, D.C. 20433.

MAR 3 0 1970

Projects Dept. Correspondence

(Bh. Subbaraju)

ANS'D EY

DATE _____



ARCCORP. 72959 TELEGRAM: 'ROADSEARCH'

CENTRAL ROAD RESEARCH INSTITUTE P. O. C. R. R. L.

NEW DELHI-2021 AT MATCH. 1970

Dr. Bh. SUBBARALU C. E., B.E., M. SC. Ph. D., M. PHI, KAPPA, PHI. M. L.E. (INDIA), M. L.A. B. S. E. BIRECTOR

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Chief, Highway Division No. I. Transportation Projects Department,

Yours sincerely,

sd/-(Bh. Subbaraju)

> No reply required grobe resonally with B. Subburaja on Tale 3, 1970, Les

1818 H Street, N.W. Washington, D.C. 20433

Sade to Ofice , hell theyou dated Filly 17, 70. TW

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Slopy to Mr. George Manoney, International Bank for Reconstruction and Development, 1818 H Street, N.W., Washington, D. 1610 Wolff 39. UMIT: Pt.

International Bank for Reconstruction & Development,

Mr. S.C. Hardy,

MAR 3 0 1970 Projects. Dept. Correspondence

A# 0.5 WV

NOLLORS COMMUNICATIONS

(Bh. Subbaraju)

NOTE ON THE ROAD TEST TRACKS CONTEMPLATED UNDER THE INDIAN ROADS CONGRESS ROAD TESTS PROJECT

A comprehensive Road Tests Project involving on-road and off-road test tracks has been taken up under the auspices of Indian Roads Congress. The main objective of this Project is to study the comparative merits of the practices, both existing and those emanating from new concepts, for the design and construction of highway pavements so that the practices could be made more rational and economical in relation to the actual conditions of traffic, soil and climate prevailing in various parts of India. The Research Organisation Committee of the Indian Roads Congress is the Co-ordinating Committee for the Project which is to be carried out in co-operation with the various highway interests in the country, including the allied industry. The Central Road Research Institute has to look after the day to day working of the Project and has to provide the whole-time staff and instrumentation.

The Project may be said to have two main parts: the on-road tests and the off-road tests. Work on the on-road test series has already been commenced. The following four Schemes, selected for the first phase of the on-road series, are at hand:-

- i) Development of appropriate serviceability indices under Indian conditions.
- ii) Evolving specifications for construction of roads on expansive sub-grades such as black cotton soils.
- iii) Evolving criteria for the choice of the type of bituminous surface courses for flexible pavements, vis-a-vis traffic etc.

iw) To evolve economical maintenance methods and critical stages at which upgrading is an economic necessity for Earth roads in rural areas.

In addition to the various on-road tests, envisaged under the Indian Roads Congress Road Tests Project are also certain off-road tests, the following aspects are considered desirable to be experimented on the off-road test series.

- i) Determination of structural equivalencies of different types of constructions for sub-bases, bases and surface courses.
- ii) Study of the performance of certain composite pavement systems.

The study of the structural equivalency on various constructions will involve, more or less, three separate sub-studies, one each meant for sub-bases, bases and surface courses. The sub-bases to be experimented with would include different levels of thickness of such constructions as stabilised soil, laterite, kankar, gravel, brick metal, brick soling and stone soling. Similarly, the studies on equivalencies for different types of bases and surface courses would include different levels of thickness, and combinations of construction such as water bound macadam (with graded and single-size aggregate), different types of bitumenbound base courses (semi-grout, full grout, built-up spray grout), thin bituminous surfacings and high type bituminous surface courses (sand asphalt, asphaltic concrete etc.).

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Some of these land . alterals better to the selver better to labor with whom such operations thou such

Is this practical in India at this time?

In the man??

The above-said studies on off-road test tracks would require nearly 200 test sections. Taking 200 feet as length of each Test section, including transition, the total length of the test track in terms of single lane works out to about eight miles, which of course could be designed into suitable number of multilane loops.

The approximate costs of the above said off-road te

11	re approximate costs of the above s	a10 011-1040
st tra	ack work is asfollows:-	Rs. (millions)
i	Cost of construction	2.4
11)	Cost of maintenance, renewals and replacements	0.6
iii	Cost for traffic operation for average of 2 million repetitions (the traffic operation would involve about 250 trucks costing Rs.15 million).	40.0
iv	Cost of instrumentation and testing equipment.	4.0
V.) Cost of staff (salaries)	3-0
vi	Cost of construction equipment (Capital investment) (Construction equipment workh kxxx Rs.1.5 million may have to be imported)	
vii	Buildings, Transport, Travelling Allowance and Ancillaries.	5.0
viii)	Miscellaneous (Services for data compilation, processing and analysis, meetings, publications etc.)	2.5

Total 60.0 ======== 115\$ 8 MILLION



Ph. D., M. PHI, KAPPA, PHI, M. I. E. (INDIA), M. I. A. B. S. E.

Dr. Bh. SUBBARAJU

C. E., B.E., M. SC.

CRRI/DD/TTPr/66

TELEGRAM : 'ROADSEARCH'

CENTRAL ROAD RESEARCH INSTITUTE

P. O. C. R. R. I.,

NEW DELHI-2021st March, 1970

INDIA

By Air Mail

MAR 2 7 1970
Projects Dept. Correspondence

4-1

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A	T	E.				-				

To DICKERSON NEUNER

DIRECTOR

Please venium and plan to discusse with Sun. Hordy

Sew 3/27

Dear Mr. Hardy,

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With kind regards,

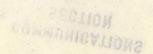
Yours sincerely,

(Bh. Subbaraju)

Mr. S.C. Hardy,
Chief, Highway Division No.I,
Transportation Projects Department,
International Bank for Reconstruction & Development,
1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

Copy to Mr. George Mahoney, International Bank for Reconstruction and Development, 1818 H Street, N.W., Washington, D.C. 20433.

(Bh. Subbaraju)



C. E., B.E., M. SC. Dr. Bh. SUBBARAJU

with Jud. Hardy

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M. I. E. (INDIA), M. I. A. B. S. E.

Ph. D., M. PHI, KAPPA, PHI.,

plan to disease

NEWNER

By Alr Mall

TELEGRAM : 'ROADSEARCH'

TELEPHONE: 72939

CENTRAL ROAD RESEARCH INSTITUTE

NEW DELHI-2021st March, 1970 P. O. C. R. R. L.

MAR 2 7 1970

Projects Dept. Correspondence

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2.0 8A

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CRRI/DD /TTPr/66

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U.S.A. Washington, D.C. 20433 1818 H Street, N.W. International Bank for Reconstruction & Development, Transportation Projects Department, Chief, Highway Division No. I, Mr. S.C. Hardy,

Mashington, Machill Se 33, 3:58 Reconstruction and Development, 1818 H Street, N.W., Copy to Mr. George Mahoney, International Bank for

(Bh. Subbaraju)

COMMUNICATIONS

SECTION

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	v)	Cost of staff (salaries)	3.0
	vi)	Cost of construction equipment (Capital investment) (Construction equipment worth **x*** R.1.5 million may have to be imported)	
	vii)	Buildings, Transport, Travelling Allowance and Ancillaries.	5.0
V	iii)	Miscellaneous (Services for data compilation, processing and analysis, meetings, publications etc.)	2.5

Total 60.0 ======== March 19, 1970

Mr. B. Cranage Rendel, Palmer & Tritton 125 Victoria Street Westminster London SW1, ENGLAND

Dear Mr. Cranage:

Thank you for your letter of February 25, 1970 which I received on my return from a mission abroad. I wish to confirm that we would like you to include the Kalpi Bridge in your investigations in India.

I apologize for the delay in answering your letter.

With best personal regards,

Yours sincerely,

Martin Karcher

cc: Messrs. Mahoney, Dickerson, Neuner

MK/als

Form No. 27 (6-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

PILDITCH

INTBAFRAD

NEW DELHI

DATE:

MARCH 20, 1970

CLASS OF

LT SERVICE:

RCA

COUNTRY:

INDIA

TEXT: Cable No.:

No.99

REURCAB MARCH 18 INDIA HIGHWAYS REGRET MATTER DELAYED BUT EXPECT OUR LETTER TO DG CRW CONFIRMING RESULTS FEBRUARY 18 MEETING WITH MAHONEY WILL BE MAILED EARLY WEEK MARCH 23

HARDY

Re: INDIA - Proposed Second Highway Project

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AUTHORIZED BY:

COMMUNICATIONS

NAME

DEPT.

S. C. Hardy

Transportation Projects

SIGNATURE

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GMahoney/isc

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Karcher

Checked for Dispatch:

Neuner Dickerson

For Use By Communications Section

MARCH 20, 1970

OUR ESTEER TO DE CRU CONSTRUCCO RESULTS SERBUARY LE RESTEUR WITH ES HOMAN REEN YERAR CRITAN HE ALLW YEMOHAM

He: INDIA - Proposed Second Highway Project

COMMUNICATIONS

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RENDEL, PALMER & TRITTON.

CONSULTING & DESIGNING CHARTERED ENGINEERS

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS

PARTNERS H. SCRUTTON, F.I.C.E., F. I.STRUCT. E., M. INST. PET. J. R. H. OTTER, F.G.G.I., F.I.C.E., A.R.I.C.G. B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E. F. IRWIN-CHILDS, F. I.C.E.

P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E.

P. A. COX, F.I.C.E.

J. C. MUNRO, F.I.C.E. K. E. AINSCOW, F. I. C. E., M. I. STRUCT. E.

D. M. S. FAIRWEATHER, F.I. MECH.E., M.I. LOCO. E.

CONSULTANTS:

J. E. G. PALMER, F. I.C.E., F. AM. Soc. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH. E. H. F. MERRINGTON, F.I.C.E., M.I.W.E.

ASSOCIATE: R. DOWNHAM, M.R.I.N.A., M.I.MAR.E. YOUR REF.

OUR REF. 02136/13992

19th March, 1970.

TELEPHONE: 01-834 8494

TELEGRAMS

INLAND & OVERSEAS

RENDELS, LONDON, SWI

125, Victoria Street, Westminster, London, s.w.1.

Dear Sir,

Indian Appraisal

Further to your cable of the 18th instant, we confirm having replied as follows:-

> "REYOUR CAB MARCH NINETEENTH ECONOMIC REPORT COMPLETED AND THREE COPIES MAILED MARCH THIRD TO WASHINGTON AND GILMARTIN IN DELHI STOP GILMARTIN RECEIVED COPIES STOP MAILING THREE FURTHER COPIES TO YOU TODAY STOP APPENDICES TO REPORT TO BE MAILED EARLY APRIL REGARDS"

fund then We now enclose three copies of the Report referred to.

> Yours faithfully, RENDEL, PALMER & TRITTON

Heal-toller

S.C. Hardy Esq., Chief Transportation Division I, International Bank for Reconstruction &

Development, 1818H Street, N.W., WASHINGTON, D.C. U.S.A.

> Original to: Trans Profesh Communications Date: 3/28-70 Section

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

ASSOCIATION

OFFICE MEMORANDUM

TO: Messrs. P.O. Malone and J.R. Howard

DATE: March 19, 1970

FROM: S.C. Hardy

SUBJECT: INDONESIA: Supervision of Highway Project, Credit 154-IND Supervision of UNDP-financed Highway Services

Preparation of Second Highway Project

Terms of Reference

- 1. On or about March 21, 1970, you will proceed to Indonesia for about 12 days:
 - i) to supervise the on-going Highway Project (Credit 154-IND);
 - ii) to help the Bank Resident Staff supervise the UNDP-financed Highway Services, and
 - iii) to assess the status of, and to assist in preparation of, the Second Highway Project.
- Mr. Malone will be head of mission.
- 2. With reference to the on-going Project you will:
 - i) review progress on all aspects of project implementation, particularly that on the provision of workshops, in view of the undertaking to accelerate the work given by the Minister of Public Works to the Bank mission which visited Indonesia in January 1970;
 - ii) discuss with Government all matters arising from the review, in the Bank, of bidding documents for procurement of workshop equipment and supplies;
 - iii) discuss with Government details of bidding documents for procurement of road rehabilitation and maintenance equipment, and establish the appropriate timing for issue of these documents in terms of progress on other aspects of the project;
 - iv) review progress on reorganization of the Directorate of Equipment Supply and on involvement by the Directorate in the procurement processes mentioned in (ii) and (iii) above;
 - v) agree with Government, on the lines of your discussions in the Bank, the personnel to be recruited for the Technical Support Services.

- 3. With reference to the UNDP-financed Highway Services and in conjunction with the Resident Staff, you will:
 - i) evaluate the work carried out on the feasibility study of the Sidjundjung-Muarabungo road in Sumatra and determine whether work has progressed sufficiently for a decision on investment in detailed engineering to be made;
 - ii) define the program of work for the feasibility study team during the remainder of the period of the Highway Services;
 - iii) review progress on establishment of three provincial pilot programs, in particular on the provision of local funds for the schemes, on the needed reorganization of the PWD's concerned and on implementation of costing and inventory control procedures.
- 4. With reference to the proposed Second Highway Project, and in conjunction with the Resident Staff and Government, you will:
 - i) endeavor to identify sources of financing for the remaining feasibility studies and detailed engineering;
 - ii) determine the specific content of the proposed bridge replacement program in Sulawesi;
 - iii) discuss the draft terms of reference, prepared in the Bank, for such remaining studies and engineering.
- 5. In addition, and in accordance with the request of the East Asia and Pacific Department, you should explore with the Resident Staff and Government the possibility of enlarging the scope of the proposed project and endeavor to identify sources of financing for any further studies or engineering which would be required as a consequence.
- 6. On or about April 5, on conclusion of your mission, you will proceed to Ceylon in accordance with the separate terms of reference issued to you. On your return to the Bank, you will submit a Back-to-Office Report followed by a Full Report on the findings of your mission.

PoMalone: jas

Cleared with and cc: Mr. Tolbert

cc: Messrs. Chadenet, Baum, Knox, Geolot, Capbert, ATDavis van Helden, Rigby, Asser, Hogg, BBell (Djakarta) Mackay, Carmichael, van der Meer FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME

OF CABLE: MARCH 19, 1970 1218

LOG NO.: RC 37 / 19

TO:

INTBAFRAD

FROM: LONDON

TEXT:

FOR HARDY CHIEF TRANSPORTATION DIVISION I

15 URGENT

REYURCAB MARCH 19 ECONOMIC REPORT COMPLETED AND THREE COPIES MAILED MARCH 3 TO WASHINGTON AND GILMARTIN IN DELHI. GILMARTIN RECEIVED COPIES. THREE FURTHER COPIES TO YOU TODAY. APPENDICES TO REPORT TO BE MAILED EARLY

APRIL. REGARDS.

HOLLOWAY

ROUTING

ACTION COPY:

TRANSPORTATION PROJECTS

IN Highwan

INFORMATION

COPY:

DECODED BY:

JAO

OF CAMER, MERCE AS, 1970

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WISTIN STREET

MAR 19 10 07 AM 1970 COMMUNICATIONS SECTION

TEXT:

31

INTERNATIONAL FINANCE CORPORATION

IN Highways

INCOMING CABLE

DATE AND TIME ROUTING MARCH 18, 1970 1240 OF CABLE: WU 4 / 19 LOG NO.: TRANSPORTATION PROJECTS ACTION COPY: HARDY INTBAFRAD TO: INFORMATION COPY: NEW DELHI DECODED BY: FROM:

RE INDIAN HIGHWAYS HAVE NOT YET RECEIVED COPY OF MAHONEYS MINUTES OF
MEETING WITH DG CRW ON 18 FEBRUARY. DATES AGREED BY DG FOR STAGE
COMPLETION OF PROJECT PREPARATION NOT BEING MET. ESSENTIAL DG HAS RECORD
OF MAHONEY MEETING WITHOUT FURTHER DELAY

Dur. Handy 1/2 - let's cashe Pildital the position of the 3/20 letter confirming agreements neached after Full Report was prepared but report has been delayed because I ather much. I will plan to have drapt letter mady | landy must much (after man appraisal report is in Jelaw) 4/10 1/21/21

M. Pilditch is reference to the Bank's letter confirmine the mission's findings. We are waiting for RPT's report before preparing the letter, which should indicate the Bank's selection of road elements to be included in the appearance. Ork 3/19

FOR INFORMATION REGARDING INCOMING CABLES, PLEASE CALL THE COMMUNICATIONS SECTION, EXT. 2021

MAR 19 9 52 AM 1970

COMMUNICATIONS

COMPRESSION OF PROJECT PROPERTION NOT BRING INT. SESTEMBLE, DO MAS PROOFE

MENTING WITH DO CHAT ON LA PERSONAN. DATES AGREED BY DE FOR WAAR

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

ROUTING

TRANSPORTATION PROJECTS

INCOMING CABLE

DATE AND TIME OF CABLE:

MARCH 14, 1970 1558

LOG NO.:

RC 47/17

TO:

INTBAFRAD

FROM:

LONDON

TEXT:

Congill informal ley towar cabo

7 FOR HARDY CHIEF TRANSPORTATION DIVISION I

REYOURCAB MARCH 17 HAVE CABLED PILDITCH AND INSTRUCTED HIM CONTACT CARGILL IN NEW DELHI. YOUR SYMPATHETIC ACTION MUCH APPRECIATED REGARDS

HOLLOWAY

ACTION COPY:

INFORMATION

DECODED BY:

COPY:

DD

TYPED

MAR 17 11 41 AM 1970 COMMUNICATIONS SECTION

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR INTERNATIONAL FINANCE RECONSTRUCTION AND DEVELOPMENT CORPORATION

INCOMING CABLE

DATE AND TIME MARCE 17, 1970 1915

OF CABLE:

WU 11 / 18

LOG NO.:

INTBAFRAD

TO:

NEW DELHI

FROM:

ROUTING

1 N Highways

MR. ROULET

ACTION COPY:

MR. CARGILL

INFORMATION

COPY:

DECODED BY:

TEXT:

5 FOR ROULET

ALPHA HIGHWAYS. THAPA PROMISED SUBMISSION MINI PROJECT AND LETTER OF APPOINTMENT TO NOR CONSULT ENGINEER WOULD BE SENT YESTERDAY BETA INTERVIEWED BIJAYA PRADHAN WILL GIVE VIEW NEXT WEEK GAMMA OTHER USEFUL DISCUSSIONS HELD WITH CARBILL ON NIDC TOURISM. WILL EXPLAIN ON RETURN DELTA LEAVING FOR RANGOON TOMORROW STAYING FOUR DAYS AT INYA LAKE HOTEL REGARDS

FELDMAN.

FAMILY NOTIFICATION BEING MADE

JAO

Mar 18 8 53 AM 1970 COMMUNICATIONS

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MARKET NA TRASS TOTAL

Form No. 27 (3-70)

> INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

IN Highways

OUTGOING WIRE

TO: RENDELS

LONDON

DATE: MARCH 17, 1970

CLASS OF

SERVICE: LT

COUNTRY: U.K.

TEXT: FOR HOLLOWAY

Cable No.:

RE INDIAN ROAD PROJECT PLEASE CABLE STATUS YOUR ECONOMIC REPORT WHICH WE

UNDERSTOOD WAS TO BE MAILED END FEBRUARY REGARDS

HARDY INTBAFRAD

NOT TO BE TRANSMITTED

Project. AUTHORIZED BY: CLEARANCES AND COPY DISTRIBUTION: S. C. HARDY Messrs. Dickerson, Neuner NAME TRANSPORTATION PROJECTS DEPT. SIGNATURE OF INDIVIDUAL AUTHORIZED TO APP MKarcher REFERENCE:

For Use By Communications Section

ORIGINAL (File Copy)

INDIA: Proposed 2nd Hwy

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

POMD ON

COUNTRY: U.K.

RE INDIAN ROAD PROJECT PLEASE CABLE STATUS YOUR ECONOMIC REPORT WHICH WE

UNDERSTOOD WAS TO BE MAILED END FEBRUARY REGARDS

INTBAFRAD

IMDIA: Proposed 2nd May

S. C. HARDY

MAR 18 COMMUNICATIONS

7 13 PM 1970

cor Messra. Dickerson, Neuner

INTERNATIONAL DEVELOPMENT | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

TO: Mr. A. David Knex DATE: March 16, 1970

FROM: S. C. Hardy

SUBJECT: INDIA: Proposed Second Highway Project Consultant's Income Tax Position

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2. You will recall that India refused to employ consultants to

- 2. You will recall that India refused to employ consultants to prepare the project for appraisal, but agreed to tolerate advice by experts if we financed them. At a cost of some US\$80,000 we retained three or four experts from Rendel, Palmer & Tritton, U.K, who commenced work in November 1969. They were pressed into service at very short notice after our first choice of consultants had backed down, and were retained on the "boiler-plate" letter agreement of the Administration Department, which makes them responsible for all tax obligations. The tax position of the proposed experts was somewhat obscure at the time (and still is) but in telephone conversation with one of the firm's principles, he made it clear to me that they were not expecting to pay much, if any, Indian tax on such short-term advisory services.
- 3. From all accounts (our own staff and the Indian State highway engineers) the consultants are doing a first class job in shaping up the project for Bank appraisal. In some ways, they can be regarded as relieving or supplementing Bank staff in the review and screening of draft appraisal data, while at the same time advising and assisting the Indian engineers and economists in preparing satisfactory appraisal material.
- 4. The attached letter dated March 10, 1970 from the consultants is self-explanatory; it mentions the situation that has developed in India, the conflicting advice they have received and the demoralizing effect on the team. Even the opinion of the Indian Alternate Executive Director as to their tax-free status, mentioned in Area Department's cable of February 25, 1970, seems to be counter to the Indian tax authorities views.
- 5. The attitude of the Indian authorities in this matter is inexplicable. We (the Bank) and the consultants are trying to help them prepare a project at no cost to themselves, and it is difficult to understand why India should wish to benefit financially from such an exercise. I suggest we take up this matter with India at the highest possible level with a view to:
 - (i) obtaining recognition of the value of the services being provided by the Bank and its consultants, and obtaining complete tax exemption for the services;

- (ii) failing to obtain such exemption under Indian law, then having India reimburse the tax levied by way of a counterpart contribution to the services;
- (iii) failing (ii), then having the Bank reimburse the consultants any taxes levied.
- 6. Whatever way we choose to handle the matter, I propose we cable the consultants as soon as possible, asking them to continue with the services and informing them that we are taking up the matter with a view to relieving them from all taxes.

SCHardy: dfw

Attachment

cc: Messrs. Votaw, Geolot, Mahoney, Dickerson, Kirk, Baum, Hogg, van Helden.

IN Highway RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS TELEPHONE: 01-834 8494 MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS INLAND & OVERSEAS RENDELS, LONDON, SWI PARTNERS

H. SCRUTTON, F.I.C.E., F. I.STRUCT. E., M. INST. PET.

J. R. H. OTTER, F.G.G.H., F. I.O.E., ARH.G.G.

B. G. R. HOLLOWAY, F.I.C.E., F. I.STRUCT. E.

F. IRWIN-CHILDS, F.I.C.E.

P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E.

P. A. COX. F.I.C.F. 125, Victoria Street, P. A. COX, F.I.C.E.
J. C. MUNRO, F.I.C.E. Westminster, K. E. AINSCOW, F. I. C.E., M. I. STRUCT, E. D. M. S. FAIRWEATHER, F.I. MECH.E., M.I. LOCO. E.

CONSULTANTS:

J. E. G. PALMER, F. I. C. E., F. AM. SOC. C. E.

T. T. LAMBE, F. I. C. E., F. I. MECH. E.

H. F. MERRINGTON, F. I. C. E., M. I. W. E.

ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I.MAR.E.

YOUR REF.

02136/13977 OUR REF.

16th March, 1970.

Dear Sir,

Highway Appraisal, India.

Further to our letter of the 27th February 1970, in which we advised you that Mr. Cranage would be available to travel to India at the end of the month, we wish to confirm that he will be leaving for India on March 29th, 1970.

On the occasion of Mr. Mahoney's visit to this office, we were informed that the likely commencement date for Appraisal would be June 1st and with this date in mind Mr. Cranage will be working to the following programme:-

Leave U.K. for India 1.

March 29th, 1970

Supervision of Origin/Destination and Speed studies

3. Return to U.K. with data

End of April

Coding and computer analysis of

data in London

During May

During April

Final write-up of collected information and despatch to Bank

End of May.

G. Mille Richard

We should be pleased to receive your confirmation that this programme will meet your own requirements for commencement of project Appraisal, and will also ensure that Mr. Cranage is not in India longer than the prescribed 90 days for tax immunity.

Yours faithfully, for RENDEL, PALMER & TRITTON

S.C. Hardy Esq.,

Chief, Transportation Division I,

International Bank for Reconstruction &

Development, 1818H Street, N.W. Washington, D.C.

U.S.A.

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: INTBAFRAD

ASSOCIATION

(Book 42)

DATE: MARCH 16, 1970

NEW DELHI CLA

CLASS OF SERVICE: LT

Ross

COUNTRY: (INDIA)

TEXT:

Cable No.: FIVE FOR CARGILL

RE PROPOSED HIGHWAY PROJECT STOP PATEL LETTER FEB 27 STATES IN PART GOVERNMENT HAS ALL ALONG CONFINED SELECTION OF CONTRACTORS FOR ROAD CONSTRUCTION TO INDIAN FIRMS STOP BANK TECHNICAL MISSIONS BELIEVE THAT INDIAN ROAD CONTRACTING INDUSTRY HAS NOT REACHED STAGE WHERE IT COULD EXECUTE EFFICIENTLY ALL WORKS IN THE PROPOSED DOLLAR SIXTY-SEVENTY MILLION PROJECT AND URGES THAT CONTRACTORS BE INVITED FROM ALL MEMBER COUNTRIES STOP ONE COMPROMISE BEING CONSIDERED HERE IS THAT UP TO ONE HALF OF PROJECT WORKS BE RESERVED FOR COMPETITION AMONG INDIAN FIRMS AND DESPITE RESERVATION FINANCED BY IDA WHILE BALANCE BE AWARDED ON AN INTERNATIONAL BASIS IN WHICH LOCAL CONTRACTORS WOULD COMPETE WITH OUTSIDERS STOP WORKING PARTY INCLUDING KNOX AND MYSELF REQUESTS YOU AND/OR KNAPP PRESS THIS AT HIGHEST APPROPRIATE LEVEL STOP SUBJECT OUTLINED IN KNOX MEMORANDUM BEING BROUGHT YOU BY DUNN STOP AT THIS STAGE FOR YOUR INFORMATION ONLY PROJECTS IS ALSO CONSIDERING POSSIBILITY OF MUCH FIRMS SMALLER PROJECT WITH COMPETITION RESERVED TO INDIAN XXXXXX ONLY BUT

NOT TO BE TRANSMITTED

COMMUNICATIONS

7 26 PM 15 (U

(see pager/2)

AUTHORIZED BY:

CLEARANCES AND COPY DISTRIBUTION:

NAME

A. F. Kirk

DEPT. South Asia

SIGNATURE ______

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

GVotaw /bj

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

For Use By Communications Section

Checked for Dispatch:

HARRIE LO, 1970

(IRDIA)

SMALLER PROJECT WITH COMPRETITION RESERVED TO INDIAN MODERS CALL BUT OUTLINED IN MICK MEMORANDON BEING BROUGHT YOU BY DUNK STOP AT THIS STAGE AMIN'OR KNARY PRESS THIS AT HIGHEST APPROPRIATE LAVEL STOP SUBJUCT OFISIDERS STOP WORKING PAMER INCLUDENC KNOX AND MISSIE REQUESTS TOU AND DESPTEE RESERVATION STARROLD BY IDA WHILE BALANCE BE AWARDED ON AN COUNTRIES SICE ONE COMPREMISE BEING CONSIDERS) HERE IS THAT UP TO MILLION PROJECT AND URGES THAT CONTRACTORS BE INVITED FROM ALL REMBER EXECUTE EFFECTANTLY ALL WORKS IN THE PROPOSED DOLLAR SIXTY-SERBITY INDIAN ROAD CONTRACTING INDUSTRY HAS NOT REACHED STACK WHERE IT COULD COVERNMENT HAS ALL ALONG CONFINED SCHECTION OF CONTRACTORS FOR BOAD

MAR 16 7 26 PM 1970 COMMUNICATIONS

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A. F. KLPK

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103

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: (Page 2 of No. 5 for Cargill)

DATE:

CLASS OF SERVICE:

COUNTRY:

TEXT: Cable No.:

CONSIDERS THIS MUCH LESS LIKELY TO BRING ABOUT FQUICK MODERNIZATION OF ROAD

CONSTRUCTION STOP REGARDING SUPERVISION WE PREFER FOREIGN CONSULTANTS BUT JOINT

VENTURE BETWEEN LOCAL AND FOREIGN FIRMS MIGHT BE CONSIDERED STOP RE JOINT VENTURES

BELIEVE GENUINE CONSULTING ENGINEERING FIRMS REQUIRED NOT A COMMITTEE OF GOVERNMENT

ENGINEERS STOP PARAGRAPH RENDEL, PAIMER AND TRITTON CONSULTANTS HIRED BY BANK

TO ASSIST INDIA IN PREPARING POSSIBLE HIGHWAY PROJECT EXPERIENCING SERIOUS

DIFFICULTIES OVER TAXATION WHICH PRECLUDE EFFECTIVE CONTINUATION THEIR WORK STOP

RENDEL MEN WILL CONTACT YOU IN DELHI WITH DETAILS STOP HAVE SPOKEN TO SHROFF BUT

URGE YOU INTERVENE WITH IG STOP IF TAX EXEMPTION IMPOSSIBLE REQUEST GOVERNMENT

REIMBURSE TAXES AS THEIR COUNTERPART CONTRIBUTION TO DEVELOPMENT OF IMPROVED

HIGHWAY EXEX PROGRAM STOP CONSULTANTS ALSO REQUIRE HELP REGARDING VISAS REGARDS

WATOV

NOT TO BE TRANSMITTED

AUTHORIZED BY:

COMMINITION:

NAME

A. F. Kirk

MAR 16 / 26 PM 1970

DEPT.

South Asia

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

For Use By Communications Section

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

10: (Page 2 of No. 5 for Cargill)

HIGHWAY MAKE PROCHAM STOP COMSULTANTS ALSO REQUIRE HELP RELARDING VISAS REDARDS REIMBURGE INVEST AS THEIR COUNTERPART CONTRIBUTION TO DETELOPMENT OF IMPROVED URGE YOU INTERVENE WITH IG STOP IF TAX EXEMPTION IMPOSSIBLE REQUEST GOVERNMENT RENDEL MEN WILL CONFACT YOU IN DELHI WITH DETAILS STOP HAVE SPOKEN TO SHROFF BUT DIRPICALITIES CARR TAXATION WHICH PRECIME REFECTIVE CONTINUATION THEIR WORK STOP TO ASSIST INDIA IN PREPARING POSSIBLE HIGHWAY PROJECT EXPERIENCING SERIOUS ENGINEERS STOP PARAGRAPH RENDEL, PAINER AND TRIPTON CONSULTANTS HIRED BY BANK COMPUNIORION STOP REGARDING SUPERVISION WE PREFER PORFIGN COMPULATANTS BUT JOINT

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DISPATCHED

MAR 16 7 26 PM 1970

COMMUNICATIONS

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South Asia

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VENTURE SETUREN LOCAL AND FOREIGN FIRMS MIGHT BE CONSIDERED STOP RE JOINT VENTURES

COMMIDING THIS MUCH LESS LIKELY TO BRING ABOUT FOURT MODERNISATION OF ROAD

7) 404

Form No. 27 (6-69) INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

IN Hegheray

OUTGOING WIRE

TO: RENDELS
LONDON

DATE: MARCH 16, 1970

CLASS OF SERVICE: LT

111

COUNTRY: UK

TEXT: Cable No.:

FOR HOLLOWAY INDIAN HIGHWAYS REURLET MARCH 10 CONCERNING TEAMS TAX
DIFFICULTIES WE ARE SYMPATHETIC AND ARE PURSUING MATTER AT HIGH
LEVEL WITH GOVERNMENT STOP PLEASE CABLE PILDITCH TO ARRANGE MEETING
THROUGH BANKS NEW DELHI OFFICE WITH CARGILL COMMA DIRECTOR SOUTH ASIA
DEPARTMENT WORLD BANK COMMA CURRENTLY ON MISSION IN NEW DELHI TO BRIEF
HIM TAX SITUATION STOP SUGGEST PILDITCH SHOWS CARGILL HIS PERSONAL
LETTER TO YOU

HARDY

INDIA:	Proposed	First	Highway	

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME S. C. HARDY

TRANSPORTATION PROJECTS

SIGNATURE_

DEPT.

CIOCIONI MOLINIFICIONE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

MWDickerson/md

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared with and cc: Mr. Kirk cc: Messrs. Abd El Aty, Mahoney

PN 1970

For Use By Communications Section

Checked for Dispatch:

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RITERIATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT MITERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: READELS

DATE MARCH 16, 1970

LASS OF SERVICE LT II

COUNTRY UK

Cable No.

FOR HOLLOWAY INDIAN HIGHWAYS REURLET NARGH TO CONCERNING THRES TAX DIFFICULTIES WE ARE SYMPATHETIC AND ARE PURSUING MATTER AT HIGH LEVEL WITH GOVERNMENT STOP PLEASE CARLE PILDITCH TO ARRANGE MUSTING THROUGH BANKS NEW DELHT OFFICE WITH CARGILL GOMMA DIRECTOR SOUTH ASIA DEPARTMENT WORLD BANK COMMA CURRENTLY ON MISSION IN NEW DELHT TO BRIEF HIM TAX SITUATION STOP SUGGEST PILDITCH SHOWS CARDAIL HIS PRESCUAL

HARIDY

INDIA: Proposed First Highway

NOT TO BE TRANSMITTED

AUTHORIZED DY

AME S. C. MARDY

THANSPORTATION PROJECTS

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DISPATCHED

MAR 16 7 28 PM 1970

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SUBJECTION OF STREET

ANDRIANT: See Secretaries Guide for preparing Corn.

Checked av Blanch

COMMUNICALIGNS Mesers. Abd El Aty, Mahoney

RAP

INTERNATIONAL FINANCE

OFFICE MEMORANDUM

TO: Mr. A. David Knox

DATE: March 16, 1970

FROM: S. C. Hardy

SUBJECT: INDIA: Proposed Second Highway Project Consultant's Income Tax Position

- 1. A deplorable situation is developing in India regarding the classification of the Bank consultants' staff for income tax purposes; it is likely to affect the consultants' willingness to continue providing services to help prepare the project for appraisal.
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- (iii) failing (ii), then having the Bank reimburse the consultants any taxes levied.
- 6. Whatever way we choose to handle the matter, I propose we cable the consultants as soon as possible, asking them to continue with the services and informing them that we are taking up the matter with a view to relieving them from all taxes.

SCHardy: dfw

Attachment

cc: Messrs. Votaw, Geolot, Mahoney, Dickerson, Kirk, Baum, Hogg, van Helden.

IN Highways
(2)
IN-Mornigao
Port Letter No. 4 March 13, 1970 Mr. I.P.M. Cargill Office of the Resident Representative International Bank for Reconstruction and Development P. O. Box 416 New Delhi, India Dear Peter: I am not sure how far you wish to be involved during your present trip with our project problems, but I thought it worthwhile sending this note to you with David on two of our perennials: (a) A proposed Highways II. Enclosed is a memorandum from Knox to Greg which we are to discuss on Monday. I think that the Projects Department is slowly coming round to the conclusion that it will be difficult to have a highways project in India other than one where the work is performed by local contractors, but they still feel,

- (a) A proposed Highways II. Enclosed is a memorandum from Knox to Greg which we are to discuss on Monday. I think that the Projects Department is slowly coming round to the conclusion that it will be difficult to have a highways project in India other than one where the work is performed by local contractors, but they still feel, probably rightly, that outside supervision will be necessary. If you have a chance and feel like doing so, I would appreciate your sounding out the Indians on this latter point and, for what it is worth, on the possibility mentioned in paragraph 3 of the Knox memorandum of a portion of the project going out to international competitive bidding. I will cable you on Monday after we have had our meeting with Knox if there is anything to report.
- (b) Mormugao Port. The consultants, Superintendence Inc., have at long last delivered their report which is quite negative.

 Scheiner's memorandum on this is also enclosed, although I have not attached the Superintendence report which is rather bulky.

Best regards,

Yours sincerely.

A. F. Kirk

yelow AFK/b;

INTERNATIONAL FINANCE CORPORATION

CABLE INCOMING ROUTING DATE AND TIME OF CABLE: MARCH 13, 1970 1659 LOG NO.: ACTION COPY: RC 7/14 TRANSPORTATION, PROJECTS TO: INTBAFRAD INFORMATION COPY: DECODED BY: FROM: LONDON TEXT: 205 FOR HARDY CHIEF TRANSPORTATION DIVISION I FURTHER MYCAB 9TH INCIDENTAL EXPENSES PILDITCH AND TRNKA FAMILY FIVE the wicomo DAYS AWAY NEW DELHI 119 POUNDS STERLING HOLLOWAY MT We should add this small emate of ylunion

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Mr. M. R. Shroff

March 13, 1970

Alexander F. Kirk

INDIA - Agricultural Lending Strategy Talks

- l. We have discussed at various times with you and other representatives of the Government of India our wish that there should be a second series of discussions between Bank staff members and representatives of the various ministries in New Delhi concerned with our lending operations in India in the agricultural sector.
- 2. We propose, if agreeable to the Government, that such discussions begin in New Delhi on April 13. The primary focus of the discussions would, we suggest, be on examining the possibilities of projects for the years 1971/72 through 1973/74. It would of course be useful to spend some time reviewing progress on the points raised last April, and to discuss problems we face in the current series of projects for the present fiscal year and for FY 71.
- 3. We would suggest that the talks follow a somewhat different format from those of last year. Instead of a series of long meetings with large numbers on both sides of a table, we would suggest we start with a number of small meetings, in which the participants would be not more than three or four on each side. Thus, a small delegation from the Bank would meet separately with representatives of the Ministry of Finance, Department of Agriculture, Department of Food, Ministry of Irrigation and Power, Central Water and Power Commission, National Seeds Corporation, and other interested bodies. There might then be one or two plenary sessions to discuss topics which cross ministerial lines and to sum up. It might also be useful to include the Agricultural Refinance Corporation, either in a small session in Bombay, or in New Delhi. We think the talks might last for about a week, although some members of the Bank delegation from Washington might remain in India for a little longer to visit existing or proposed project sites.
- 4. The Bank's delegation would comprise members of the South Asia and Agricultural Projects Departments and the Resident Mission.
- 5. I would be grateful if you would request your Government to confirm by cable that the dates suggested above are agreeable. In the meantime we will prepare a tentative outline of topics to be covered by the discussions and I would be grateful if GOI would prepare its own suggested agenda.

Cleared with and cc: Mr. McIvor cc: Mr. Wapenhans; Messrs. Gilmartin/Naylor

DADunn/AFK/bj

Als

IN Highways

March 13, 1970

Files

M.W. Dickerson

INDIA: Proposed Second Highway Project Meeting with Mr. Ramakrishna of Government of India

1. A brief meeting was held in the Bank on March 3, 1970, with Mr. Ramakrishna (Economic Affairs Department, Ministry of Finance, Government of India) to discuss outstanding policy and other matters in connection with the above project. Bank Staff present at the meeting were: Messrs. Kirk, Hardy, Mahoney and Dickerson.

Mr. Ramakrishna indicated that a letter was being sent by the Government of India in reply to the Bank's letters of May 16 and November 17, 1969. (This letter was subsequently received on March 4, 1970). However, he indicated the Government of India's position with respect to the following principal issues.

International Competitive Bidding

2. The Government of India would find it very difficult to meet this Bank requirement and considers the introduction of international bidding for readworks both "impractical" and a "luxury". The Government wishes the local contracting industry to be developed to undertake the work and would welcome any advice which the Bank could give on this matter.

Type of Contract

3. The Government of India is prepared to consider awarding a contract for the construction of all roadworks on a given length of road to one prime contractor, but the contracts should be of a size small enough to suit the capacity of Indian contractors. The use of specialists or subcontractors would also be considered.

Credit and Import Licenses for Domestic Contractors

4. In reply to a question, Mr. Ramakrishna stated that credit facilities are available to domestic road contractors. The granting of equipment-import licenses to road contractors could be the subject of a discussion between the Government and the Bank.

Appraisal Timing

5. The Government of India considers that the project will be suitably prepared for appraisal by April 15, 1970 (our latest preappraisal mission recommends mid-May).

Bank's Consultants - Income Tax Status

6. Mr. Ramakrishna was not fully acquainted with the circumstances surrounding the flight of the Bank's consultants to Pakistan (with a view to tax exemption). as the development had occurred whilst he was in Washington, He agreed to look into the question of their tax status when he returned to India.

Construction Supervision

7. The Government of India recognises the need for adequate supervision of the project roads but considers that this can best be provided through existing Indian agencies. Mr. Ramakrishna stated that if the Bank wishes to station Bank staff in India then this could be a matter for discussion.

Size of Project

8. It was brought to Mr. Mamakrishna's attention that if only domestic contractors were to be invited to bid for the road works then the scope of the project might have to be reduced to correspond with the present limited capacity of this "infant" industry. Mr. Mamakrishna said that the Government would wish to discuss with the Bank all aspects of building up the local contracting industry to undertake the proposed project.

MWDickerson/ec

Cleared with and co: Mr. Hardy

cc: Messrs. Knox, Geolot, Votam/Kirk, Mahoney, Abd. El Aty, Karcher, Neumer

IN Highways RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS TELEPHONE: 01-834 8494 MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS INLAND & OVERSEAS RENDELS, LONDON, S WI PARTNERS H. SCRUTTON, F.I.C.E., F.I.STRUCT. E., M. INST. PET. J. A. H. OTTER, F.C.G L. F.I.G.E. A.R.I.G.S. B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E. 125, Victoria Street, P. M. FRAENKEL, F.I.C.E., F. I. STRUCT. E. P. A. COX, F.I.C.E. Westminster, London, s.w.1. J. C. MUNRO, F.I.C.E. K. E. AINSCOW, F. I.C.E., M.I. STRUCT. E. D. M. S. FAIRWEATHER, F.I. MECH.E., M.I. LOCO. E. CONSULTANTS YOUR REF. J. E. G. PALMER, F. I.C.E., F. AM. SOC. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH. E. H. F. MERRINGTON, F.I.C.E., M.I.W.E. OUR REF. BGRH/JD 10th March, 1970. ASSOCIATE: R. DOWNHAM, M.R.I.N.A., M.I.MAR.E. S.C. Hardy Esq., MAR 13 1970 Chief Transportation Division I, International Bank for Reconstruction & Development, Projects Dept. Correspondence 1818H Street, N.W., WASHINGTON, D.C. ANS'D BY DATE ____ Dear Cliff,

India: Highway Project Appraisal

Upon receipt of your cable of the 7th March I confirm having cabled you yesterday as follows:-

"REYOURCAB MARCH SEVENTH OURLET FEBRUARY 27 GIVES INFORMATION REQUIRED TO OUR BEST KNOWLEDGE BUT PLEASE ELABORATE IF YOUR REQUEST MISUNDERSTOOD STOP PILDITCH CABLED DELHI FOR COSTS OF RECENT BREAK STOP WILL CABLE FURTHER WHEN INFORMATION TO HAND".

However, this morning I have received a personal letter from Pilditch explaining his recent trip to Pakistan and describing the complex tax situation as he understands it. The following extracts are taken from his letter:-

"After conflicting information about the Indian tax law viz-a-viz the 90-day exemption period, we received word from the Bank's Resident Representative in New Delhi that the Joint Secretary to the Department of Economic Affairs, who deals with Bank Loan negotiations, had ruled that 90 days was the total time in any one fiscal year. We immediately notified the Resident Representative of our intentions, and left the country for Pakistan where by prior arrangement the Bank's office in Islamabad very kindly lent us money. My detailed account is enclosed with this letter.

With my full agreement Trnka obtained an exit clearance to leave India and relinquished his residence permit for himself and his family.

contd...

-2- by whom.

RENDEL, PALMER & TRITTON

Again with my full concurrence he obtained tourist visas for himself and his family from the India High Commission in Islamabad. In doing this he had to sign an undertaking that he would take up no gainful employment whilst in India as a tourist.

Upon receipt of your telegram, which was handed to me by the Bank in Islamabad, I cabled you our immediate intention to return to New Delhi. We got back on 1st March and took up our tax status again withthe Resident Representative who instituted enquiries through the D.E.A. who got in touch with the Income Tax Department. The result was a total negative - only foreign technicians engaged on Government sponsored projects or specifically requested to assist the Government or its agencies can apply for tax exemption under the existing I.T. law. As our presence in India is regarded as purely an internal arrangement of the Bank's to suit their own requirements, the authorities decline to accept the view that our work is in any way beneficial to the Government, and that we are here purely for personal employment and gain. If taxation is levied it will be not only on salaries but also on subsistence allowances. I do not know the exact amount involved, but it might be as high as 80%.

Sholl said otherwise

To comply with his tourist status, and with my complete backing, Trnka is not continuing with any duties at our office in the Central Roads Wing, and so far as our Indian colleagues are concerned he is on leave. On a voluntary basis, again with my understanding, he is meeting me elsewhere to discuss project matters and to collect data for study at home. Needless to say, this manner of conducting his affairs goes very much against the grain with him and he is deeply concerned at the way things have turned out. I have assured him that both the Bank and the Firm have full faith in his integrity, the former being particularly impressed with his individual performance on this assignment.

From the foregoing paragraphs you can see that the situation is far from being a happy one, and my first concern is to obtain a ruling which will enable Trnka to resume his full duties as a member of the team. You will understand that under the present circumstances neither Pilditch nor Trnka are prepared to extend their stay beyond their original contract date of mid-May, and in order to persuade them I would like to assure them that this present tax muddle can be satisfactorily concluded.

I am aware, of course, that the terms of our Agreement with the Bank define tax obligations as being the individual's responsibility, and Pilditch, Trnka and Cranage were fully aware of this before they left the U.K. However, neither we, nor they, envisaged the possibility of Tax obligations on their salary plus subsistence being as high as 80% which sum, of course, would be far higher than they would pay if their salaries were subject to normal U.K. tax.

Cranage is due to return to India for his second tour in a fortnight's time and since he has already completed 64 days in India I am obviously concerned to obtain clarification as to the tax position before he leaves.

contd.....

In your telephone conversation with Ainscow on the 26th February you intimated that the Bank would take up the matter direct with the Indian Internal Revenue with a view to obtaining a classification for these engineers as technicians. This would solve this particular problem, of course, and enable Trnka to resume his duties and, no doubt, would encourage both he and Pilditch to stay for the extended period required by you. Perhaps you would let us know if such an approach has been made and with what result.

Regarding the costs involved in their stay in Pakistan, Pilditch has forwarded details to-day but these require some study and I will write to you again shortly concerning this aspect.

Yours sincerely,

Brian

March 10, 1970

A. David Knox

Mr. Gregory B. Votaw

INDIA: Proposed Second Highway Project

- 1. I suggest we meet with you and your staff as soon as possible to discuss the Bank's next course of action on the Government of India's letter of February 27, 1970.
- 2. We have discussed the issues in a preliminary way in this Department. I understand that the somewhat flexible tone of the letter was not confirmed in oral discussion with Mr. Ramakrishna, who indicated a possibly more negative reaction on the part of his Government to the two issues which concern us most, namely: international competitive bidding and foreign supervision of construction.
- Any possible relaxation of our international competitive bidding requirements would of course require approval in principle by Management, but notwithstanding, we believe that the Indian road contracting industry has not yet reached the stage where it could execute efficiently all the works envisaged in the proposed US\$60-70 million project. I understand this issue is more political than technical. As such, we should take it up at the highest possible level with India, with a view to their making some concessions regarding international competitive bidding. We suggest as a minimum Bank position that about 1/3 to 1/2 of the project works be reserved for Indian contractors, and the balance awarded on an international competitive basis, in which Indian contractors might also participate either in their own names or in association with foreign contractors.
- Regarding supervision of construction, we believe a serious situation may develop if expatriates are not given some position of responsibility in the supervisory teams. One solution may be to encourage joint ventures between Indian consulting firms and foreign firms, giving the joint venture full responsibility for supervision. An alternative solution might be the appointment of expatriate "co-resident engineers" to work with the Indian supervisory teams. The question of who should bear the cost of such expatriate supervisory services would need to be discussed with the Government; we could justifiably hold out for some contribution from India, but, as a fallback position, the Bank might have to be prepared to pay. (We have not assessed accurately the likely foreign supervisory costs involved, but they might well exceed US\$1 million).
- 5. I understand that Messrs. Knapp and Cargill are to visit India in the near future, and, after we have had our meeting, you might wish to have them briefed about these obstacles to progress on the project.

Acherdy: dfw

cc: Messrs. Baum, Geolot, Mahoney, Dickerson, Karcher, Neuner.

IN Highways

Files

March 6, 1970

W. S. Humphrey

INDIA - Proposed Second Highway Project - Meeting with Mr. Sinha and other Officials

- 1. There was a meeting at the Ministry of Transport on February 18 with Mr. S. N. Sinha Director General, Central Road Wing and other Government officials. Messrs. Mahoney, Karcher, Humphrey, Lankester and Abd El Aty of the Bank were present as were the two consultants, Messrs. Pilditch and Traka.
- 2. Mr. Mahoney went through the list of the roads proposed for the project and informed Mr. Sinha of the ones which the Mission would recommend be dropped. Some of the road sections were being dropped on engineering grounds since more study and design would be needed. These included the Barwa-Chas, where a coal field caused complications, and the ghat sections of the roads in Maharashtra. The Mission would recommend that studies and designs be carried out by consultants financed under the proposed credit for construction under a possible second credit. Other road sections, notably the two in Tamil-Nadu, were being dropped because the economic return on the investment, as calculated by the consultants, was very low. Only the major by-passes in Tamil-Nadu would be included. The effect of all these reductions would be to bring the total construction cost of roads included in the project down to about \$60 million.
- Mr. Sinha seemed to agree that further studies were needed on the roads through the Bihar Coal Fields and Maharashtra ghats. However, he was unable to judge the validity of dropping the Tamil-Nadu roads on the basis of a low economic returns, since he had not seem the assumptions on which the returns had been based. On being told that the benefits were low because these roads were already two-laned, he said that they should have been considered as one-lane roads for the purpose of the economic return calculation. This was because they had merely been converted to temporary two-laned roads by paving over the shoulders. These shoulders were in imminent danger of collapse under the weight of traffic. Mr. Mahoney said that it was the consultants' judgment that the roads were adequate for the time being, considering the amount of traffic they carried and that they would hold up for a few more years. Mr. Sinha doubted this and wondered whether the traffic counts used in the economic return calculations were accurate. Mr. Mahoney said that the economic studies would be sent to the Government for review as soon as they had been reviewed by the Bank.

- h. Mr. Sinha also questioned whether it was practical to include only by-passes in Tamil-Nadu. He seemed to think that IDA would require separate allocations of staff exclusively for these by-passes which would make little sense if the state went ahead with the reconstruction of the connecting road sections on its own. Mr. Mahoney said that IDA would certainly not require any kind of organization which did not fit in well with the existing state road organization.
- 5. Mr. Mahoney urged Mr. Sinha to allow the consultants to review the road alignment submitted by the states as soon as they came in. He added that the consultants were still awaiting Government comments on a typical pavement drawing which had been submitted. Mr. Sinha said that it was necessary for his officials to have some dialogue with the state officials on material submitted by the states before this material was reviewed by the consultants. He described the consultants' pavement drawing as "pious" and said that his own staff was designing pavements appropriate for the different locations. These designs would be available about March 7.
- 6. A number of further technical issues were then discussed on matters such as the method of estimating quantities, surveyor's rights of access to private property, bullock trains on roads in Maharashtra, appropriate methods of constructing bridges and the qualifications of Indian road contractors. The discussion then turned to the timing of the appraisal.
- 7. Mr. Mahoney said that it was the judgment of both the Bank team and the consultants that it would be early June before the additional work needed before appraisal would be completed. Mr. Sinha said that on the basis of the requirements set out in Mr. Hardy's letter of January 22, appraisal should be possible in mid-April. Mr. Mahoney said that he did not see how estimates of quantities accurate to within 20 percent could be available by mid-April since this would require most of the detailed engineering which in many cases had not yet been done. He added, he had made it quite clear to Mr. Sinha in earlier discussions that this detailed work must be done before appraisal. Mr. Sinha insisted that the quantity estimates needed for appraisal as described in Mr. Hardy's letter did not require all the detailed work suggested by Mr. Mahoney. Mr. Mahoney said that he was prepared to accept Mr. Sinha's judgment that all the information needed for appraisal as described in Mr. Hardy's letter could be provided by mid-April.

WSHumphrey/pop

No.

cc: Messrs. Abd El Aty (2)

Mahoney

Karcher

Neuner

Delhi Office (Mr. Humphrey)

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

ACTION COPY:

INFORMATION

DECODED BY:

COPY:

ROUTING

TRANSPORTATION PROJECTS

INCOMING CABLE

DATE AND TIME

OF CABLE:

MARCH9, 1970 1757

LOG NO.: RC 4 / 10

TO:

INTBAFRAD

FROM:

LONDON

TEXT:

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

INTBAFRAD

DATE:

MARCH 6, 1970

NEW DELHI

CLASS OF

SERVICE:

LT

COUNTRY:

(INDIA)

TEXT: Cable No.:

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81 FOR GILMARTIN

PLEASE ADVISE CARGILL THAT COPIES OF IG REPLY DATED FEBRUARY
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STOP MEMO ON BOTH TO BE SENT EARLY NEXT WEEK OR WITH DAVID REGARDS

KIRK

NOT TO BE TRANSMITTED

AUTHORIZED BY:

Alexander F. Kirk

DEPT.

NAME

South Asia

SIGNATURE ____

r F. Kirk

Rul About Aty/pop

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

For Use By Communications Section

Abd El Aty

ORIGINAL (File Copy)
(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

cc: Messrs. Kirk

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

RENDELS

LONDON

DATE: MARCH 6, 1970

CLASS OF

SERVICE: LT

COUNTRY:

U.K.

TEXT: Cable No.:

> FOR HOLLOWAY REURLET FEBRUARY 27 ON INDIAN ROAD PROJECT PLEASE ADVISE CONSULTING US YOUR BEST ESTIMATE EXPECTED TOTAL COST ORIGINAL CONTRACT AS PROMISED MAHONEY STOP ALSO INDICATE PRESENT DISPOSITION YOUR INDIAN TEAM AND EFFECT OF RECENT BREAK IN SERVICES ON PROJECT PREPARATION AND YOUR COSTS

> > HARDY

INTBAFRAD

Re: Proposed 2nd Hwy Project - INDIA.

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

S. C. Hardy

DEPT.

Transportation Projects

SIGNATURE

STATION OF STATION OF THE STATE OF THE STATE

ORIGINAL (File Copy) (IMPORTANT: See Secretaries Guide for preparing form) CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Dickerson

Karcher/Neuner

For Use By Communications Section

Checked for Dispatch:

DATE MARCH 5, 1970

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Re: Proposed 2nd May Project - INDIA.

co: Mesers. Dickerson Karober/Neumon

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DISPATCHED

OFFICE MEMORANDUM

TO: Files

DATE: March 6, 1970

CORPORATION

FROM: W. S. Humphrey & AM.

SUBJECT: INDIA - Proposed Second Highway Project - Meeting with Mr. Sinha

and other Officials

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- Mr. Mahoney went through the list of the roads proposed for the project and informed Mr. Sinha of the ones which the Mission would recommend be dropped. Some of the road sections were being dropped on engineering grounds since more study and design would be needed. These included the Barwa-Chas, where a coal field caused complications, and the ghat sections of the roads in Maharashtra. The Mission would recommend that studies and designs be carried out by consultants financed under the proposed credit for construction under a possible second credit. Other road sections, notably the two in Tamil-Nadu, were being dropped because the economic return on the investment, as calculated by the consultants, was very low. Only the major by-passes in Tamil-Nadu would be included. The effect of all these reductions would be to bring the total construction cost of roads included in the project down to about \$60 million.
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WSHumphrey/pop

cc: Messrs. Abd El Aty (2)

Mahoney

Karcher

Neuner

Delhi Office (Mr. Humphrey)

FORM No. 26 (4-69) OP Files - I.i.d. o Highways

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME

OF CABLE: MARCH 4, 1970 1840

LOG NO.: WU 11 / 5

TO: INTBAFRAD HARDY

FROM: NEW DELHI

TEXT:

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ROUTING

ACTION COPY: TRANSPORTATION PROJECTS

INFORMATION COPY:

DECODED BY:

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RE INDIAN HIGHWAYS FOUR COPIES PROGRESS REPORT NUMBER THREE

DISPATCHED TODAY UNDER SEPARATE COVERS

PILDITCH

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INTONIO TARTE

1 N Highways

March 4, 1970

Messrs. Rendel, Palmer & Tritton, 125, Victoria Street, Westminster, London, S.W.1.

Attention: B.G.R. Holloway, Esq.

Dear Sirs:

re: INDIA: Proposed Second Highway Project Bank Mission February 1970

We acknowledge with thanks receipt of the copy of Mr. Neumer's notes which you kindly sent to Mr. Mahoney in Ethiopia. We also thank you for the Indian Roads Congress publication entitled "Brick Pavement in Highway Construction" sent to us by your Mr. Pilditch.

Yours sincerely,

S.C. Hardy Chief, Highway Division I Transportation Projects Department

cc: Messrs. Mahoney, Neuner.

cc: Mr. P. Pilditch (Team Leader, Bank Appraisal Assistance Team)

MwDickerson/ec.

RECEIVED

1970 MUR-5 PM 5:31

SECTION SECTIONS

IN Heapwarp

Harch h, 1970

Messrs. Bendel, Falmer & Tritton, 125, Victoria Street, Destminster, London, S.W.1.

Attention: B.C.R. Holloway, Eng.

Dear Sirs:

re: Biblia: Proposed Second Highway Project Bank Mission February 1970

We acknowledge with thanks receipt of the copy of Mr. Menner's notes which you kindly sent to Mr. Mahoney in Sthiopia. We also thank you for the Indian Reads Congress publication entitled "Mrick Pavament in Highway Construction" sent to us my your Mr. Pilditch.

Yours sincerely,

S.C. Hardy

Chief, Eighnay Division I Transportation Projects Department

cc: Messrs. Mahoney, Neuner.

eo: Mr. P. Filditch (Tesm Leader, Bank Apprelsal

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

TO:

DATE: March 3, 1970

FROM:

Messrs. Mahoney Karcher and Nepner

SUBJECT: INDIA - Pre-appraisal of Second Highway Project Back-to-Office Report

In accordance with Terms of Reference dated January 26, 1970, we visited New Delhi from February 15 through 21, 1970. Mr. Karcher visited the Bank's consultants (Rendel, Palmer and Tritton) in London on his way to India, and Mr. Mahoney saw them on his way back from India. Following is a summary of our findings and recommendations.

Status of Project Preparation

- Engineering: Preparation by the States of detailed engineering for road elements is proceeding slower than expected. No field staking of major relocations and by-passes have been done, and road plans and estimates are being prepared on the basis of paper locations most of which have not yet been approved by the Central Roads Wing (CRW). Test data for pavement design is complete for all roads, and the design of bridges by the CRW is proceeding well. The States have submitted comments and suggestions on standard construction specifications and tender documents; the CRW will prepare the final drafts. CRW and State cooperation with the Bank's consultants is fair, and most delays to date are the result of CRW administrative procedures.
- Economic Analysis: The consultants are finalizing their report on the economic evaluation of the project elements; they expect to mail the report by February 27. Preliminary rate of return calculations uphold their judgement on the priority of the various elements, i.e. the reconstruction of genuine single lane roads with rough shoulders would prove economically feasible, whereas improvement at this time of single lane roads with paved shoulders in fair to good condition would only be marginally justified. The construction of by-passes around congested areas would yield high returns. For some elements, mainly bridges, preliminary rates of return are not yet available.

Tentative Selection of Project Elements

Based on the status of detailed engineering and on preliminary 4. results of the economic calculations, we made a tentative selection of project elements (including by-passes) for appraisal and suggested that the CRW and the States concentrate their efforts on the preparation of these elements. We indicated some flexibility in our final selection at appraisal, based on further engineering and economic work. We recommended

that economic and engineering studies of difficult mountainous sections or by-passes be included in this proposed credit for possible construction in a subsequent project. The total construction cost of the selected project elements would be about US\$60 million equivalent.

C. Additional Work and Consultants' Services

- Engineering: We urged the CRW to expedite approval of the paper location studies (para 2) and advised that field staking of major relocations and by-passes would be required as a basis for design and cost estimates before appraisal. The CRW agreed (we believe somewhat optimistically) to complete their pavement designs before mid-March and to prepare a draft of standard specifications and tender documents by the end of March. We recommended that CRW work closer with the consultants by holding more joint reviews of State submitted data and avoiding two separate reviews which have caused some delays in the past. Once the basic design matters are settled with the CRW, the consultants will spend most of their time before appraisal working with the States on plan preparation and estimates.
- Economic: From discussions with the consultants, it appears that the main benefits from the project are linked to increases in travel speeds on open roads and by-passes and to the proportion of traffic diverted to the by-passes. Since no actual speed checks have been made under varying road conditions and traffic volumes, and since conditions in India could not be compared with those in a developed country, we recommend that actual tests be conducted under the supervision of the consultants' transport economist. Similarly, 0 & D surveys should be undertaken at certain major by-passes.
- 7. Consultants' Services: To date the quality of the consultants' services has been good and we feel they have been of considerable help to the CRW and States in project preparation. To provide further needed assistance, we recommend extension of the consultants' services as follows:

One Transport Economist - 3 months; 2 months in the field beginning about mid-March followed by 1 month home office work;

Two Highway Engineers - 3 months; about 12 months each in the field beginning about mid-May which is their termination date under the present contract.

The consultants' home office will submit a current estimate of expected total costs under the present contract and an estimate of the above extensions. It may be necessary to seek some increase in our present allocation of US\$80,000 for these services.

D. Appraisal Date

Given the additional work required, we suggested that appraisal be postponed until early June, assuming that the major policy questions on international competitive bidding and expatriate supervision had been settled by then. The Director of the CRW objected strongly to such a delay and urged that the appraisal take place by mid-April. However, the engineering would be less than substantially complete and the results of the speed and traffic checks would not then be available. We, therefore, recommend that appraisal be scheduled for early to mid-May. In any event, the major policy issues must be settled between the Government and the Bank/IDA before appraisal.

E. Research Project

9. We met with the Director of the Central Road Research Institute (CRRI) to discuss a possible highway research project which would obtain data on vehicle operating costs under varying road and traffic conditions, indices of pavement performance and costs of road construction and maintenance by various blends of labor and equipment. The CRRI has already formulated plans for such a project and will furnish a summary of their proposal and estimated costs. Dr. Millard of the UK Road Research Laboratory expressed interest in participating in such a project and will furnish his comments and suggestions in the near future.

F. Transport Policy Matters

10. We met with Mr. Baveja of the Planning Commission to review progress in transport coordination and to inform him of the Bank's likely requirements in connection with the proposed highway credit. Mr. Baveja noted the Bank's likely requirements and said he would shortly forward to the Bank a report on transport coordination as agreed during the 10th Railway Credit negotiations. He agreed with us that there was a definite need for improving highway planning procedures.

G. Recommended Action

A letter should be sent to the Government confirming our findings and recommendations. This letter, however, should be deferred until our Full Report is prepared and the consultants' economic report is received (para 3). The Bank should advise the consultant of their decision on staff extensions as soon as possible after the cost proposal for this work is received (para 7).

GMahoney/MKarcher/THNeuner/isc Bank/IDA

cc: Messrs. Chadenet, Baum, Baldwin, Piccagli, Rovani, Engelmann, Knox, Geolot, A.T.Davis, Lind, Kirk/Abd.El Aty, Dickerson, Gilmartin (New Delhi Office), Hogg, de Weille/Harral

BGRH/JD RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS 01-834 8494 TELEPHONE: MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS INLAND & OVERSEAS TELEGRAMS RENDELS, LONDON, SWI PARTNERS H. SCRUTTON, F.I.C.E., F. I. STRUCT. E., M.INST. PET. J. R. H. OTTER, F. C. I., F. I.C.E., A.R.I.C.S. B. G. R. HOLLOWAY, F. I. C. E., F. I. STRUCT. E. F. IRWIN-CHILDS, F. I. C. E. 125, Victoria Street, P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E. P. A. COX, F.I.C.E. J. C. MUNRO, F.I.C.E. Westminster. K. E. AINSCOW, F. I. C.E., M.I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH.E., M. I. LOCO. E. CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. AM. Soc. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH. E. YOUR REF. H. F. MERRINGTON, F.I.C.E., M.I.W.E. OUR REF. 02136/13938 3rd March, 1970. ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I. MAR.E. S.C. Hardy Esq., Chief Transportation Division I, International Bank for Reconstruction & Development,

1818H Street, N.W., WASHINGTON, D.C., U.S.A.

Dear Sir.

India: Highway Project Appraisal Assistance

-Doc No 2

We have pleasure in enclosing our final Report, together with three copies, on the Status of the Economic Studies prepared by Mr. J.M. Thomson and Mr. B.E. Cranage. We regret we were unable to post this report to you last week as promised to Mr. Mahonev.

Two further Appendices, dealing with traffic count data and Vehicle Operating Cost data, will be prepared during the course of this month but, as agreed with Mr. Karcher, we are forwarding the main text of this Report for your early information and assistance.

Two copies of the Report are also being posted to-day to Mr. Gilmartin in New Delhi with a request to pass one copy to Mr. Pilditch for his confidential information.

May we also take this opportunity of advising you that we have received a cable from Mr. Pilditch confirming that he has now returned to New Delhi and that Mr. Trnka has now obtained a tourist visa valid for a further three month stay in India.

> Yours faithfully, RENDEL, PALMER & TRITTON

> > Klentoth

Enc.

Projects Dept. Correspondence

MAR 1 7 1970

CHARLING & DESCRIPTION CHARLES

Chief Teansportation Division 1,

1818H Street, N.W., Development,

D.8.A. WASHINGTON, L.C.,

S.C. Hardy Esq.,

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RENDEL, PALMER & TRITTON Yours faithfully,

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SECTION

COMMUNICATIONS

INTERNATIONAL BANK FOR FORM No. 75 RECONSTRUCTION AND DEVELOPMENT (2-60) INTERNATIONAL FINANCE INTERNATIONAL DEVELOPMENT **ASSOCIATION** Date ROUTING SLIP ROOM NO. NAME Luns Note and File To Handle Appropriate Disposition Note and Return Prepare Reply Approva1 Per Our Conversation Comment Full Report Recommendation Information Signature Initial Send On RE, KS Original with W' Wahoner From

I.D.A. Appraisal Assistance Team, P. Reports) Room 215A. Central Roads Wing, Ministry of Transport & Shipping, 1, Parliament Street. New Delhi.

Ref: IDA/India/ 16 2 March, 1970.

The International Development Association, 1818 H Street, N. W., Washington, DC. 20433, U.S.A.

> For the attention of S.C. Hardy, Esq., Highway Division I, Transportation Projects Department.

Dear Sirs,

INDIA: ASSISTANCE IN HIGHWAY PROJECT APPRAISAL

PROGRESS REPORT NO. 3.

In accordance with the Terms of Reference contained in the Consultants' Proposal dated 11 November 1969 and I.B.R.D. letter dated 14 November 1969, we submit herewith our Progress Report No. 3 in quadruplicate.

STATUS OF EACH PROJECT ELEMENT.

- The status of preparation under the new list of (i) Roads headings required by you is given in Annex 1. Work on additional traffic data can only be monitored when the detailed information has been made known to us by the Consultants in London, and fed to the States.
- (ii) Bridges The up-to-date situation reported by CRW is given in Annex 2. Progress in Bihar continues to lag, although the situation is eased by the relegation of B2 to further study.

ASSISTANCE TEAM'S PROGRESS B.

Visits of inspection have been made to the under-(i) Visits -mentioned Project elements by members of the Team since the submission of Progress Report No. 2.

Date	Element	Visited by			
1, 2/2/70	M2	J. Trnka			
13, 14/2/70	MI	P. Pilditch J. Trnka			

(ii) Central Roads

Location Survey
A memorandum dealing with location survey of new
centre-line at the design stage was submitted to
CRW on 7/2/70. The memorandum requires the settingout and levelling of new centre-lines by accepted surve
methods for new stretches of road such as by-passes
and major realignments, and by a simplified method
for stretches of road to be reconstructed only.
General agreement in this matter has been reached
in a final discussion with CRW Project Engineer,
Mr. Kathuria, on 24/2/70. A promise has been given to
start with the survey works as soon as possible and
the work to be carried out according to our
recommendations.

Paper Alignments.
The paper alignments of by-passes of Tamil Nadu Tl and T2 were submitted for our reviewing on 20/2/70 and were returned to CRW with our comments and recommendations on 23/2/70.

Preliminary Estimation of Quantities.
On 18/2/70 agreement was reached with CRW on the method of estimation of quantities for cost calculation suitable for appraisal. For by-passes and major realignments quantities taken from approved paper alignments and field levels taken along longitudinal centre-line profiles are considered to be sufficient, although it is not absolutely certain that an accuracy of plus or minus 20% will be achieved by this method.

Visit of Bank Reconnaissance Mission On 16 and 17/2/70 discussions took place between the Team and Messrs. Mahoney, Neuner and Karcher for the purpose of identifying those elements likely to be suitable for appraisal and those which may have to be dropped from the Project. Progress of preparation was considered from which appraisal in June appeared to be the earliest realistic prospect. On 18/2/70 a full meeting was held with the DG, CRW, and his Project staff, the report on which was to be submitted to the Bank by Mr. Mahoney on his return to Washington. Before departure from India Mr. Karcher indicated to the Team the sort of further traffic data which he considered should be collected to provide better economic evaluations of congested areas, open roads of various widths and certain bridges and by-passes. Details were to be discussed in London with the Consultants to determine how data collection might

(iii) In the States

Ml - Mysore Border - Poona Length 241 km, existing two-lane road of 18 ft width over 77% of total length running through plain country except for Khandala and Katraj ghat sections.

best be carried out.

(a) Kolhapur By-Pass
Length 5.0 km. Basic idea is sound; the by-pass avoids
the town in a long straight line up to the existing

bridge 200 m long. Acquisition of land has been already completed, a process which 7 or 8 years. The strengthening of the bridge is being undertaken outside the Project, and precast, prestressed concrete girders to replace the existing century-old iron lattice trusses are on the site. It is understood that a recent decission has been taken to rebuild the bridge, although the land acquired for the by-pass is based on the site of the old structure. To avoid an unpleasant gimp in the alignment of the by-pass which would result from building a new bridge, it has been recommended to construct it as close to the old as possible, smooth out the by-pass alignment at the approaches and check how much additional land would be really required to accommodate the road embankment.

- (b) Satara By-pass
 Length 8.5 km. Very unpleasant alignment with two sharp bends (deflection angles 110° and 90°).
 It has been recommended to investigate a new alternative alignment with possible extension north of the river.
- Length 5.0 km. Starts at an elevation of 970 m, climbs to 1000 m in a length of 1.5 km to a saddle, and descends to 800 m over a distance of 3.5 km.

 Improvement of the existing road is now being proposed for a design speed of 40 k.p.h. with some hairpin curves and three viaducts. According to preliminary estimate of quantities this improvement will require approximately 50,000 cu.m of earthworks per km and the total cost of the improvement of this ghat section would be about US \$ 900,000. In our opinion all possibilities for solving the problem have not been investigated and further studies of this section are certainly required. For example, the possibility of tunnelling the short stretch in the saddle should be investigated.
- Length 6.0 km. Starts at an elevation of 848 m, climbs to 888 m, passes through 100 year-old tunnel 290 m long and descends to 680 m. Improvement of the existing road is being proposed for a design speed of 40 k.p.h. with 3 or 4 hairpin curves and a viaduct. Earthworks estimated at approximately 46,000 cu.m per km and total cost US \$ 700,000. In our opinion further investigation with consideration of possible new alternatives should be carried out in a thorough manner. The tunnel contains lengths of continuous masonry lining at both ends, with close-spaced rings of brickwork and cast iron in between. A number of the brick rings have been damaged by overloaded vehicles. In both ghat sections the preliminary estimation of quantities is thought to be low.

M2 - Bombay - Nasik - Dhulia
Length 283 km. Existing single and two-lane road.
Plain country except for Kasara, Chandor and Laling
ghat sections. By-passes proposed at Vashind (2.4 km),
Assangaon and Shanapur (5.0 km), Ghoti (2.5 km),
Kasara (5.0 km), Pimpalgaon (2.4 km) and Malgaon (4.3 km)

- (a) Bombay Nasik Road varies in width between 20 - 23 ft, mostly black top, the remainder being concrete slab in poor condition. There are four major by-passes and one ghat section at Vashind, Assangaon and Shanapur, Ghoti and Kasara. The ghat section is at Kasara of length 13.0 km and ia continuous with the by-pass. There is a major engineering problem in how to link the Kasara by-pass with the ghat section and how to improve the latter. The by-pass ends at the edge of a valley, the crossing of which would require a cutting about 12 - 15 m deep by 500 m long followed by two sections of filling 10 - 12 m high by 300 m total length with a 30m span bridge in between. The PWD have proposed 3 or 4 alternatives to avoid a direct crossing of the valley none of which are satisfactory. The PWD showed uncertain -ty as to how to tackle the direct crossing and how to link it up with the road on the other side in the ghat To avoid a bad geometric solution we have recommended that the full length of the road in the ghat section should be studied and a new alignment chosen to marry in with the valley crossing. We are sceptical as to the ability of the PWD to produce a satisfactory solution of this whole Kasara ghat problem.
- (b) Nasik Dhulia
 Single lane road throughout, 12 ft wide with terribly bad waterbound macadam shoulders. By-passes are proposed at Pimpalgaon and Malegaon, and there are short ghat sections at Chander and Laling both of which can be dealt with by applying the minimum design standards for 40 k.p.h.

Maharashtra Sugar Mills. A bullock cart problem has been identified on both Ml and M2 in connection with sugar mills at Kolhapur and Niphad. Long convoys of bullock carts carry sugar cane to these mills during the months of November to March inclusive, which is the mill crushing season. The bullock carts travel to and from the mills over distances of up to 25 km, using the paved highway wherever this is possible. Thus a continuous length of road of 50 km is subjected to heavy ballock cart traffic, which produces a serious traffic problem. Damage to bituminous surfaces has been observed in the form of ruts as much as 2 - 3 inches deep adjacent to the shoulder and up to 1 inch deep on the other track. The ruts occur on both sides of the pavement. No cutting of the surface of the road has been observed and it would appear that the damage is due mainly to weak pavement construction, softening of the sub-grade after the monsoon rains and some wear of the stones of the bitumenised macadam surface layer. We recommend that because of the heavy commercial traffic on both MI and M2 that asphalt concrete wearing course (high stone content mixture and suitably low penetration bitumen) on bitumen macadam binder layer haunched with natural dressed stone blocks (not precast concrete) should be used throughout the entire lengths of these roads. Special provision for bullock cart traffic in the vicinity of sugar mills should be made in the form of concrete slab cartways about 2 m wide by 10 cm thick, concrete being chosen in preference to black top as being easier to maintain and providing a colour contrast with the main vehicular carriageway.

Visits in Bombay

- The Chief Commercial Superintendent, Central Railway, Victoria Terminus, Bombay, was visited on 12/2/70 for the purpose of determining if stone could be transported by rail from the Jhansi area to points on U2, to replace the use of bricks. CCS stated that two trains, each consis/ting of 35 wagons of 22-ton capacity, could operate a shuttle service to deliver 770 tons of stone per day. For a maximum total requirement of 500,000 tons of stone for pavement foundation layers and bituminous surfacing the delivery period for a continuous rail operation would be about 20 months, and this was considered by CCS as an attractive commercial proposition. CCS was asked to let us have a ton-mile cost estimate, exclusive of loading and unloading, and this he promised to send to New Delhi.
 - Visits have been made to Recondo Private Ltd and Ivan Milutanovic Pim. The former is an asphalt paving firm and the latter a harbour construction company from Yugoslavia. Some paving work carried out by Recondo was inspected and their laboratory was visited. Mixing of asphalt in a plant constructed with the ingenuity of Heath Robinson was watched, and admiration expressed at the way in which mechanical difficulties were being tackled. Ivan Milutinovic operate in India under Mon-convertible Rupee Account. The firm has expressed keen interest in tendering for IDA Loan road jobs which could be carried out by associated highway contractors from Yugoslavia. Problems experienced in India are mentioned under Section E of thes Report.

C. SUITABILITY OF PROJECT FOR APPRAISAL.

During the visit of the Bank Reconnaissance Mission the date when the Project might be ready for Appraisal was discussed both with the Mission and DG, CRW. The view of the Mission was that Appraisal could not take place before June, whilst DG, CRW, felt that the bridges would be ready by mid-March, the roads by mid-April and everything would be ready by 31 March. The experience of the Team in India is that everything seems to take ages to get done due to the stereotyped and top-heavy procedural methods of CRW and States' PWDs. The small number of by-pass alignments submitted to the Team in New Delhi have been no more than brief sketches requiring no more

than a few hours constructive thought and imagination to produce; but it has taken seemingly several weeks before they eventually filtered through to us.

D. CONTRACTORS

At the meeting between the Bank Reconnaissance Mission and DG, CRW, on 18/2/70 it was stated that CRW expected to have the lists of contractors available by 11 March. It is known that Maharashtra PWD have been sending out questionnaires to firms in that State, and it is hoped that some names will be forth coming by the date promised.

E. GENERAL.

In reference to your letter of 22 January to the Consultants in London we have the following observations to make further to those given in our Progress Report No. 2.

We believe that the delegation of contract control and site 3.1 supervision by CRW to States' PWDs is fundamentally wrong. Whilst enthusiasm for the Project exists amongst younger PWD staff, we have, in view of the archaic contract proceedures in current use, doubts as to the ability of the States' organizations to handle Project contracts to the Bank's satisfaction. Within our knowledge there are no PWD engineers with the necessary experience of handling large contracts under modern conditions at any level. We strongly recommend that for each contract the resident engineer, deputy resident engineer, surveyors, inspectors and laboratory technicians should all be appointed by CRW, if possible after interview of all grades but certainly after interview of the senior appointments in each grade. Applications should in the first place be received from serving members of the Project States' PWDs, but minimum standards must be set and failure to find a suitable applicant to fill an appointment will mean that CRW must select staff from other States or even recruit outside the PWD. Project site staff during the period of appointment will be responsible to CRW for all technical and contractual matters, but pay and routine administration should remain the responsibility of States' PWDs. The numbers of staff appointed to a Project contracts must be tailored to the needs of the work to be done, ensuring tha every man is fully employed without being unduly stretched, with due allowance for absences for leave and sickness. Under no circumstances must jobs be overstaffed, as this will lead to slackness and loss of proper enthusiasm for the work. Scales of pay must be commensurate with the level of integrity and responsibility normally expected from field staff.

A further matter which we must recommend for careful attentio is measurement. Falsification of quantities for personal gain is not unknown in India, and is not confined to junior grades. We suggest that CRW should establish a Measurement Division, headed by the best possible man experienced in quantities. Qualified quantity surveyors as such are probably few and far between in India, but these are not needed. A good road engineer with an aptitude for taking-off is what is needed. He would need to know the specifications,

Bills of quantities and conditions of measurement and certification for each contract. He would be assisted by a small, selected staff of checkers, and would make periodic visits to sites to keep in touch with the field work and discuss any immediate problems with resident engineers. He would under no circumstances give technical instructions on any matters except those connected with measurement, and even then he would keep strictly within the terms and conditions laid down in the contract documents. He would be answerable to the CRW Project Engineer, and would check, amend and pass interim measurements received from resident engineers for cetification within the time minits set for the payment of contractors' accounts. It is believed that a number of engineers at present serving in CRW could be earmarked for measurement duties and for which they would have a natural aptitude. We will give further attention to these matters.

3.2 The following observations are supplied by the Managing Director of an Indian engineering firm who is a well-established Bombay industrialist in answer to questions put to him on the basis of paragraphs 3.2.1 to 3.2.6.

"The road construction industry as well as civil and mechanical engineering construction industries in India are today facing problems under two main heads:-

- (a) Technical (b) Financial
- have achieved in civil and mechanical engineering a considerable degree of expertise, much remains to be done moreso in the road construction industry. No specialised companies exist at present to undertake road construction on advanced lines, particularly to construct roads to International Standards. It is the considered opinion of our company that on any programme of road construction to International Standards, technical assistance will be required from foreign countries, particularly Germany and U.S.A. This assistance would be required initially for a period of 3 5 year after which, we are confident, Indian engineers would achieve a degree of specialisation to undertake road construction on their own. The business and administration knowledge in this country is adequate and will not require any reinforcement in the shape of foreign know-how.
- (b) On the financial side there is a complete absence of any awareness on the part of the Government authorities in treating the construction industry as vital and requiring all the assistance and encouragement from the Government authorities, both in tax and financial matters. You will be surprised to know that construction industry in this country is treated for tax purposes as a non-industrial activity, although the equipment required in this industry may exceed millions of rupees. How the definition has acted as a restraint on the development of this industry is explained as follows:-

(i) Public companies in which shares are held by promoters and an equally large amount is held

by the general share-holding public. Public companies, irrespective of the activities they indulge in, are taxed presently at 55% of the net profits and it is left to the discretion of the Directors to decide the quantum of profit to be distributed to the shareholders and to be ploughed back into the business.

(ii) Private companies in this country are those which are closely held by less than fifty shareholders, such as family or a group of persons.

In the case of private companies the Tax authorities differentiate between industrial and non-industrial companies. A private industrial company pays tax at the rate of 55% of its net profits up to the first million rupees on the same lines as the public company and the Directors have the right to decide the quantum of any dividend to be declared to the shareholders and the ploughing back of the profits. However, in the case of the <u>Private Non-Industrial</u> companies (under which the construction industry at present is classified) the tax is 65% of the net profits (although this is the statutory percentage of tax, normally the effective rate is about 70% due to certain items of expenditure such as entertainments etc. being disallowed for tax purposes) and inaddition 60% of the balance of the profit after tax has been to be distributed to the shareholders compulsorily. You will realise, therefore, that in a Private Non-Industrial company the quantum of available profit to be ploughed back is about 12% of the net profit.

Further clarifications on the above matter could be had on reading paragraph 5 at page 17 onwards of the 'Final Report on Rationalisation and Simplification of the Tax Structure' by S. Bhootalingam.

In addition to the above the present financial assistance programme of the Government only envisages assistance to industrial companies, private or public. All Government lending institutions such as I.C.I.G.I., I.F.C., L.I.C. and other State Finance Corporations, only lend capital to industrial companies. This assistance is in the shape of long term loans repayable within 7 years, with provision that for the first three years no payment except interest is to be made as it is expected that the industry would take 3 years to commence production and be in a position to repay its loans. Since a Non-Idustrial company, therefore, is not in a position to obtain any borrowed capita for underwriting of its shares by any of the concerned lending institutions, the construction industry has, per force, remained as a private company or partnership depending upon the resources of its promoters. You will appreciate that this factor alone has arrested the growth of this industry. In our opinion the only way in which the construction industry can be developed to meet International Standards would be to classify the construction industry as Industry for purpose of tax laws. The advantages of this step would mean a considerable development of the construction industry which is highly labour intensive and encourage the construction industry to secure export contracts. You are aware how the developed countries of the West have today been able to secure large construction contracts in other countries resulting in earning of foreign exchange.

With the above two important factors in mind and hoping that the same are acceptable to the Government authorities in India, we give below our replies to the various questions raised by you:-

3.2.1. Our company would be interested to undertake a maximum road work contract of 10 million rupees per year in the first three years, assuming that the necessary equipment is made available to us and financial assistance in procuring the same is also made available. After achieving the necessary experience we would consider undertaking contracts up to a maximum of 25 million rupees per year.

We would not be interested in any consortium of a group of contractors, but would certainly consider giving sub-contracts for specialised activities.

3.2.2. Keeping in mind the necessity to have the quality of roads built to International Standard, we would have no objection to allocating a part of the work to be done by hand in the present day conditions in India. Broadly we would agree with your views regarding the following work to be done by hand labour:-

(See list of items given on page 8 of Progress Report No. 2)

and the following work to be done by machinery:-

(See list of items on page 8 of Progress Report No. 2)

- 3.2.3. Very little road building machinery is being produced in this country and, therefore, import will have to be arranged from foreign countries. The necessary import licences and credit facilities will have to make be made available by the Government.
- 3.2.4. We would normally require 8 10 weeks for mobilization for contracts in excess of 3 million rupees. The period could be shortened for contracts of lesser value. However, in wax view of our present organization it would not be economical for us to undertake individual contracts of less than 3 million rupees.
- 3.2.5. We have no objection to this mode of executing contracts and would certainly consider sub-contracting work provided reliable and efficient sub-contractors are available in the area of construction.
- 3.2.6. Mhereas the administration of road contracts would not pose a great problem, the execution of the same again raises financial problems. The present contracts of the Government are based on the PWD system and a contractor is supposed to give an earnest money cash deposit or a bank guarantee at the time of submission of the tender. Subsequent to this, assuming that the contract is awarded to the tenderer, the customer then requires a minimum of up to 10% of the contract value as a security cash deposit or bank guarantee for adequate performance of the contract. The bank guarantee is reduced proportionately when payment for progress bills are

made by the customer by deducting 10% from each bill. These complicated financial requirements add additional heavy burdens on the contractor. This security deposit has to remain with the customer for a period up to one year from the date of the completion of the contract, whereas tax authorities assess the profits from year to year with the result that the contractor has at times to find cash resources to pay the taxes, whereas his profit which is about 10% is with the customer.

The concept of mobilization payment existing in this country.

as soon as a contract is awarded, the contractor has to make arrangements for site preparations, moving of machinery, building labour colonies, etc., all these requiring considerable cash. Banks are averse to loaning against contracts, whereas in the advanced countries these activities are accepted as 'Progress of Work' and a certain payment is made against the work done.

Our suggestion to solve this problem would be:-

- (a) To have prequalification tests, whereby the customer receives applications from contractors to be registered and only such companies are registered as are found adequate from the technical and financial point of view.
 - (b) The introduction of mobilization payments to enable the contractor to proceed fast with his work mather than being tied down in trying to secure the necessary cash resources.
- (c) Elimination of earnest money and security deposits in cash or backguarantees. The necessity for such guarantees would not arise as the companies concerned would be reliable enough to rectify any defective work should it be found within the guarantee period of the contract.

The following observations are based on information and comments supplied by the British General Manager of a Bombay asphalt paving firm, who is a Member of the Institution of Civil Engineers and has had many years of experience in India and the Far East.

Proposals for the Improvement of Road Construction Methods in India

Defects in existing methods.

The methods of specifying and executing road construction in India have changed very little since the time when all roads were made with local material and local labour. Earth filling was then dug by hand from borrow pits on the side of the road and was paid for by measuring the borrow pits. Other materials were "collected" and stacked by the side of the road where they could be measured before being spread. No attempt was made to measure the finished work or to check the characteristics of the finished product. The terms "collecting" stacking", "spreading", etc. still appear in nearly all road contracts let by the States. If rapid progress is to be made in road construction.

payments made to the contractor must be made on the basis of the volumes, areas and properties of the finished work. This change will enable materials to be brought to the work site in tipping trucks, deposited where required and spread and compacted without wasting time and money on unnecessary material handling.

Standard specifications for large road works must be prepared by some agency not biased by existing methods, advised by engineers who are familiar with local conditions. At present, specifications are not drafted by senior engineers. They are drafted by some deputy engineer who seldom makes a careful study of the specific conditions or availability of materials, and are based on some earlier specification for similar work. When modern materials are used, such as asphaltic mixtures, reliance is placed on foreign text books and no attempt is made to determine by full scale tests the compositions best suited to Indian conditions.

In the days of waterbound macadam roads, the collection of broken stone and earth blindage in advance of construction work was certainly desirable as labour could very often break stone by hand using boulders which were present near the road. Even though small quarries had to be opened some distance away from the road, the bullock cart could bring the broken stone to the road side and deposit it in small heaps ready for measurement. In those days the time lag between starting the work and the actual execution was not of great importance; this is no longer the case.

2. Material Production

-works, (b) base and sub-base works and (c) surfacing works.

- (a) Where adequate labour is available, earthworks can be executed either by labour or by machines. There is no real reason why earthworks largely executed by hand labour should not be properly compacted or at least as well compacted as earth deposited by machines. (The Team totally disagree that satisfactory compaction can be achieved either by hand methods or by earthmoving machinery purpose-made compacting equipment in conjunction with graders to produce smooth layers of uniform thickness are absolutely essential) In both cases, the usual difficulty is the absence of sufficient water, hence the phrase "let one monsoon pass over it". In the days of railway construction, compacting equipment was unknown but high embankments were quickly and efficiently built by hand and animal labour with the assistance of the monsoon. If adequate labour is not available or procurable, earthmoving machinery must be used. Such work is by no means unusual in India and many earthen dams and several road embankments have been constructed by machinery.
- (b) Base and sub-base works normally eaploy rock in some form although the sub-base may be stabilized without using rock. The specification of the rock must follow a materials survey so that local materials can be used to the best advantage. There is an unfortunate tendency for Deputy Engineers to draw up a specification which stipulates the use of the highest quality material when a local material can be used, at least in the lower layers of the base. If the specifications are altered to allow the immediate incorporation

of crushed rock in the base without preliminary measurement, the problem remains of obtaining supplies in adequate quantity. though the National Highways twelve feet wide are improved to have a 23 foot wide paved width and suitable foundations and surfacings, the quantity of material required per mile is still relatively small. There is no question of obtaining supplies from existing quarries and the contractor has to locate and open up his own quarry and install crushing plant. In some States permission to open up and operate a quarry may take months as this involves the obtaining of permits from the local revenue authority, which may be State or Forestry Officer under the Central Government, to open the quarry and remove the rock against royalty payment of blasting permission from the police, storage permission from the Explosives Department. As the quarry will be small, the crushers which have frequently to be moved will be small - usually a 16" x 9". As the crushers are small, the size of stone to be crushed must be small and blasted rock to feed the crusher must be reduced in size by hand. The ideal plant would consist of wagon drills, front-end loading shovels on rubber tyres, and a large portable crushing installation consisting of a primary and a secondary emisher. This is the type of installation used from for the construction of the Ledo Road and the Burma Road. Much of this equipment was left in India after the war but has been sold as scrap. Drills and trucks for transporting the crushed stone are available. Front-end loaders and portable crushers are not yet being sold in Indi: from indigenous production, although loaders will be on the market shortly. There is no reason why large portable crushere should not be made in India. Several firms are associated with British crusher Manufacturers and trailers for mounting the equipment are already being made in India.

(c) Surfacing works using asphaltic materials require mixing plants, tipping trucks, pavers and rollers. Trucks, pavers and roller are made in India. There is no reason why suitable drying and mixing plant should not be made in India. This should be plant suited to Indian conditions where skilled mechanics are still extremely few. Simple plants using proportioning at the cold feed end and continuous mixing are economical to produce, to run and to maintain. They can be made completely portable.

3. The Best Use of Woreign Aid.

If foreign aid is to be used for purchasing foreign machinery shipped in foreign ships, which is then to be left to rust away for lack of spares the end result will be a number of well-constructed roads which will fail in time like the machines, for lack of maintenance. If the aid is to be used for the purpose of improving roads in India, the funds should be employed for the purchase of Indian-made equipment and spares and for the actualcost of construction to suitable specifications.

The next step would be to discuss with manufacturers of roadmaking machinery the question of producing sufficient equipment to
enable contractors to carry out the road werks which are envisaged.
Bharat Earthmovers are now advertising a front-end loader and Telcos
have had a propetype on trial for the past two years. Marshall Sons
& Co. (Mfg.) Ltd. would be very interested in producing mobile
crushing plant. They are associated with Baxters and they are alread;
making heavy trailers on which crushing equipment could be mounted.

Marshalls are also producing a PF-45 finisher in association with Blaw-Knox. Bharat Earthmovers also produce earthmoving equipment of all types, including motor graders.

A dryer of an asphalt plant based on a Barber-Greene continuous mixer has been made privately. It is a readily trans-portable equipment and would be most useful to read contractors in India. Unfortunately, it is being produced at the moment by a man with no capital and no managerial experience. If he will be prepared to co-operate with one of the larger firms, I am sure that a batch of, say, 20 Barber-Greene type continuous mixers could be produced speedily.

It is essential that all manufacturers carry a complete range of spares.

The only real difficulty in manufacturing equipment in India is the shortage of alloy steel and high grade castings, and this problem requires remedying for Indian-made equipment to be produced in sufficient quantities with an adequate spare parts service to meet the needs of road contractors."

whilst there may be points of detail in the foregoing two sets of observations with which one may disagree we consider that they contain a number of basically interesting and useful suggestions and pieces of information which the Back should bear in mind and take into account when furthering the Project with the Indian authorities.

firm, Ivan Milutanovic Pia, have to contend when working in India:-

- (a)/Technicians are allowed to work in India for a period of 3 years without Indian tax liability but must remain outside the country for 3 years before being allowed to return to enjoy the same exemption again. Thus for a large job lasting more than 3 years key technical staff must be replaced, at a time when their experience in India is valuable
- (b) Equipment is imported under a re-export agreement with the Customs. Failure to re-export equipment renders the firm liable to pay penalties to the Customs, the amounts of which are at the sole discretion of the latter. Worn-out accipment not worth re-exporting may be penaltied by the Customs, but the firm has managed to overcome this by making such worn-out equipment subject to a special clause exempting it from penalties if left in India.

Yours faithfully,

P. Pilditch, Team Leader.

cc. Rendel, Palmer & Tritton.

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References:

Preparation of final tender drawings
Preparation of land acquisition plans
Refinement of preliminary engineering cost estimate
Setting-out of permanent centre line
Area of land acquired
Field survey
Plotting

8 Soil sampling and testing 9 Pavement testing

Preparation of contract documents and specifications Additional traffic data required 10

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Preparation of preliminary estimates

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE Highways

INCOMING CABLE

DATE AND TIME

OF CABLE:

MARCH 2, 1970

1915

ROUTING

LOG NO.:

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ACTION COPY:

MR. KIRK

TO:

INTBAFRAD

INFORMATION

MR. CARGILL

FROM:

NEW DELHI

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DECODED BY:

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D.O.No:938-SEA/70



GOVERNMENT OF INDIA
MINISTRY OF FINANCE
Department of Economic Affairs,
New Delhi.
February 27, 1970

My dear Greg,

During our meeting on the 5th February, 1970, when you enquired about the Second Highway Project, I informed you that the points raised in your letter of November 17, 1969, were under active consideration and that I expected to give a definite reply shortly. I am writing this to indicate our position on those matters.

- 2. As you are aware, the Consultants engaged by the Bank to help prepare the data for appraisal have been working since the third week of November, 1969. These Consultants, as also the visiting World Bank officials, have evidently indicated the need for a great deal of additional work in the form of major re-alignments, regrading of the vertical profile, improvement to geometrics, etc. to be done on the project roads. This has necessitated extensive field surveys including soil and pavement data studies, large scale preparation of situation plans, longitudinal and cross sections of roads prior to the actual project preparation. I understand that this work is progressing. According to the latest assessment of the progress so far made on these items, we feel that it would be reasonable to aim for an appraisal towards the middle of April, 1970. A similar suggestion had also been made to the Bank reconnaissance mission which visited India recently. I am sure, the Bank Consultants are also in touch with the project department of the Bank and will be corroborating this assessment.
- 3. The question of land acquisition has been raised by the recent Bank missions and in your letter. I appreciate that the Bank's concern arises from the fact that the problems of land acquisition contributed to a significant extent to the delays in the first Highway Project financed by IDA. However, as you are aware, necessary steps are being taken by us to simplify the land acquisition procedure as best as possible. So far as this project is concerned, I understand that since most of the work involved will be of the nature of widening and strengthening existing roads, land acquisition does not figure as a major problem in this project. I also understand that wherever land has to be acquired, it is anticipated that the procedure could be completed in a period of 12 to 18 months. Once settlement is reached regarding the alignment, acquisition work can be completed within the period envisaged in the construction schedule. In this, however, problems can possibly arise if the Bank experts wish to change alignments in such a way that large scale problems of land acquisition are thrown up or acquisition of home-steads or built up land becomes necessary on account of such re-alignments. This will mean that against the considerations which may weigh in favour of improved alignments, we will have to consider such fresh land acquisition problems as may arise in consequence of the re-alignment.

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D.O.No:938-SEA/70
GOVERNMENT OF INDIA
MINISTRY OF FINANCE
Department of Economic Affairs,
New Delhi.

February 27, 1970

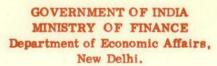
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also mentioned in your letter. This is on the question of selecting contractors for road construction on the basis of international bids. As you are aware, this is an area where we have all along confined selection to Indian contractors. We are of the view that this is an area where appropriately local effort has to be encouraged. If there are questions about strengthening or improving the efficiency of the agencies involved in the construction and the supervision, these could be looked into and appropriate steps taken. I am sure that we can have fruitful discussions with the Bank staff regarding the standards and methods of highway construction, the manner of supervision, the optimum use of labour and machinery, the time schedule for completion of works etc. While we feel that we can reach satisfactory agreements with the Bank team on all these, we feel that we will find it extremely difficult to agree to invite foreign contractors to bid for the highway construction work. I hope that the Bank will appreciate our wish to use indigenous talent to the maximum extent possible and, as in the case of other construction projects such as

irrigation, will find it possible to accommodate our

There is one important issue which you have

With best regards,

point of view.

Yours sincerely,

1. 7. Zull (I.G. Patel)

Mr. Gregory B. Votaw, International Bank for Reconstruction & Development, Washington DC, 20433, USA.

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Record Removal Notice



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ndia - Second Highways Project -	Correspondence 1969 / 1971 - Volume	e 2		1847189
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ocument Date 27 February, 1970	Document Type Letter			- x
orrespondents / Participants To: S. C. Hardy Esq.,		*		4
From : Brian (Rendel, Palmer	& Tritton)			
India: Highway Project Appra	aisal			
cception(s) Personal Information				
Additional Comments			The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information. This Policy can be found on the World Bank Access to Information website.	
			Withdrawn by	Date
			Chandra Kumar	02-Mar-15

1 H Heghways



old wokingham road crowthorne, berks. RG11 6AU

Our ref: ZA/MC

S C Hardy Esq Chief, Highways Division 1 Transportation Projects Department International Bank for Reconstruction and Redevelopment 1818 H Street NW Washington DC 20433 USA

26 February 1970

ROAD RESEARCH LABORATORY

Dear Oliff,

As George Mahoney has probably told you he got in touch with me on his way through London over the weekend, to discuss prospects of co-operating with you and the Indian Government in experimental work on roads in India. From what he tells me there are two broad aims, one to obtain more reliable information on operating costs of vehicles and the effect of varying road conditions on these operating costs, and the other to determine more precisely than is yet known how, with the type of pavement encountered in developing countries in the tropics, axle loading and number of repetitions affect performance.

We are very much interested in both these. The work in Africa on operating costs could usefully be complimented by similar work in Asia where both road conditions and the organisation of transport are different. No great precision is needed, but we need more information over the range of vehicle types than is available yet. On pavement design we are using the AASHO equivalents and I think these may well involve considerable error with wasted expenditure, particularly in some tropical environments.

I was not able to go into very great detail on the plans with George Mahoney, but I would make the point that these are two separate investigations and that it would be a mistake to try to combine them in a single exercise. The study of road costs must be undertaken with normal vehicles in normal use, whilst the pavement design study requires careful field observation and instrumentation of the performance of standard examples of road construction, either under the typical traffic on public roads or on a special track with its own carefully organised traffic.

We are certainly interested in any schemes you may be floating to organise field research on these two subjects. To be frank I think that the work on pavement design might well have a more successful outcome if it was undertaken in some African country that was ready to co-operate. If the work is done in India then I hope that the variations in road construction will include methods that have been proved elsewhere but are not yet accepted into normal use in India.

We look forward to hearing further from you on this. The help that we can give will certainly include advice; the extent to which we can help in field observations etc must depend on the numbers and kind of staff that are available at any particular time.

With best wishes

Yours sincerely

R S Millard

Date:3/11/70 Section

FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

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INFORMATION

DECODED BY:

COPY:

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INCOMING CABLE

Highways I

ROUTING

MR. KIRK

MR. CARGILL

DATE AND TIME

OF CABLE:

FEBRUARY 26, 1970 1535

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RC38 / 26

TO:

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FROM:

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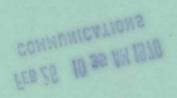
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FORM No. 25 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

ROUTING

MR. KIRK

MR. CARGILL

1131 Highway

INCOMING CABLE

DATE AND TIME OF CABLE:

FEBRUARY 26, 1970 1340

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TO:

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IN Highways

RENDEL, PALMER & TRITTON.

CONSULTING & DESIGNING CHARTERED ENGINEERS

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS TELEPHONE: 01-834 8494

INLAND & OVERSEAS RENDELS, LONDON, SWI

PARTNERS

H. SCRUTTON, F.I.C.E., F. I. STRUCT. E., M. INST. PET. J. R. H. OTTER, F.C.G.I., F.I.C.E., A.R.I.C.S B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E. F. IRWIN-CHILDS, F. I.C.E. P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E. P. A. COX, F.I.C.E. J. C. MUNRO, F.I.C.E. K. E. AINSCOW, F. I. C. E., M. I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH. E., M. I. LOCO. E.

125 Victoria Street,

Westminster, London, s.w.1.

CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. Am. Soc. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH. E.

YOUR REF. OUR REF.

25th February 1970.

Rease reply ac others concerned.

H. F. MERRINGTON, F.I.C.E., M.I.W.E.

ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I. MAR.E.

> Mr. M. Karcher, World Bank,

Highway Division 1,

International Bank for Reconstruction, and Development,

1818 H Street, N.W., Washington D.C., U.S.A.

Dear Mr. Karcher,

Thank you for your note - via Mr. Mahoney concerning the additional traffic data requirements for the proposed Indian highway project. In your note you raised all of the points that were discussed when you were in London, except for any mention of additional data for the Kalpi Bridge project. Would you please confirm whether or not any further data is required for this project. You may like to know that our general feeling concerning Kalpi Bridge is that it will in all probability be justified assuming only a small volume of generated and diverted traffic.

I look forward to hearing from you shortly.

Yours faithfully,

MAR 2 1970

Projects Dept. Correspondence ANSID BY M. Kareher

CONSUMANTS

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TK. CPHONE 01-634 5484

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I look fraund to hearthy from you shortly.

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE

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TO: INTBAFRAD

ASSOCIATION

DATE: FEBRUARY 25, 1970

NEW DELHI

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REUR 68 SHROFF ADVISES THAT INTERNAL REVENUE DEPARTMENT SHOULD BE APPROACHED

THROUGH DEA FOR THEIR APPROVAL OF ROAD CONSULTANTS AS TECHNICIANS UNDER THE

INCOME TAX ACT STOP SUCH APPROVAL CONFERS EXEMPTION INDIAN TAX FOR UP TO

THREE YEARS STOP HAVE SENT SIMILAR MESSAGE TO PINDI AND LONDON STOP REGRET

THIS ADDED TO YOUR OTHER BURDENS BUT WOULD APPRECIATE HEARING FROM YOU REGARDS

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AUTHORIZED BY:

COMMUNICATIONS

NAME

Alexander F. Kirk

FEB 25 3 20 PH 1970

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared with and cc: Mr. Hardy

cc: Mr. Shroff

For Use By Communications Section

Checked for Dispatch:

IMPRAFIAD

FERRIARY 25, 1970

70 FOR GLIMARTIN

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COMMUNICATIONS

Mr. Shroff

Mr. Hardy

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South Asia

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE of Files
CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

FEBRUARY 24, 1970 1320

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TO:

IN TBAFRAD

FROM:

NEW DELHI

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66 FOR KIRK

ROUTING

ACTION COPY: MR. KIRK

INFORMATION

MR. CARGILL COPY:

DECODED BY:

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IN Highways green February 24, 1970

Mr. A. F. Kirk

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INDIA - Proposed Second Highway Project

- During my recent visit to India I had meetings and conversations with Mr. G. V. Ramakrishna and Mr. Pilditch (Team Leader, Bank Appraisal Assistance team) and, together with the preappraisal mission, we held several meetings with the appraisal assistance team and officials of the Central Roads Wing in order to discuss the status of preparation for this project.
- 2. Mr. G. V. Ramakrishna informed me that a meeting was to be held on February 20 to decide upon policy issues raised in Mr. Votaw's two letters of last year. As he was leaving for Washington for negotiations the following day, he hoped to be able to communicate to Mr. Votaw a reply to these two letters, or hopefully carry a written reply.
- The appraisal assistance team expects cost per mile of road construction to be higher than originally forecast, and so, in order to limit the total cost of the project in which IDA will participate to U.S.\$60 million, certain elements (probably two) will have to be dropped. These would be either the elements with the lowest rate of return among the 12 elements previously proposed for appraisal, or those for which preparation has advanced the least.
- 4. In general it was the opinion of the team that preparation was advancing very slowly. They had also not received the lists of road contractors, with indications of their capacities, for which they had asked.
- 5. They saw no progress in contracting practices and still felt a strong need for close supervision of project execution.
- 6. The preappraisal mission, in the light of their findings, thought that the date of appraisal will have to be delayed, probably until the beginning of June 1970. But Mr. S. N.Sinha, Director General, Roads Development, recommended strongly appraisal to be made in mid-April 1970.

MADdELAty/gs

Form No. 27 (6-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

GILMARTIN

INTBAFRAD

NEW DELHI

DATE: FEBRUARY 23, 1970

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SERVICE: FULL RATE

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INDIA

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AUTHORIZED BY:

NAME

A.F. Geolot

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Mr. A. F. Geolot

February 20, 1970

S. C. Hardy Cou

INDIA: Proposed Second Highway Project
Development of Domestic Contracting Industry

- 1. The contents of my memorandum dated February 13, 1970 on the above subject (copy attached) were discussed at a meeting attended by yourself, Messrs. van Helden, Hogg, Dickerson and myself on February 17. You asked me to develop the ideas expressed at that meeting and to write a further memorandum on the subject.
- I concur with Mr. Hogg that the ultimate objective and long term goal should be to develop the civil works contracting industry in India, and that an appropriate means to this end might be the creation of a "Civil Works Contractors' Development Bank". The "Development Bank" provide its members with the necessary licences for equipment and the financing required. In the immediate context of the proposed highway project, we might consider a pilot scheme such as a "Road Contractors' Development Bank", recognised by and perhaps with some participation by Government; it would be financed with funds provided under the highway credit (or with a separate Development Bank credit if more appropriate).
- 3. Under the sponsorship of the Government (the arrangements for which would need to be discussed prior to or during negotiations of the proposed credit), contractors associated with the "Development Bank" would qualify for (a) priority allocation of available road construction equipment manufactured in India; (b) prompt issuance by Government of import licences for equipment and spare parts not manufactured in India and (c) credit facilities on lenient terms for the purchase of such equipment.
- 4. The facilities available from the "Development Bank" would be known to Indian contractors prior to bidding, and could therefore be taken into account when calculating their unit prices. The necessary licences and any credit required would be made available to successful contractors immediately on award of contract.
- As mentioned in paragraph 5 of my previous memorandum, I would expect that US\$5 to 10 million for equipment would be adequate to meet the needs of Indian contractors, assuming that they were to execute about half the proposed project works. I suggest that US\$5 million be the initial sum provided in the proposed credit for setting up the Development Bank in Embryo; the amount could always be increased in subsequent highway projects in the light of experience.
- 6. Before finalizing our ideas we should discuss the matter further with our colleagues in Area Department and Development Finance Companies Department.

Ettachment.

SCHardy: dfw

cc: Messrs. Knox, Kirk, Mehoney, Hogg, ven Helden, Dickerson, Karcher, Neumer.

IN Heepheray

February 16, 1970

Messrs. Rendel, Palmer & Tritton 125, Victoria Street Westminster London, S.W.1. England.

Attention: B.G.R. Holloway, Esq.

Dear Sirs:

re: INDIA: Proposed Second Highway Project Appraisal Assistance

We acknowledge with thanks receipt of your Progress Report No. 2 dated January 31st, 1970, together with the interesting and useful photographs. We also thank you for your letter of February 5th, 1970, enclosing the Central Road Research Institute publications on bullock carts.

Your Progress Report is under review, but we will defer our comments on it until after the return from India of our Reconnaissance Mission.

Yours sincerely,

S.C. Hardy

Chief, Highway Division I Transportation Projects Department

ce: Mr. Pilditch (Team Leader Bank Appraisal assistance team)

cc: Messrs. Karcher, Mahoney, Neuner

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

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1 N- Heghway February 13, 1970 Mr. A. F. Geolot S. C. Hardy Log_ INDIA: Proposed Second Highway Project Needs of Domestic Contracting Industry One of the indirect aims of the proposed IDA financed second highway project in India is to develop the domestic civil works contracting industry. Our consultants recently reported considerable interest by small Indian contractors in forming joint ventures to undertake part of the project works, but they seem to suffer from a shortage of construction equipment. It appears that Indian contractors would be prepared to participate in the project and to adopt equipment-intensive methods of construction, provided (a) the equipment is available and (b) that they have credit fecilities to acquire the equipment. It would be logical, therefore, if concurrently with the preparation of the second highway project, India and the Bank/IDA/IFC Group would give consideration to the means of making available to domestic contractors an appropriate selection of construction equipment, including graders, scrapers and paving equipment not menufactured in India. Industrial Projects Department is now preparing an appraisal report on a proposed second IDA industrial imports credit to India, which might be used as a means of providing some of the road construction equipment needed. However, my understanding is that the credit will cover primarily the import of truck parts only, and that no civil works construction equipment is to be included in the current proposel although some was included in a previous project (1964/65). Perhaps some mrangements could be made to remedy this deficiency. We and India should also consider the possibility of making credit facilities available (perhaps through a Development Bank) for the acquisition of road construction equipment by the smaller Indian contractors. Some talk has already ensued with the Indians and the Bank regarding the inclusion of an amount in the proposed second highway credit to provide for the importation of such equipment, but I do not consider the highway credit to be an appropriate medium for such financing. Perhaps this matter could be taken up with the Industrial Projects Department, IFC and the Area Department, with a view to discussing the need with the Indian Government. The amount, timing and appropriate channelling of the funds would need further study but there is a degree of urgency since our highway project is tentatively scheduled for negotiation in the Fall of this year. I estimate that approximately US\$40 million equivalent of construction equipment will be "consumed" annually by domestic contractors in executing India's National and State road programs over the next four to give years, if the goals of the Fourth 5-year Plan are to be met. On our National highway project alone, equipment to the capital value of about US\$5 to 10 million would be needed by Indian contractors, assuming that they were to execute about half the project works. SCHardy: dfw ce: Messrs.Knox, Kirk, El Darwish, Mahoney, Dickerson, Karcher, Neumer.

February 10, 1970 Mr. M. R. Shroff Mr. Alexander F. Kirk Mission Concerning Proposed Second Highway Project Mr. Karcher (French national), Transportation Projects Department Economist, will join Messrs. Mahoney and Neumer in Delhi on February 15, 1970 (via BOAC 792 arriving at 13:05 hours) to review the progress in the preparation of the economic justification

for the proposed Second Highway Project, as well as transport coordination policy matters. Mr. Karcher is planning to leave India on February 20, 1970.

cc: Messrs. Hardy Dickerson

I.D.A. Appraisal Assistance Team, Room 215A, Central Roads Wing, Transport Bhavan, 1, Parliament Street, New Delhi.

Ref: IDA/India/15 6 February, 1970.

S. C. Hardy, Esq. Chief, Highways Division I, Transportation Projects Department, The International Development Association, 1818 H Street, N.W., Washington, DC. 20433, U.S.A.

Publication retained my affice for

Dear Mr. Hardy,

I enclose for your information a copy of a publicati of the Indian Roads Congress entitled 'Brick Pavement in Highway Construction' by Chaturvedi and Tayal. There is some interesting data on the properties of bricks, and the description of their manufacture and problems of quality suitable roadworks provides a useful background picture of the brick situation in Uttar Pradesh. The notes on costs mentioned in Appendices C and D may be of some value, although the figures given are for 1958 and refer only to the experimental work carried out over a short length of road.

I do not think, however, that the paper brings us any nearer to solving the brick problem so far the Project roads are concerned, and some further research is needed. So far we have not been able to ascertain what, if anything, has been done in this direction.

We will be discussing all this with Mahoney when we see him here.

Yours sincerely,

P. Pilditch.

FEB 1 1 1970

Projects Dept. Correspondence

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concerned, and some further research is needed. So far we have not nearer to solving the brick problem so far the Project roads are I do not think, however, that the paper brings us any background picture of the brick situation in Uttar Pradesh. The notes on costs mentioned in Appendices C and D may be of some value, although the figures given are for 1958 and refer only to the experimental work carried out over a short length of road. manufacture and problems of quality suitable roadworks provides a useful data on the properties of bricks, and the description of their of the Indian Roads Congress entitled 'Brick Pavement in Highway Construction' by Chaturvedi and Tayal. There is some interesting I enclose for your information a copy of a publication Dear Mr. Hardy, U.S.A. 1818 H Street, N.W., Washington, DC. 20433, The International Development Association, Transportation Projects Department, S. C. Harly, Esq., Chief, Highways Division I, IDA/India/15 6 February, 1970. Hef: New Delhi. 1, Parliament Street, Transport Bhavan, Central Roads Wing, Room SISA, I.D.A. Appraisal Assistance Team,

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direction.

We will be discussing all this with Mahoney when we see

him here.

Yours sincerely,

COMMUNICATIONS SECTION

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I.D.A. Appraisal Assistance Team,
Room 215A,
Central Roads Wing,
Transport Bhavan,
1, Parliament Street,

M. July

New Delhi.

Ref: IDA/India/14

5 February, 1970

The International Development Association, 1818 H Street, N.W., Washington, DC. 20433, U.S.A.

For the attention of S.C. Hardy, Esq., Highway Division I, Transportation Projects Department.

Dear Sirs,

I enclose for your information the following Indian research publications which may be of interest. Copies have been sent to the Consultants in London in connection with the design of asphalt wearing surfaces suitable to resist the effects of bullock cart wheels which they are considering.

Yours faithfully,

P. Pilditch

cc. Rendel, Palmer & Tritton.

FEB 9 1970

Projects Dept. Correspondence

ANS'D BY S.C. Hauly

DATE 2/16/710

TO FEB -9 AMIO: 19 COMMUNICATIONS SECTION GG* Rendel, Palmer & Tritton. P. Pilditch / Yours faithfully, wheels which they are considering. asphalt wearing surfaces suitable to resist the effects of bullock cart sent to the Consultants in London in connection with the design of research publications which may be of interest. Copies have been I enclose for your information the following Indian Dear Sirs, Transportation Projects Department. For the attention of S.C. Hardy, Esq., Highway Division I, U.S.A. 1818 H Street, N.W. Weshington, DC. 20433, The International Development Association, Ref: IDA/India/14 5 February, 1970 New Delhi. 1, Parliament Street, Transport Bhavan, Central Roads Wing, M. . . . Room 215A, I.D.A. Appraisal Assistance Team,

Projects - Dept. Correspondence

COMMUNICATIONS SECTION

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INTERNATIONAL DEVELOPMENT
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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: RENDELS

DATE: February 5, 1970

LONDON

CLASS OF SERVICE: LT

COUNTRY: U.K.

TEXT: Cable No.: 39

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(IMPORTANT: See Secretaries Guide for preparing form)

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H. SCRUTTON, F.I.C.E., F.I.STRUCT. E., M.INST. PET.

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B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E.

F. IRWIN-CHILDS, F.I.C.E. 125, Victoria Stree P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E. P. A. COX, F.I.C.E.
J. C. MUNRO, F.I.C.E. Westminster, K. E. AINSCOW, F. I.C.E., M.I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH.E., M. I. LOCO. E. CONSULTANTS: YOUR REF. J. E. G. PALMER, F. I.C.E., F. AM. Soc. C. E. T. LAMBE, F.I.C.E., F.I.MECH.E. H. F. MERRINGTON, F.I.C.E., M.I.W.E. OUR REF. 02136/13848 4th February, 1970. ASSOCIATE:
R. DOWNHAM, M.R.I. N.A., M.I. MAR. E. FEB 1 0 1970 S.C. Hardy Esq., Chief Highway Division 1, Projects Dept. Correspondence International Bank for Reconstruction & Development, ANS'D BY _____ 1818H Street, N.W., DATE ____ WASHINGTON, D.C. U.S.A. Dear Sir, India: Highway Project Appraisal Assistance On his return to this office Mr. Cranage brought back with him some Notes compiled by Mr. Neuner on his recent visit to New Delhi, with the request that we have them typed and forwarded to yourself. We accordingly enclose a single copy of these Notes as requested. Yours faithfully, for RENDEL, PALMER & TRITTON I.g. hille Kichards Enc.

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RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS INLAND & OVERSEAS TELEGRAMS RENDELS, LONDON, SWI PARTNERS H. SCRUTTON, F.I.C.E., F.I.STRUCT.E., M.INST.PET.
J. R. H. OTTER, F.C.G.I., F.I.C.E., A.R.I.C.S. B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E. F. IRWIN-CHILDS, F.I.C.E. 125, Victoria Street, P. M. FRAENKEL, F. I. C. E., F. I. STRUCT. E. P. A. COX, F.I.C.E. J. C. MUNRO, F.I.C.E. K. E. AINSCOW, F.I.C.E., M.I.STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH. E., M. I. LOCO. E. CONSULTANTS: YOUR REF. J. E. G. PALMER, F. I.C.E., F. Am. Soc. C. E. T. LAMBE, F. I.C.E., F. I. MECH. E. H. F. MERRINGTON, F.I.C.E., M.I.W.E. OUR REF. 02136/13845 3rd February, 1970. ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I. MAR. E. FEB 1 0 1970 S.C. Hardy Esq., Projects Dept. Correspondence Chief Highway Division I, International Bank for Reconstruction & Development, 1818H Street, N.W., WASHINGTON, D.C. U.S.A. Dear Sir, India: Proposed Highway Project

Appraisal Assistance

Further to Mr. Mahoney's visit to this office on the 30th January 1970, we appreciate the urgency of obtaining our comments on the various points raised in your letter of the 22nd January 1970 on the Interim Report issued by Mr. Pilditch on December 23rd, 1969.

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Section 3.9 Economic Evaluation.

The general procedure in regard to operating costs has been to accept Indian data unless there has been some valid reason (valid in terms of past experience and previously established results) to question the general nature of the relationships used. The necessity for netting out taxes from operating costs data required data to be provided from various manufacturers. Those manufacturers able to provide information in the shortest possible time were consulted and capital costs of vehicles may thus differ slightly from those originally used by the Indian economic staff.

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Data on wages, insurance costs and overhead costs obtained from original Indian data.

Yours faithfully, for RENDEL, PALMER & TRITTON

G. Mille Richard

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: INTBAFRAD NEW DELHI DATE:

FEBRUARY 3, 1970

CLASS OF

SERVICE:

LT

COUNTRY: INDIA

TEXT: Cable No .:

FOR PILDITCH CONSULTANT RE INDIA SECOND HIGHWAY PROJECT YOUR INFORMATIVE CABLE

20 RECEIVED WITH THANKS STOP PLEASE TAKE UP MATTER WITH MAHONEY VISITING INDIA

FEBRUARY 15 TO 19

HARDY

TNDTA:	PROPOSED	SECOND	HTCHWAY	PROJECTNOT	TO BE	TRANSMITTED

AUTHORIZED BY:

S.C. HARDY NAME

DEPT.

TRANSPORTATION PROJECTS

SIGNATURE_

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO AP PROVE)

DICKERSON/EC.

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

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cc: MR. KARCHER

For Use By Communications Section

Checked for Dispatch:

PERRUARY 15 TO 19

FERNARY 3, 1970

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INDIA: PROPOSED SECOND HECHMAY PROJECTIVOT TO BE TRANSMITTED

S.C. HAR

COMMUNICATIONS SECTION

6 10 PM 1970 FEB

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CC: MM. KARCHER

GMR/JD

RENDEL, PALMER & TRITTON.

CONSULTING & DESIGNING

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS

PARTNERS

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P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E.

P. A. COX, F.I.C.E.

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D. M. S. FAIRWEATHER, F. I. MECH. E., M. I. LOCO. E.

CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. AM. SOC. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH E.

H. F. MERRINGTON, F.I.C.E., M.I.W.E. ASSOCIATE:

R. DOWNHAM, M.R.I.N.A., M.I.MAR.E.

S.C. Hardy Esq., Chief Highway Division I,

International Bank for Reconstruction &

Development, 1818H Street, N.W., WASHINGTON, D.C.

U.S.A.

Dear Sir,

India: Proposed Highway Project Appraisal Assistance

OUR REF. 02136/13845

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contd....

TELEPHONE: 01-834 8494

INLAND & OVERSEAS

RENDELS, LONDON, SWI

IN Highway

125, Victoria Street, Westminster, London, s.w.s.

3rd February, 1970.

Date: 2/10/70 Common Distions Section

Vehicle Prices and Vehicle Life

Source of vehicle prices: Hindustan Motors (New Delhi office). Tax elements in vehicle prices: Hindustan Motors and also Report of the Road Transport Taxation Enquiry Committee (1967). For cars: Taxation and Price Structure of Automobile Industry. NCAER (New Delhi 1967). Information on vehicle utilisation: Report of the Road Transport Taxation Enquiry Committee and also various regional transport surveys (generally unpublished) consulted at the offices of the Planning Commission, New Delhi. Car life estimates largely based on Consultant's experience in African countries.

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Yours faithfully,
for RENDEL, PALMER & TRITTON

4. Mille Richard

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GMR/JD RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS TELEPHONE: 01-834 8494 INLAND & OVERSEAS RENDELS, LONDON, SWI PARTNERS H. SCRUTTON, F.I.C.E., F. I.STRUCT. E., M. INST. PET.
J. R. H. OTTER, F.C.G.I., F.I.C.E., A.R.I.C.S. B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT, E. F. IRWIN-CHILDS, F.I.C.E. P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E. 125, Victoria Street, P. A. COX, F.I.C.E. J. C. MUNRO, F.I.C.E. Westminster, London, s.w.1. K. E. AINSCOW, F. I. C.E., M. I. STRUCT. E.
D. M. S. FAIRWEATHER, F. I. MECH.E., M. I. LOCO. E. CONSULTANTS: J. E. G. PALMER, F.I.C.E., F.AM. SOC.C.E. YOUR REF. T. T. LAMBE, F.I.C.E., F.I.MECH.E. H. F. MERRINGTON, F.I.C.E., M.I.W.E. OUR REF. 02136/13848 4th February, 1970. ASSOCIATE: R. DOWNHAM, M.R.I.N.A., M.I.MAR.E. S.C. Hardy Esq., Chief Highway Division 1, International Bank for Reconstruction & Development. 1818H Street, N.W., WASHINGTON, D.C. U.S.A. Dear Sir.

India: Highway Project
Appraisal Assistance

On his return to this office Mr. Cranage brought back with him some Notes compiled by Mr. Neuner on his recent visit to New Delhi, with the request that we have them typed and forwarded to yourself.

We accordingly enclose a single copy of these Notes as requested.

Yours faithfully, for RENDEL, PALMER & TRITTON

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Enc.

Date: 2/10/70 Commidetions

INDIA Higher A/S II IDA Programme -Roadworks to be included in the. B & C Dept. letter NHP-1369/11481-1A Cell of 2nd February, 1970. RECONDO PRIVATE LTD., Name of firm and Co-operative Insce. Bldg., Registration No. Sir P.M. Road, Bombay 1 BR. Registration No. 130. Whether Indian or Indian Foreign. Annual capacity for 3. Rs. 200 lacs. doing works The firm is interested in Whether the firm is interested undertaking works (asphaltic works) costing more than in undertaking works including bridges and asphalting etc. Rs. 50 lacs. costing more than 8. 50 lacs. Engineering personnel with 5. the firm as on 1.1.1970 Mr. N.H. Taylor, M.Sc. (Eng.) M. I. C. E. General Manager. Mr. T.H. Peshori, B.E. (Mech)..

Mr. S. J. Basu, B.E.

Mr. G. D. Patel, B.E.,

A.M. I.H. E. (U.K.) Manager (Contracts) Manager (Plant) Dy. Chief A.M. I.Mun.E. (U.K.) Engineer. The above are our top-level engineering staff. We have, working under the above, road overseers, asphalt plant overseers, asphalt plant operators, etc. etc. Phoase see list attached. Road building machinery with firm. Our permanent staff strength is 7. Labour strength .73. We engage seasonal and temporary employees depending on our workload. for Recondo Private Ltd., sd/- (N. H.Taylor) General Manager. Encl: as aboye cas/-

Auto-car Tractors		2 Nos.
Caterpillar RD-6 Tractor		1 No.
Galion Chief 10-ton road rollers		3 Nos.
Buffalow Springfield Tandem		
Roller		l No.
Chaseside Shovel 2 ton		1 No.
Merton Overloader		l No.
Aveling Austin Motor Grader		1 No.
Etnyre 1000 gal. bitumen		
distributors		5 Nos.
750 gal. bitumen skid tanks	1	O Nos.
1000 gal. bitumen skid tanks		3 Nos.
Vibrating roller		1 No.

Laboratory Equipment (sets available at various worksites).

Taylor Stability Testing Machine Water absorption testing apparatus. Vacuum pump Analytical balance with weights. M.S.E. Centrifuge with two 10 ml. and 50 ml. buckets and tachometer. Absorption meter Penetrometer Electric drying owen. Bitumen extraction apparatus Proctor compaction apparatus Triaxial compression apparatus. Hart 5 Kg. balance Glassware, thermometers, hot plates and Misc. apparatus. Test Sieves (various mesh). C.B.R. testing apparatus.
Marshall stability testing apparatus and proving ring.

Transport

We have sixteen tipping trucks.

cas/-Bombay, 9/2/1970.

RECONDO PRIVATE LTD.

List of Plant & Machinery.

ASPHALT MIXING PLANT

15/20 tons per hour Millars Asphalt Mixing Plants, complete with hot mixed material hopper, belt feeder, dust collector, etc. powered by diesel engine/electric motor	2 Nos.
40 tons per hour Barber-Greene Asphalt Mixer, complete with hopper, drier, elevators, dust collector, powered by diesel engines.	3 Nos.
40 tons per hour Barber-Greene Asphalt mixer, complete with hopper, drier, elevator, dust collector, powered by electric motors.	l No.
60 tons per hour Barber-Greene Asphalt Mixer, complete with elevator for cold mix, powered by diesel engine.	1 No.
25 tons per hour Barber-Greene Mixer complete with hopper, drier, elevator, dust collector, powered by diesel engines.	2 Nos.
5 tons per hour Barber-Greene Mixall Plants	2 Nos.
CPUSHING PLANT	
20 tons per hour "D" type Lightning Crusher, complete with 16" belt conveyor, powered by 30 HP GEC electric motor	1 No.
20 tons per hour "D" type Lightning Crusher, complete, on chassis with elevator, powered by 30 HP. electric motor.	1 No.
30 tons per hour "F" type Lightning Crusher, complete, on chassis, powered by 60 HP. diesel tractor	1 No.
Marshall stone crushers	3 Nos.
ASPHALT FINISHERS	
Barber-Greene Asphalt Finisher Blaw-Knox Asphalt Finisher, PF 90-A Blaw-Knox Asphalt Finisher, PF 90-C	1 No. 1 No. 1 No.

FORM No. 26 (4-69)

> INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE

CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

FEBRUARY 2, 1970

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HARDY INTBAFRAD

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NEW DELHI

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FEB 2 1970

Projects Department Correspondence

Ports & Pipelines Division

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DRAFT ROADS STUDY REPORT FOR OUR USE ECONOMIC MISSION REGARDS

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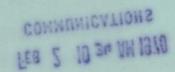
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ALPHA REPORT ON MY THOMPSON MEETING LEFT WITH RPT FOR MAHONEY I
REQUESTED RPT SEND YOU REPORT IF MAHONEY HAS NOT PICKED UP OR TO
CABLE MAHONEY TO PASS ON TO YOU IF HE ID PICK UP
BETA REPORT ON MY OBSERVATION HERE TO RPT VIA CRANAGE WHO IS
RETURNING LONDON TOMORROW WITH REQUEST RPT DUPLICATE AND DISTRIBUTE
REPORT YOU AND MAHONEY
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WEEKEND BHATIAS ECONOMIC REPORT REGARDS

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Jan 30 12 29 PM 1970 COMMUNICATIONS

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The table indicates all proposed sections and my preliminary judgement as to whether they will prove up to inclusion in project. Certain general observations are made:

- (1) Land acquisition cost is included where possible.
- (2) Where the shoulders were paved with bitumen to total width of 18 feet it was assumed to be effectively 2 lanes; where the shoulders were unpaved or paved with bricks to 18 feet total or less it was assumed to be 1 lane.
- (3) Time savings used by consultant are roughly for cars about 6 Rs per hour per passenger at 2 passengers per car and for buses about 1R per hour per passenger at 38 passengers per bus.
- (4) The additional economic data required for recommended projects would be obtainable in about 2 months.
- (5) Engineering for all recommended sections could also (with real effort) be completed in 2 months.
- (6) Recommended sections (if M-l ghats are included) would include major example of most types of road problems in India.

As to Mr. Cranage's program - I believe it would be desirable for him to come for the week of February 15th to India and to visit again to help in completing economic data collection.

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STATUS: SECOND HIGHWAY PROJECT



TAMIL NADU (T1 & T2)

General Comment

Both TN roads are functionally two lane even though structurally they are one lane. Hence recommended these roads adequate for some time. However, bypasses may be possible project. T-1 has three bypasses, one of which appears not needed and other two are only two to three Km. each. T-2 bypasses:

- (i) SALEM
- (ii) BHAVANI (including bridge)
- (iii) COIMBATORE

Possibly also 20 Km. reconstruction of very bad road from Coimbatore to Kerala border.

	LENGTH (Km.)	ESTIMATE	D COST
		(RS)	(\$)
(i) SALEM	9.0	5M	
(ii) BHAVANI (incl. bridge)	5.0	8.3M	say 3M
(iii) COIMBATORE	N.A.	7.5M)	

Economic Considerations

T-l Since roads are effectively two lane, no basis on present traffic figures for work proposed.

- T-2 Two data are needed
 - (i) Numbers of through vehicles
 - (ii) Present transit time

Engineering Considerations

Coimbatore is Not included in project but has been staked and land acquired.

MAHARASHTRA (M1 & M2)

General Comment

M1: About 90% of this road is effectively two lane (that is 12 foot carriageway with 3 foot paved shoulders) and about 10% is pure 12 foot pavement. Hence the same consideration applies as in Tamil Nadu. However there are two ghat sections which could probably be justified with new two lane alignment. Total length is about 50 Km. Sections are around Katraj and around Ku Parwahal.

M2 Bombay - Dhulia: in two sections. A. Bombay-Nasik Existing: Real two lanes hence probably out.

B. Nasik - Dhulia Real single lane $\rightarrow 2$ lane

	LENGTH (Km.)	ESTIMATED COST	
		(RS) (\$)	
Ml (Ghats)	50	21 M 3M	L)
M2			
В	132	30M 4M	I
Economic Considerations			
Ml Traffic Counts	Katraj 1280	trucks, buses	
	Mahda Road Junction 1140	trucks, buses	
M2 Traffic counts at	t 8 stations about 7	00 - 1200 trucks	, buses

Engineering Consideration

Ml This requires substantial engineering and RPT will check before February 16th extent of work required.

M2 Consultant now inspecting but no problems anticipated.

General Comment

Ul Agra - Bognipur present road single lane (12 foot) with brick shoulders (3 feet) \rightarrow 2 lane.

U2 Kampur Kalpi Complex (see sketch map) subdivided as follows:

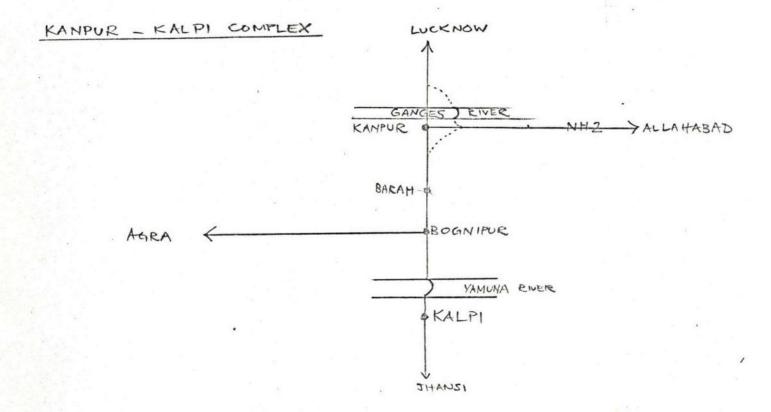
one law if A. contenin can it fage adopted to

- A. BOGNIPUR KALPI 12 Km. single lane (12 ft.) brick shoulders (3 ft.) -> 2 lane, new bridge to replace existing one (i.e. Pontoon bridge and barges)
- B. BOGNIPUR to outskirts of KANPUR Present road 12 foot pavement plus 3 foot brick shoulders 2 lanes
- C. S.E. QUADRANT OF KANPUR BYPASS depends primarily on congestion in Kanpur
- D. N.E. QUADRANT OF KANPUR BYPASS similar to C.
- E. GANGA BRIDGE presently one lane to be replaced by new two lane east of present site.
- In two sections neither likely to be justified.
 - A. From KANPUR to about FATEHPUR paved to 22 feet, (about 40 Km.
 - B. From about FATEHPUR to ALLAHABAD (about 120 Km) paved 12 foot roadway with paved three foot shoulders.

U4 ALLAHABAD VARANASI not justified. Paved 12 foot roadway with paved three foot shoulders.

			LENGTH (Km.)	ESTIM	ATED COST
				(RS)	(\$)
Ul			209	72M	say 10M
U2	A.		12	3M	say 0.4M
		New bridge		16M	say 2.1M
	В.		50	12.5M	1.8M
	C.		20	5M	0.7M
	D.		20	6M	0.8M
	E.			25M	3.5M

5



Economic Considerations

Ul Traffic counts at 6 stations Average 380 trucks & buses 100 cars

Tentative rates of return without time saving 16% with time saving 20%

- U2 A. Traffic count very low but there will be large generated traffic because nearest road bridges over Yamuna are about 200 Km. on either side. This means large area to cover with O/D survey.
 - B. Traffic count at Barah 480 trucks & buses 120 cars
 - C. Needs a) O/D of traffic entering Kanpur which would use bypass.
 - b) Transit times for this traffic absent bypass
 - D. Similar to C.
 - E. Needs a) Traffic count across old bridge and estimate on delays
 - b) If on bypass, estimate of traffic on bypass

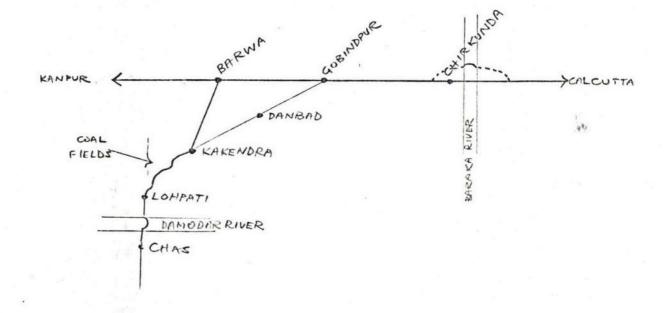
General Comment

- Bl & B2 West Bengal border to Chas Complex (See sketch map)
 - A. The original proposal stops at W. Bengal border. For purposes of analysis the whole bypass around Chirkunda is included. The first section would Chirkunda bypass based on congestion there. The bypass includes a new bridge
 - B. CHIRKUNDA GOBINDPUR already two lanes not justified
 - C. Danbad bypass consisting of 1) widening of Barwa - Gobindpur road already under way 2) New road from Kakendra to Barwa
 - D. Road through coalfields very poor but not included in project - consultant says should be
 - E. Lohpati bypass a few houses could be relocated more cheaply than building bypass
 - F. Damodar bridge present weak, can only take ten tons, single lane but delay not too important.
- B3 Up border to Bahri. Real single lane 12 foot road.
- B4 Nawadi Barauni in two sections (see sketch map)
 - A. Nawadi Baktiapur 65 Km. 12 to 20 foot width of fair to good quality. As whole not justified due to light traffic. However parts possible -

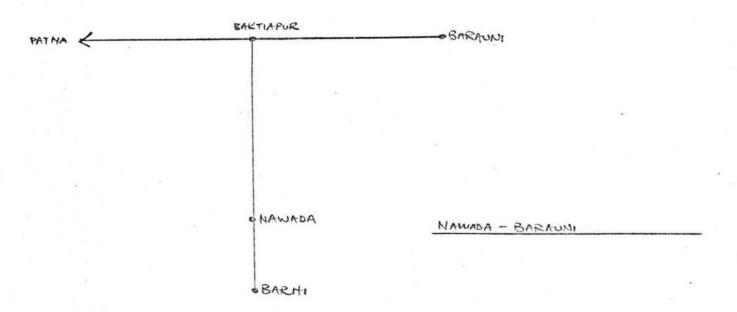
Bypasses around Nawada & Baktiapur, 12 foot stretches.

B. Baktiapur - Barauni 22 foot in very poor condition.

						1 mg 8	LENGTH (Km.	ESTIMATED	COST
								(R\$)	(\$)
Bl	&	B2							
			A.	Bypass	only		13	5M	0.7M
				Bridge				7M	lM
			C.				11	3,5 M	o. 4M
			D.				10	4 M	0.5M
			F.				(IF	3.8M NEW 7M)	0.5M



WEST BENGAL BORDER TO CHAS COMPLEX



		LENGTH (Km.)	ESTIMA	TED COST
			(RS)	(\$)
В3		232	91M	12M
B4	В.	63	16M	say 2.3M

Economic Considerations

- BIHAR Bl & B2 A. Needs 1) O/D for traffic through Chirkunda 2) Transit time through Chirkunda
 - C. Needs 1) O/D for traffic now using Kakendra to Gobindur
 - 2) Transit time through this section
 - D. Needs 1) Traffic count
 - 2) Transit through this section
 - F. Traffic count: 810 trucks & buses 600 cars
 - B3 Traffic count with 7 stations 490 trucks & buses 150 cars

Preliminary rate of return

without time saving 20% with time saving 25-30%

B4 B. Traffic count at three points about

480 trucks

200 cars

Needs determination of speed under pressing conditions.

Engineering Considerations

BIHAR B1 & B2

- D. Engineering not done. Difficult right of way problems
- F. Engineering needed to determine a) real load limit of bridge and b) minimum cost to strengthen.

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

IN- Highway INTERNATIONAL FINANCE CORPORATION

ACTION COPY:

INFORMATION

DECODED BY:

COPY:

ROUTING

TRANSPORTATION PROJECTS

INCOMING CABLE

DATE AND TIME

OF CABLE:

JANUARY 28, 1970 1755

LOG NO.:

RC 3/29

TO:

INTBAFRAD

FROM:

LONDON

TEXT:

72 FOR HARDY CHIEF DIVISION I

REYR28 JAN CONFIRM WILL BE AVAILABLE TO MEET MAHONEY AFTERNOON 30TH. POSTED EXPRESS TODAY NEUNERS NOTES ON DISCUSSION THOMSON. PILDITCH ADVISES 17 FEBRUARY OFFICIAL HOLIDAY IN INDIA ALSO GOVERNMENT OFFICES CLOSED SATURDAY 14TH FEBRUARY OTHERWISE NORMAL SIX DAY WORKING WEEK OPERATES REGARDS

HOLLOWAY

Haliday on Feb 17 will be during our misit but we can use the day for discussions

MT

Washington Reconstruction will start their

EXHIBITION OF THE STATE

THERESONATION LEGISLES

INCOMING CARL

DATE AND THE

JANUARY 28, 1970 1755

LOG NO.

EG 3/58

40

THYBAFRAD

FRENE

POSTION

TEXT

72 FOR HARDY CHIEF DIVISION I

EXTR28 JAN COMPLING WILL BE AVAILABLE TO NEET MANOUET AFTERNOON SOTH. FORTED EXPRESS TODAY REUNERS NOTES ON BINGUESION THOMSON, FILDITCH ADVISES IT FRANCISC OFFICES CLOUED SATURDAY INTERPREDICT.

OFFICIAL HOLIDAY IN INDIA ALSO GOVERNMENT OFFICES CLOUED SATURDAY INTERPREDICT.

OFFICIAL HOLIDAY IN INDIA ALSO GOVERNMENT OFFICES CLOUED SATURDAY INTERPREDICT.

HOLLOWIA

JAN 29 9 08 AM 1970 COMMUNICATIONS SECTION

11. ...

ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE

CORPORATION

OUTGOING WIRE

TO:

RENDELS

LONDON

DATE:

JANUARY 28, 1970

CLASS OF

LT SERVICE:

COUNTRY:

U.K.

TEXT: Cable No.:

> FOR HOLLOWAY REURCAB JANUARY 27 WE CONFIRM OUR CABLE SAME DATE THAT MAHONEY WILL VISIT YOUR OFFICE AFTERNOON JANUARY 30 TO COLLECT DRAFT REPORT FOR ETHIOPIA ROAD STUDY

> > HARDY

INTBAFRAD

Checked for Dispatch:

Re: INDIA - Proposed Second NOT TO BE TRANSMITTED Highway Project CLEARANCES AND COPY DISTRIBUTION: AUTHORIZED BY: cc: Mr. Karcher S. C. Hardy NAME Mr. Dickerson Transportation Projects DEPT. SIGNATURE (SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE For Use By Communications Section ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

JAMUARY 28, 1970

U.H.

MAHONEY WILL VISIT YOUR OFFICE AFFERMOON JAMBARY 30 TO COLLECT DRAFT

Re: INDIA - Proposed Second NOT TO BE TRANSMITTED Highway Project

SECTION S. C. REDWINDHICKLIONS

161461 SE 9: 187 Noper ment

CHahoney HREVICHED

oc: Mr. Karcher

Mr. Dickerson

RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENGINEERS MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS ake copies of these wite TELEGRAMS RENDELS, CONDON, SWI PARTNERS PARTNERS
H. SCRUTTON, F.I.C.E., F. I.STRUCT. E., M. INST. PET.
J. R. H. OTTER, F.C.G.I., F. I.C.E., A.R.I.C.S.
B. G. R. HOLLOWAY, F. I.C.E., F. I. STRUCT. E.
F. IRWIN-CHILDS, F. I.C.E. P. M. FRAENKEL, F. I. C. E., F. I. STRUCT. E. P. A.COX, F.I.C.E.
J. C. MUNRO, F.I.C.E.
K. E. AINSCOW, F.I.C.E., M.I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH.E., M. I. LOCO. E. CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. AM. SOC. C. E. T. T. LAMBE, F. I.C.E., F. I.MECH. E. H. F. MERRINGTON, F. I.C.E., M. I.W. E. JD 28th January, 1970. OUR REF. ASSOCIATE: R. DOWNHAM, M.R.I.N.A., M.I.MAR.E. JAN 3 0 1970 S.C. Hardy Esq., Chief, Transportation Division 1, Projects Dept. Correspondence International Bank for Reconstruction & not required Development, 1818H Street, N.W., DATE ____ Washington, D.C. U.S.A. Dear Sir, As requested in your cable dated 27th January, we enclose Mr. Neuner's notes on his meeting in this office on 23rd January. which we have been holding for Mr. Mahoney. Yours faithfully, for RENIEL, PALMER & TRITTON Twows (Secretary to Mr. Holloway)

Transcript for Mr. Neumer's notes to Mr. Mahoney on, hondon visit with Rendel Palmer Tritton about the proposed second Hogling project in India

Friday evening Dear George Ispoke to Monyson at RPT's office. Also present were J. G. Ody (RPT's diet economist), M. Mill Richards (sulling), and Messus Holloway, Frankel and Ainscow (figuret of the time). Mirrighen did wort of the talking and it secome clear as he detailed his Tindings hat here would not be much resemblance between he calculations widered by Blotic and any Cost benefit anolypis Cronoge and Kingson are lokely to make. The Holloway was quite concerned him his kingler be offensive to the Indians but I don't hinh the problem is hut serious and hongson agrees, We are Simply mohing our own calculations, without housing to make inidious aruparisons, The Hollowry and M. Ody were Concomed over the disposition of Grounge and would him to Come buch to London for Consultations. I made no commetwents and told tum to take the water up with you. I don't believe we can respond on this mitt after we've been

Autotin and hot he did not used to make a firm statement about he retes of return of the vacious project elements with leanage had completed his calculations. With host covered he felt hast form elements were not likely to prove up powerbly, namely, he tryone Border-Salam and balem- Coimbaton Statelles in Tamil Nadu and Kanpur-Allahebad and Allahabad-Varanesi in U.P. The basic problem seems to be that these are technically one lane roads but functionally try home to lanes either because some parement has been added to the original convaguacy or the shoulders have been

proved & accommodate Tholones of hopic Buka takes to position that here wads are one lone become they subbase under the added portions is not up to standard. Thompson, however, did not see any sign of pavement pilline as the added strips of povement and felt the reads could be used for some time for the apy helpe in heir present worditini. These wads wild, here five, have to be justified on another basis Not nothing them into two laws. (Munipour feels, incidentally, that any real cases of diribling a snigle lone road would be touly easy to pure up.) what other bases are here? Importment in greating costs due to better quality of parement - Thompson feels that at the low speeds prevailing to extra cost due to a slightly uneven surfaces would be very small, Secondly here is title growthing to shoightening toght across or hilly sections because to alignment of most project roads is quite shaifly and without money ups and downs. The only substantial sawngs remaining Jun these schemes wild Aurefore result Jun to by passes which were playinged for several places along eatiproject.
How world have be guantified? Ideally what should be done until de to mohe actual test dives Muough each village to measure the amount of delay, Through son believes some indicature of his could be obtained taily quickly (2 months) by donny some struple during in each palace. (This raised the quisting of how much of a hung are we in do westell nout to find the cudit in his FY; I was wholly non committed as his point) Alternatively (really not very satisfecting according to Muniper and I tend to agree) one and use some variation of the speed / volume couves used by

was or to shoulder have b

In Minds Ry of nousput for their calculations Mongson would fuit adjust the curres to reflect the situation as he and Canage interpret it. The Time cures are:

C Thorupen's adjusted Versions of BoC B A A A A = single lone Volume.

B - double lane usin prived

C. double laws in proved.

A is what he Hinsty wents to use to these roads and which Munipuson says is magginguisk become then the conseity is really the lave. Instead to north proposed really results in a shift from B to C. A small port of the upho speed from B to C is represented by improvements he alignment, shoulders, & surface but most is accounted for by climnistion of villages Murupon Miles cures Bo C hust be made much Hathe, hot is, the reduction in speed with higher haffic volumes is much more gradual how shown by the Indians. It that is dive and if the much smaller growth rate of hothe (say /2) which Manyson believes should makeralize, is applied to fru subposeds will probably have raks of return (final Indement will defend as colculations. Hence his prodyment that the form projects are libely not to prove up. Thompson made some interesting comments about the publem of by posses. Great cove would have to be taken

hat his senetits are not dissopated by he village following The wad and sniggly receeding the original condo tion. rences get broken down Squotters on Pho I right of noy are hard to receive because he police hand act askund sometimes even seem cheeper to their down the obstructing en in habitable ditches. The problem of gathing the right of cay are probably
Also rysting by passes are propunted full of profesorts and other stop aring tropic.

Hoarly in surranne foll. I homepoon has felt that the same fits of a by pass nuglet not be very great of are were to take into account realistically, that The injurement would be short lived. Thompson hod The hupressin hicidentelly That right of may algarithm unted not be a great The remainder of the projects had a variety of problems In euromic anolysis but Munipour felt hat her justification and hem and never fourably (He noted in collectally that one of the problems with Blická's anolysis was he feet host he had not seen any of the pigets obereas thompson had seen a good many of them and Carnope the rest. Only achel rigrection indirected othere to real benefits could like be). To tobe hem are by me (the names are littly misspelled) 1. Real single love roads while are to be doubted and Mu who width: Bombay - Duhloa - crullane, were a also a two lone
Bombay son to toward Belgaum Collich he did not see) B. . pur - Agra, 2. Kanpur Kalpi complex. - at each end of this perget is a major bridge and the project in effect evorst of Sposting in an Swoop In the Towns and An congesting

Indges. he commie problems are that the Vishing Kalpi bridge is pontoon which deening 8 wonths regaines unloading to tuch and ferrying The load in small Goats and during & months of the year (high water) repaires a keing which often incolves a half day noit. The neavest bridges over the Jamuna are about or mites an eiten Side and hence here may be a lot of generated a vocal duned hother for his unprovement of present the hatter is low, for obnous reasons). However, queested hoffic would require estimations as to directions Jun existing bridges and his would mean O/D ni franchis over lorge over - sumething juste deficult to get. At he Kanpen and here is no information on me lovel hoppi possing of wer to cooking bridge, so it is was hard to say how much deg decrepes him of it will result once The new bridge which lies as he byposs as Mished. In other words, near is a build amount of data avoilable on to trathe (ie the him hope) 3. Chas - Clikenda Complex Findious had ased the data of the the between the hours for the objects to the hours for the objects. And is hist shown by pass. Bana NH #2 Chikunda W. Burgal NH 3/2 Coal frelds & To Tamshed pur, Bokaro

The two sections (NH 32 + NH2) we each about 30 miles. The principal moblems on NH 32 are Me bidge over Danidor > should of be strengthened at 32 lohs or rebuilt at 80. Eng. Jures now lakha town to latter and horagion to impressed by his understanding of comonnie tisce. The Godge varioes much heavy nothir June the seel A section Morigh to Thoria coal Welds to hust 6 milesilong which is very bod in every request-Congestin, alignment, and thin. The wast stimed be ampletely done over but due to collorio colliuses every where his is very defruit. Clist aspects. of mines is very stict a ellowing roads wer me by pass around Danbad is the long way found - again because of some coal field on to SE side of two town, Also have there is an absence of O/D in boundin to show how much hoeffic would in fact go over by pass. The puncipal problem on NH Z is the Chikunda by oss. There is congestion in the w Bengal side of the border and the bypass (including a very Godge) could Columnant it all. Knowers, the W Bengal porting of it is not in one project even hough economically the whole king is indrisible.

4. Patha - Baranai - his is the only section where horyson saw a collapsed road, he could not obtain any indication from the engineers as to the course. It it is assumed not the rest of this stretch well soon suffer a Similar fate, a jurgest and werhazes be

justified thouse, the road has a very low volume There are some by passes which have not been wicheded in project. Nost of the road is single love but olume may be so low as to mobile difficult the ordinarily applicable retirale for double laurip. On the other hand the cost is fairly low and hence the peget may stll pure up. Basicelly, Mongson Minhs by josses are the most rewording type of improvement. Hence even on sections which are otherwise low purity, there neight be several large hypasses which could hemaloes from projects: eg the coty of Salem and the bridge + town anylex near Bavani? in the Solom - Cointatore Rd. Horoever, There remain some problem with by posses as with other in provements in holesting the beautits. There is no dota in the while of the white is soved. Vehicle greating costs data are brighed; Cravage has done sum avrla in adjusting and discreting the Indian paires. The congesting value of bullock carts is his horizon's even higher Mon shown by the Indian - hid use 10 pca (Con't we make his questin port of our test program with CRR1?). The putter general points. Thorupson beloever hat the growth rates assumed by Ohoka are too high; certainly When applied beyond 10 years beautily, transge hos not gothered much data on the economic charactusties of the regions to be served, on the vehicle populations, toxes it in he piget states. It might be possible are could get him to do This since he could doubtless do it Justly with his puriliarity with the terrain. I'm of on my glove & done in hoste. All my best and see you not week Tiller

Form No. 27 (6-69)INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT CORPORATION

OUTGOING WIRE

TO: INTBAFRAD NEW DELHI

JANUARY 28, 1970 DATE:

CLASS OF

SERVICE: L.T.

COUNTRY: (INDIA)

TEXT:

Cable No.: 36 FOR GIIMARTIN

> MAHMOUD ABDELATY FROM THIS DIVISION WILL ARRIVE IN DELHI FEBRUARY FIRST TO BE AVAILABLE DURING VOTAW VISIT AND IN CONNECTION WITH SECOND HIGHWAY COMMA PORTS COMMA RAILWAYS AND ICICI REGARDS

> > KIRK INTBAFRAD

NOT TO BE TRANSMITTED

AUTHORIZED BY:

SIGNATURE

A. F. Kirk NAME

DEPT. South Asia

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE) MACHED

For Use By Communications Section

ORIGINAL (File Copy) (IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

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Checked for Dispatch:

JAMBARY 28, 1970

L.T.

w 15 PH 1970

RECEIVED

A. F. Kirk

GENERAL FILES COMMUNICATIONS

JAN 28 3 28 PM 1970

DISPATCHED

Form No. 27 (6-69) INTERNATIONAL DEVELOPMENT

ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

RENDELS LONDON DATE:

JANUARY 27, 1970

CLASS OF

SERVICE: LT

COUNTRY:

U.K.

148

TEXT: Cable No.:

FOR HOLLOWAY

ALPHA MAHONEY WILL VISIT

MAHONEY WILL VISIT YOUR OFFICE AFTERNOON JANUARY 30 TO COLLECT

AVAILABLE DRAFT REPORT FOR ETHIOPIA ROAD STUDY

BETA RE INDIA ROAD PROJECT URLET JANUARY 20 AND THOMSON'S PRELIMINARY

REPORT RECEIVED AND UNDER REVIEW STOP MAHONEY WILL DISCUSS

TIMING FOR KARCHER TO VISIT YOUR OFFICE ABOUT FEBRUARY 13 OR 14

TO DISCUSS ECONOMIC EVALUATION WITH THOMBON AND CRANAGE STOP

PLEASE MAIL SOONEST EXPRESS DELIVERY NEUNER'S NOTES ON HIS

DISCUSSIONS YOUR OFFICE JANUARY 23

HARDY

Re: INDIA - Proposed Secondnot to BE TRANSMITTED

Highway Project.

AUTHORIZED BY:

S. C. Hardy

NAME DEPT.

Transportation Project

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROV

SIGNATURE_

Schard

MAN GMahoney/isc

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Karcher

Mr. Dickerson

For Use By Communications Section

Checked for Dispatch:

REMDERCS

JAMUARY 27, 1970

U.A.

FOR HOLLOWAY

HE INDIA ROAD PROJECT URLET JANUARY 20 AND THOMBON'S PRELIMINARY

REPORT RECEIVED AND UNDER REVIEW STOV INHONEX WILL DISCUSS

TIMING FOR MARCHER TO VISIT YOUR OFFICE ABOUT FEBRUARY 13 OR 14

TO DISCUSS ECONOMIC EVALUATION WITH THEMSON AND CAMBAGE STOP

PLEASE MAIL SOOMEST EMPRESS DELIVERY MEDMER'S NOTES ON HIS

Re: INDIA - Proposed Secondnor to as navasmitted

COMMUNICATIONS

Transportation Projects JAN 27

DECENT CHED

Mr. Dickerson ce: Mr. Karcher

DET LACEOUPER

The M. Abd Wh Aty

As Ta Mill

TOTAL TOTAL PART OF THE PARTY

1. You will arrive in India on or about February L for a stay of about three weeks.

- 2. In Fidicity on will be aveilable to take part, at Fr. Votaris request, in his general discussions with efficients of the Government of India. You should also appears to next with the Central Reads Ming in connection with the proposed Sucand Mighany Project, with the Major Ports officients in communion with the Marangue Port Project and further port projects. You should slow join Masons. Charood and Spancer in Bolhi on February 17 and 18 on their places, to review the Penth Callucy Cradit.
- 3. In Dembey you will accompany the Bank's pleasen to appraise the proposed Sighth Lean to IUICY.
- h. During your stay in India you should keep in touch with the New Delhi Office.

Copy for: New Dolhi Office

mand Aty/ss

FORM No. 75 (2-60)

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE

INTERNATIONAL DEVELOPMENT ASSOCIATION

	ROUTING SLIP	Jan 27 70
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	To Handle	Note and File
	Appropriate Disposition	Note and Return
	Appropriate Disposition Approval	Note and Return Prepare Reply
_	Appropriate Disposition	Note and Return
	Appropriate Disposition Approval	Note and Return Prepare Reply
	Appropriate Disposition Approval Comment Full Report	Note and Return Prepare Reply Per Our Conversation Recommendation
	Appropriate Disposition Approval Comment	Note and Return Prepare Reply Per Our Conversation

From

3. Mohorey

7424

VIN Highways

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO:

Messrs. Manoney, Karcher and Neuner

DATE: January 26, 1970

FROM:

S. C. Hardy

SUBJECT:

INDIA - Preappraisal of Second Highway Project

Terms of Reference (Supersedes Terms of Reference

dated Jan. 21, 1970)

1. From about Feb. 15 to 20, 1970, you will visit New Delhi, India to review the status of preparation for the subject project; Mr. Mahoney will be head of mission. Specifically,

- a) Mr. Karcher will stop in London (about February 13) on the way to India for meetings with the Bank's consultant (Rendel, Palmer and Tritton), concerning their recent findings on project preparation, and in particular, on the economic aspects.
- b) While in India:
 - (i) Messrs. Karcher and Neuner will assess the progress in preparation of economic justification, including questions of transport policy and coordination;
 - (ii) Mr. Mahoney will check on progress of engineering preparation with particular reference to the items mentioned in my January 23, 1970, letter to Mr. Sinha; and
 - (iii) jointly you will assess the needs for additional consultant's services considering the budget limitation of US\$80,000.
- 2. On your return to Washington, you will prepare a Back-to-Office Report to be followed by a Full Report on your findings including the consultant's general performance and recommendations for Association actions and their timing.

GMahoney/isc Bank/IDA

Cl. with and cc: Mr. Kirk (3)

cc: Messrs. Chadenet, Baum, Knox, Geolot, Abd.El Aty, A. T. Davis (2), Finne, Hogg, Dickerson, New Delhi Office Form No. 27 INTERNATIONAL DEVELOPMENT

ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

DIRECTOR GENERAL

ROADIND

NEW DELHI

DATE:

JANUARY 23, 1970

CLASS OF

SERVICE:

LT

COUNTRY:

INDIA

TEXT: Cable No.:

> REFERENCE INDIA ROAD PROJECT AND YOUR CABLE PL-10 (147)/69 JANUARY 23 1970 WE ARE POSTPONING VISIT OUR THREE MAN MISSION UNTIL ABOUT FEBRUARY 16 TO 20 STOP HOWEVER NEUNER WILL ARRIVE AS SCHEDULED ON JANUARY 27 FOR GENERAL DISCUSSIONS ECONOMIC AND TRANSPORT MATTERS STOP WILL CABLE YOU EXACT SCHEDULES MAHONEY AND KARCHER NEXT WEEK REGARDS

> > HARDY INTBAFRAD

NOT TO BE TRANSMITTED

AUTHORIZED BY: INDIA SECOND HWY. PROJECT.

NAME

S. C. Hardy

DEPT.

Transportation Projects

SIGNATURE -

(SIGNATURE OF INDIVIDUAL AUTHORIZED

GMahoney/gsg

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Kirk and Dickerson

For Use By Communications Section,

Checked for Dispatch:

Form) No. 27 (6-69) INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMEN

INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: DIRECTOR OSMERAL ROADIND

DATE

JANUARY 23, 1970

CLASS OF

RVICE IN

COUNTRY

IMDIA

REFERENCE INDIA ROAD PROJECT AND TOUR CABLE PL-10 (15 (147)/69
JANUARY 23 1970 WE ARE POSTPONING VISIT OUR THREE MAN MISSION UNTIL
ABOUT FWRHUARY 16 TO 20 STOP HOWEVER NEUMER WILL ARRIVE AS SCHEDULED
ON JANUARY 27 FOR GENERAL DISCUSSIONS ECONOMIC AND TRANSPORT MATTERS
STOP WILL CABLE YOU EXACT SCHEDULES MAHONEY AND KARCHER NEXT WEEK

HARDY

ACT TO HE TOALSEASITTED

AUTHORIZED BY INDIA SOCIALD HAVY, PROJECT

1970 JAN 23 PM 6: 42

REGARDS

Transportation Projects

Citahoney/gag

S. C. Hardy

on: Masswa. Wak and Di

cc: Messrs. Kirk and Dickerson

DRIGINAL (File Copy)

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Checked for Usualcte

ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

NEUNER

In hotelcer OBEROI INTERCONTINENTAL

DATE:

JANUARY 23, 1970

NEW DELHI

CLASS OF

SERVICE:

LT

COUNTRY:

Cable No.:

INDIA

TFXT:

ONE

RE INDIA SECOND HIGHWAY PROJECT MISSION NOW POSTPONED UNTIL ABOUT

FEBRUARY 16 TO 20 DUE ABSENCE OF DIRECTOR GENERAL SINHA FROM NEW DELHI STOP YOU SHOULD COMPLETE PRESENT VISIT IN INDIA IN ACCORDANCE WITH TERMS OF REFERENCE AND ON DEPARTURE MAIL BRIEF FIELD REPORT ON DISCUSSIONS LONDON AND FINDINGS INDIA STOP YOU SHOULD PLAN ASSIST KARCHER DURING

WEEK FEBRUARY 16 STOP WILL CABLE YOU EXACT KARCHER MAHONEY SCHEDULES NEXT

WEEK REGARDS

HARDY

NOT TO BE TRANSMITTED

AUTHORIZED BY: INDIA SOCOND HUY. PROJECT.

NAME

S.C. Hardy

DEPT.

Transportation Projects

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPRO

GMahoney/gsg

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Kirk, Dickerson

For Use By Communications Section

Checked for Dispatch:

JAMUARY 23, 1970

OBEROI INTERCONTINUEAL

RE INDIA SECOND HICHWAY PROJECT WISSION NOW POSTFONED UNTIL ABOUT FEBRUARY 16 TO 20 DUE ABSENCE OF DIRECTOR GENERAL SINHA FROM NEW DELHI STOP YOU SHOULD CONFLETE R PRESENT VISIT IN INDIA IN ACCORDANCE WITH TERMS OF REFERENCE AND ON DEPARTURE MAIL BRISE FIELD REPORT ON DISCUSSIONS IDNIDON AND FINDINGS INDIA STOP YOU SHOULD PLAN ASSIST KARCHER DURING WEEK FEBRUARY L6 STOP WILL CABLE YOU EXACT KARCHER MAHOMEY SCHEDULES NEXT

YERAH

co: Messrs. Mirk, Dickerson

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: HOLLOWAY

ASSOCIATION

ABBOTSBURY GARDEN CLOSE GIVONS GROVE LEATHERHEAD DATE: JANUARY 23, 1970

CLASS OF

SERVICE: LT

COUNTRY:

SURREY

TEXT: Cable No.:

ALPHA DUE TO ABSENCE FROM NEW DELHI NEXT WEEK OF ROADS DIRECTOR GENERAL
WE ARE POSTPONING VISIT MAHONEY AND KARCHER TO INDIA UNTIL ABOUT
FEBRUARY 16 TO 20 STOP IF APPROPRIATE KARCHER COULD VISIT YOUR
OFFICE ABOUT FEBRUARY 15 TO MEET THOMPSON AND CRANAGE STOP WILL
ADVISE EXACT SCHEDULES SOONEST STOP

BETA REURCAB JANUARY 21 ETHIOPIA MAHONEY WILL VISIT YOUR OFFICE ENROUTE

TO ETHIOPIA ABOUT JANUARY 30 TO PICK UP AVAILABLE REPORT DRAFT STOP

HE COULD ALSO VISIT YOU ON RETURN FEBRUARY 20 IF DESIRABLE REGARDS

HARDY

INTBAFRAD

And I Zand Highway Protector to BE TRANSMITTED

AUTHORIZED BY:

NAME S.C. Hardy

DEPT. Transportation Projects

HORIZED TO APPROVE)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Kirk, Karcher, Dickerson, Mahoney

SIGNATURE .

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

GMAHONEY/sw

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

For Use By Communications Section

Checked for Dispatch:

ENGI YND

JANUARY 23, 1970

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HE COULD ALSO TIME YOU ON BETHIN PREMIARY 20 IF DESIRABLE REDARDS TO REPLOFIA ABOUT JANUARY 30 TO PICK UP AVAILABLE REPORT DRAFT STOP FOURCAS JANUARY 21 ETHICPIA MARDINEY WILL VISIT YOUR OFFICE ERROUTE

Que Highway Properator to BE TRANSMITTED

S.C. Hardy

Transportet 1040 tipl 603 abil 6: 173

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Mahoney Messra, Kirk, Karcher, Dickerson,

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR INTERNATIONAL FINANCE RECONSTRUCTION AND DEVELOPMENT CORPORATION

CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

JANUARY 23, 1970

1550

ROUTING

LOG NO.:

WUI/23

TO:

HARDY INTBAFRAD

FROM:

NEW DELHI

COPY: DECODED BY:

ACTION COPY:

INFORMATION

TRANSPORTATION PROJECTS

IN - Highways

TEXT:

PL-10 (147)/69 YOUR CABLE REGARDING THREE-MAN MISSION VISITING INDIA TO REVIEW STATUS PROJECT PREPARATION. S N SINHA DIRECTOR GENERAL (ROAD DEVELOPMENT) OUT OF DELHI IN CONNECTION WITH TOUR OF PRIME MINISTER. FURTHER ATTENDING SEMINAR FROM JANUARY THIRTIETH TO FEBRUARY SECOND AT MADRAS CONVENED BY THE INDIAN NATIONAL GROUP OF INTERNATIONAL ASSOCIATION FOR BRIDGE AND STRUCTURAL ENGINEERING OF WHICH HE IS CHAIRMAN. REQUEST POSTPONE MISSION VISIT BEYOND FEBRUARY THIRD

ROADIND NEWDELHI

answer 23, 1970

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JAN 23 1 24 PM 182/ CONTRONICATION Form No. 27 (6-69)

INTERNATIONAL DEVELOPMENT **ASSOCIATION**

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO:

RENDELS

LONDON S.W.1

DATE:

JANUARY 23, 1970

CLASS OF

LT SERVICE:

COUNTRY:

ENGLAND

TEXT:

Cable No.:

FRANKEL URCAB JANUARY 23 STOP MISSION NOT SCHEDULED FOR STOPOVER

LONDON HOWEVER FATEEN WILL TELEPHONE YOU BEFORE 10 A.M. MONDAY JANUARY 26

PRIOR TO TAKING CONNECTING FLIGHT

CARMICHAEL INTBAFRAD

NOT TO BE TRANSMITTED

AUTHORIZED BY:

A. J. Carmichael NAME

Chief, Ports and Pipelines Division

Transportation Projects Department

AFateen/Time of Individual Authorized to Approve)

For Use By Communications Section

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

Checked for Dispatch:

CLEARANCES AND COPY DISTRIBUTION:

form No. 27 (6-69) INTERNATIONAL DEVELOPM INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELORMENT

INTERNATIONAL IMANCE

OUTGOING WIRE

TO: IMMORIS LOMBON S.W.1

DATE JANUARY 23, 1970

CLASS OF

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TEXT

Cable No

FRANKEL URCAB JANUARY 23 STOP MISSION NOT SCHEDULED FOR STOPOVER

LONDON HOWEVER TATEEN WILL TELEPHONE YOU BEFORE LO A.M. MONDAY JAHOARY 26

PRIOR TO TAKING COMMECTING FLIGHT JANUARY 26

O AHMI CHARLA DATE APPLANT

MOT TO BE TRANSMITTED

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ame A. J. Carrel cheel

Chief, Perus and Fight 73 bh 6: 13

AFECGER/THE OF INDIVIDUAL AU RECEIVED O APPROVE

For the 8y Communications Section

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SOUTHERN POR PROBLEMS CHARLES FOR MATHEMATICS FORCES

Checked for Dispare

O Jes 2nd January 22, 1970 Mr. S.N. Sinha Director General, Roads, Central Roads Wing. Ministry of Transport & Shipping, Parliament Street, New Delhi, India Dear Mr. Sinha: India: Proposed Second Highway Project It was a pleasure to meet youronce again on my recent trip to Bangkok and to discuss with you various aspects of the proposed Indian second highway project. As you are aware, we had tentatively scheduled our appraisal of the project for January 1970, but in view of the major policy issues still outstanding between the Government of India and the Bank, the departure of the Bank Appraisal team has been postponed. We are now hoping that appraisal can take place about March of this year, but discussions with your Government over policy matters may still further delay this timing. However, as indicated in our cables to you of January 12 and 19, 1970, we are sending a Bank reconnaisance mission to India at the end of this month to review progress in project preparation and, in particular, economic evaluation. Timing and Expected Status Although in some ways, the delay in appraisal is unfortunate. 2. we consider that this additional two months will provide an opportunity to refine and develop the preparation work of the project and to proceed further with the detailed engineering. In pursuance of this, we outline below the preparation status which we would expect at the time of appraisal in March and by about July/August 1970, when our appraisal report would need to be finalized as a basis for credit negotiations. At appraisal we would expect that: a) i) all major engineering problems have been resolved, and sufficient detailed engineering, including draft drawings completed, so that estimates of quantities accurate to plus or mimus 20% are available; (where alternative alignments are still to be considered appropriate quantities and cost estimates should be available); Your cable dated January 23, 1970 just received. As indicated in

our cable of the same date, the mission is now postponed until about February 16 to 20, 1970.

- ii) estimated costs based on the quantities in i) have been calculated using current average unit rates. Contingency allowances to cover variations in quantities and price escalation should be included in cost summaries;
- iii) draft specifications and conditions of contract have been prepared; and
- iv) detailed and reliable traffic data and projections should be available together with data necessary for economic evaluation.
- b) We would further expect that by mid-July:
 - detailed engineering, including tender drawings, whould be essentially complete;
 - ii) draft final copies of specification and conditions of contract should also be complete; and
 - iii) final quantities and cost estimates to an accuracy of about 10% available.
- We understand that project preparation by the States is generally proceeding satisfactorily, but we would like you to consider the following points, which we feel need some attention:
- Project Size. For the 12 elements at present under consideration, the latest figures which we have (August, 1969) give the estimated construction cost as Rs 610 million (about US\$ 80 million equivalent). As indicated during our preappraisal mission in August, 1969 we expect the number of project elements to be reduced to around eight in number; this was confirmed by Mr. Dickerson in December, 1969. You have indicated that you have sufficient resources for detailed engineering to proceed on all project elements and that final selection might take place at appraisal. We wish to confirm, however, that we consider this final selection of projects should take place preferably before this time, to allow your resources to be concentrated on the residual elements.
- Land Acquisition. The dates given to the pre-appraisal mission in August 1969 for completion of land acquisition vary from January to June 1971. As we are concerned that land acquisition procedure might hold up project execution, we have asked Dr. I.G. Patel in our letter of November 17, 1969 to send us information concerning the progress of this activity. We would now appreciate your supplying to our consultants, monthly progress percentages for the preparation of land acquisition plans together with some indication of the progress of the necessary formalities. As land acquisition is a local currency expenditure, our missions have been given to understand that sanction to incur acquisition expenditure can be obtained without difficulty. We would like to know when you may receive this sanction.

c) Engineering

- i) We understand that the alignment of several bypasses has not yet been finalized and we feel, therefore, that a close examination of these areas by our consultants would be desirable. We have instructed them accordingly.
- ii) We are concerned that certain mountainous (ghat) sections of road within the Maharashtra project elements are not being considered for improvement. We appreciate that the engineering problems may be great and the resulting construction costs high, but we do consider that preliminary engineering for possible alternative improvement should be carried out to obtain cost estimates for an economic evaluation of the alternatives. It may be that without some improvement to these ghat sections, improvement of the remainder of the road may not be economically justified and hence these elements would consequently be deleted from the project.
- iii) We assume that all center lines are now being set out and referenced with permanent monuments but your assurance on this point would be appreciated.
- iv) We have in the past, expressed some concern over the use of uncrushed brick as a base or sub-base material. We would be interested to learn if any research has been carried out by the CRRI on the use of brick in various forms (crushed and stabilized, on edge, different laying patterns, etc.) and if comparisons (both in performance and economy) have been made with other available base and sub-base materials.
- d) Cost Estimates. We have given an indication in paragraph 2 of the accuracy of the estimates we require. However, as the only estimates we have at present were those given to our preappraisal mission, in August 1969 (and prepared earlier), we would appreciate early warning of any likely major change in the estimate of any project element.
- e) Bullock Carts. As these feature not only in present traffic figures but also in traffic forecasts and capacity calculations, what special arrangements (if any) are you proposing to accommodate bullock cart traffic on the carriageways or the shoulders of the project roads?
- Road Contracting. As our missions have pointed out, there are a number of disadvantages to the system currently practiced in India whereby a large number of small independent contractors, each carrying out one or two separate specialized operations, are engaged to carry out road works. We prefer that, when the contract for a section of road goes to tender, all works necessary to complete the construction of the road within this section be included in the one contract. A contractor can then tender alone for this section, contact or he can form a joint venture with other contractors specializing in certain aspects of roadworks. Any joint venture formed by contractors would however, be considered a single body both for tendering and for the construction of the works.

g) Size of Contracts. We appreciate that it may not be feasible for local contractors to tender for an entire project element (average value about Rs 50 million) and we would favor breaking contracts down into wactions (defined in f above) with a value of say about Rs 7-8 million. Contractors (or joint ventures) could tender for a single section or any combination of sections. thereof. We would, like therefore, a list of individual Indian road contractors whom you feel could participate in works of this nature with an indication of their annual capacity.

Background Information.

- 4. As general background to an appraisal of a project we always require fairly detailed information on State and National highway systems. Thanks to your cooperation, much of this material has already been supplied to the Bank. We find, however, that there is some additional information which we will need from the project States and I have attached copies of a short questionnaire for distribution. The information should preferably be available on the arrival of the appraisal mission.
- 5. I would like to take this opportunity of thanking you and your staff both for the cooperation which Mr. Bergan received while making this review and also for the cooperation which our team of experts are now receiving, and would be grateful if you could pass on our appreciation to the State Chief Engineers.

With best wishes,

S.C. Hardy Chief, Highway Division I Transportation Projects Department

Enel.

MWDickerson/jp

Cleared and cc: Mr. Kirk

cc: Mesars. Vatow, Abd. El Aty, Karcher

Mahoney, Neuner,

ec: Mr. Gilmartin (New Delhi Office)

Mr. Pilditch (Team leader, Bank Appraisal Assistance Team)

SP JUS ANNEX 1

INDIA: PROPOSED SECOND HIGHWAY PROJECT

We require the following additional data (for each element) from each project State as a preliminary to appraisal of the proposed Second Highway Project.

The Highway System

1.1 Give lengths of road under the following categories (in kilometers) in the project State:

Surfaced (include only bitumen or concrete)

Unsurfaced

2 lane 1 lane ' · 2 lane 1 lane

National Highways State Highways Major District Roads Other District Roads Village Roads Total

Maintenance

- 2. Give average annual maintenance costs for highways of various categories and pavement type. These costs to include administration, equipment depreciation, servicing and operating costs, materials, labor and supervision. (Note: the standard rate given in previous reviews does not include all the above costs we now require them for appraisal).
- 3. Give the present annual maintenance cost of each road proposed for improvements (to include items noted in question 2) and also the estimated annual maintenance cost after improvement. Give a short descriptive paragraph supporting the difference in these costs.

Construction Costs

4. State recent contract construction costs for typical highways and bridges. Give costs in form of bill of quantities for a specified length of road with appropriate unit prices.

The Transport System

- 5. What national import restrictions are there on motor vehicles?
- 6. What regulations are in force limiting vehicle weights -- (total, axle and wheel loadings) and dimensions? How are there regulations enforced?
- 7. Tabulate the vehicle registrations annually within the project States for the last the years, if possible, by the following categories:

- a) Cars
- b) Light trucks (say, less than 3-ton total laden weight, but define)
- c) Heavy trucks (define)
- d) Passenger service vehicles
- e) Other vehicles (define)
- 8. Tabulate the vehicle fuel consumption annually within the State for the last ten years for:
 - a) gasoline, and
 - b) diesel fuel

(the oil companies should be of assistance in obtaining this information).

- 9. Give any available vehicle operating costs by vehicle category and road type (preferably in paved, gravel and earth categories) and state the basis for computation.
- 10. Show, on a map of the State, the location of ochtroi posts with the average annual revenue obtained from each. Also show on this map the location of checkposts.
- 11. What are the States' plans with regard to ochtroi posts?
- 12. Has the State any plans for the reduction and consolidation of checkposts?
- 13. Give a brief description of the truck licensing system within the State.
- 14. Give the number of truck licenses issued by type over the past five years.
- 15. What are the present arrangements for inter-State licensing with adjoining States?

Economic Justification of Project (separately for each project element).

- 16. What is the main purpose of the project (e.g. trunk route, only access to port, tourism, agricultural development, etc.)?
- 17. How does the project fit into the planned national highway program and what priority has it been given therein? On what criteria was the priority based?
- 18. What is the size, physical and economic geography of the influence area of each project road, and what are the industrial and other trafficgenerating activities within these areas?
- 19. What are the main population centers, their size, projections, and growth rates as compared to national average within the influence area of the project roads?
- 20. What are the main benefits expected to accrue and the manner in which they will further the government's economic objectives for development (e.g. industrial location, income redistribution, etc.)?

Of TN Highway January 22, 1970 Rendel, Palmer & Tritton 125 Victoria Street Mestminister London S.W. 1 England Attention: B.G.R. Holloway, Esq. Dear Sirs: Re: INDIA: Proposed Second Highway Project Appraisal Assistance Thank you for your Interim Report of December 23, 1969 on the proposed second highway project status and on the progress of your team's assignment. As you are now aware, major policy issues are delaying the progress of this project and we wish to confirm that appraisal is now tentatively scheduled for about March 1970 and not in January 1970 as previously planned. You should reschedule the work of your team to synchronize with this revised timing and, in this connection we refer you to the enclosed copy of a letter which we have sent to the CRW. Project Status Your report contains many valuable observations, some of which we refer to later in this letter, but we find some difficulty in judging the overall present status of the twelve elements tentatively included in the proposed project and the time schedule planned for detailed enginearing. We appreciate, that with the number of project elements involved and their scattered location, it would have been difficult to obtain an accurate estimate of status at this stage. However, to assist in the Bank's evaluation of preparation progress we would now like you to include in your future reports, progress percentages (for each project element) under the following headings; a) progress of the preparation of final tender drawings; b) progress of land acquisition plan preparation and an indication of the commencement of acquisition formalities; c) refinement of preliminary engineering costs estimates; and d) progress in setting out the permanent center line. The above categories will be additional to those which you already include in your reports.

Interim Report

3. We have the following points to make on your Interim Report (page numbers in parenthesis) and would like your comments on these in your end of January progress report:

Local contractors and construction methods (page 3)

- After your visits to bridgeworks and labor intensive readworks under construction, we wish to know what major changes in present practice (engineering, supervision, contract procedure) you would recommend to ensure that similar works under the proposed project are executed soundly, on time and within the tendered sum. We expect this subject to be a continous discussion between the Bank, yourselves and Government and we would not expect detailed recommendations at this stage; your initial ideas on the subject will, however, be most useful.
- 3.2 We would like you to continue making contact with local Indian contractors and would be interested to learn their views on road contracting in general. We are particularly interested in their opinions on the following:
 - 3.2.1. The value of complete roadwarks which they could undertake in the following capacities:

.1 as the sole contractor;

- .2 as a member of a joint venture formed by a small group of contractors who would be held responsible for the works as a single body, or employing subcontractors for specialized activities (i.e. paving, precasting etc.).
- 342.2 labor versus equipment intensive method of working; 3.2.3 the availability of road combination equipment and/or credit facilities therefor:
- 3.2.4 the mobilization time they would require for different sizes of contract;
- 3.2.5 the use of one prime contractor carrying out the major portion of the work with sub-contractors carrying out the smaller specialized activities: and
- 3.2.6 problems of doministration and execution which they have experienced in the past.

Engineering (Pages 3-4)

- 3.3 You mention that the standard of highway location and design is low. Could you elaborate on this point indicating the suggestions which you have made to CHW to improve current practice and noting any suggestions which have not been accepted by CHW?
- 3.4 In your field reviews please pay particular attention to proposed town and village bypasses and advise and assist where possible with alignment location.
- 3.5 On what basis do you consider the proposed design of pavement base and surfacing to be inadequate and what suggestions have you made for design changes?
- 3.6 In connection with your comment on the lack of stability and

shear strength of a brick base or subbase course, you might indicate whether the Central Road Research Institute has conducted experiments on the use of brick in various forms (crushed and stabalized, on edge, different laying patterns, etc.) to compare its performance against other economical base and subbase materials.

- 3.7 You will note from our letter to CHW that we are pressing for the preparation of preliminary engineering and hence cost estimates for for the ghat sections of the Maharashtra project elements. Please keep us informed of the progress of this work.
- 3.8 In connection with the bridges, the preparation of plans for preliminary estimates is less advanced than we had understood. Is this likely to affect our appraisal requirements as indicated in our enclosed letter to CRW?

Economic Evaluation (Page 4)

5.9 Could you please indicate the source of the data that your team is using to revise and recalculate vehicle operating costs;

Bullock Carts (Page 4)

3.10 Could you please indicate if any consideration, such as hard shoulders on town and major village approaches, is being given to providing for bullock cart traffic on the proposed projects roads.

Cost Estimates (Page 4)

3.11 We have asked the CRW for early warning of any major changes in the project element cost estimates. Please include any such revisions in your progress reports.

Conditions of Contract (Page 5)

3.12 Would you please obtain the principal comments made by the States on the FIDIC document and indicate if it is likely to be either adopted or used as a guide in revising existing conditions. Although the Bank would have no objection to the use of the FIDIC document (with appropriate addenda and corrigenda) by the project States, we are not insisting on its adoption.

Indian Road Contractors (Page 6)

3.13 Would you please press the CRW for the list of read contractors mentioned in the final paragraph of your report togather with their estimated clapacity and send this to the Bank at the earliest opportunity.

Labor versus equipment intensive construction methods

4. I am enclosing for your information copies of my memorandum dated January 6, 1970 and of a letter dated January 12, 1970 from the ILO Regional Office, Asia, concerning a possible joint study by the Bank and ILO on labor-intensive versus equipment intensive technologies in developing countries, and in India in particular. Two may wish to bring this to the attention of Pilditch and your economists in India, so that

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gen

Mr. A. F. Kirk

S. C. Hardy

January 22, 1970

INDIA: Transport Policy

Jan 21,1970

The attached memorandum dated January 21, 1970 from Mr. Neumer lists the points on transport policy which we in Transportation Projects Department believe should be mentioned when our mission visits India next week in connection with the Second Highway Project.

You will recognize the main issues, as they have been discussed frequently with your Department over the past several years. We have attempted to make them more concrete and to adapt them better to the special circumstances of the agencies with whom we are dealing in this project. Will you have a look at the memorandum and let me know whether it raises any particular difficulties for you, so that I can communicate them to the mission by the middle of next week?

SCHardy: dfw

cc: Messrs. Geolot, Dickerson, Karcher, Mahoney, Hogg.

Attachment.

IN Highways snd IN Transp. gen

Mr. A. F. Kirk

January 22, 1970

S. C. Hardy

INDIA: Transport Policy

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SCHardy: dfw

cc: Messrs. Geolot, Dickerson, Karcher, Mahoney, Hogg.

Attachment.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT /- 14 gherry INTERNATIONAL DEVELOPMENT ASSOCIATION OFFICE MEMORANDUM TAXABLE OF

TO:

Messrs, Maroney, Karcher and Neumer

DATE: January 21, 1970

FROM:

C. Hardy

SUBJECT: INDIA - Preappraisal of Second Highway Project Terms of Reference

- 1. From about January 27 to 31, 1970, you will visit New Delhi, India to review the status of preparation for the subject project; Mr. Mahoney will be head of mission. Specifically,
 - a) You will stop in London on the way to India for meetings with the Bank's consultant (Rendel, Palmer, Tritton), concerning their recent findings on project preparation, and in particular, on the economic aspects.
 - b) While in India:
 - (i) Messrs. Karcher and Neuner will assess the progress in preparation of economic justification, including questions of transport policy and coordination;
 - (ii) Mr. Mahoney will check on progress of engineering preparation with particular reference to the items mentioned in my January 22, 1970, letter to Mr. Sinha; and
 - (iii) jointly you will assess the needs for additional consultant's services considering the budget limitation of US\$80,000.
- 2. On the basis of the foregoing, you will prepare a brief field report on your findings including the consultant's general performance and recommendations for Association actions and their timing.

GMahoney/isc Bank/IDA

Cl. with and cc: Mr. Kirk (3)

cc: Messrs. Chadenet, Baum, Knox, Geolot, Abd. El Aty, A.T. Davis (2), Finne, Hogg, Dickerson, New Delhi Office

January 21, 1970

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Mr. S.C. Hardy

T. Neumer

INDIA: Second Highway Project -Transport Policy

- l. You have asked for some ideas on how we might help India develop sound transport policy objectives in connection with the above project. I believe we have a definite opportunity here: The State Governments have shown remarkable cooperation in the preparatory work for this project as well as in some of the recent agricultural projects. Under these circumstances we can certainly insist on "conditions" insofar as they relate to the proper execution of the individual projects (see para. 2); however, broader objectives under the heading of "transport coordination" might best be handled in terms of "our long range interest in the overall transport system of India." (see para. 3). We would thus, be looking for opportunities to stimulate rapid growth of highway transportation and to permit our continued support for the sector. We would be pressing for innovations which could then spread beyond the confines of the particular State.
- 2. Below I have made a short outline of transport policy objectives which we might appropriately pursue for each of the four project States. The suggestions were made on the basis of material available to me here in Washington and take into account the special circumstances of each State as I know them. We should certainly discuss this matter with our consultants and incorporate their ideas in our final position. For all four States we should ask for:
- a) Action toward consolidation and reduction of check posts for trucks and cargo;
- b) Action toward consolidation of the collection of taxes on motor vehicles, passengers and goods in one agency;
- c) Establishment of Planning and Development cells in the Transport Departments; and
- d) Establishment or upgrading of PWD traffic engineering units to collect and record traffic data in accordance with our standard loan covenant on this subject.

For the individual States the following items are suggested:

- a. Bihar (i) This State is considering establishment of a separate highway department and we should support this effort;
 - (ii) Bihar's PWD has a number of circles for major construction work. The time may be ripe, therefore, for separating construction from maintenance entirely and setting up a Statewide maintenance organization.

b. Maharashtra

- (i) A report recommending abolition of octrois will shortly be published; we should support this and agree on a timetable for the implementation of the recommendations;
- (ii) The State Economics and Statistics Department is scheduled to undertake a major highway survey but there is some problem about funds; we should stand behind this effort with a small financial contribution for outside staff, if appropriate, to be included in the proposed project:
- (iii) At present the maximum posted load on many older bridges in India is so low as to impede the flow of modern truck traffic. Highway authorities are reluctant to raise the limit without careful engineering studies. A committee is undertaking such a survey of bridge capacities in Maharashtra. No should press for completion of this work, implementation of the recommendations in Maharashtra and formulation of the results, perhaps in collaboration with the Central Road Research Institute, to permit application to other States:
- (iv) We should ask for, and perhaps offer financial assistance for, a full-scale feasibility study of the proposed new Bombay-Poona road with help from outside consultants.

c. Tamil Nadu

- (i) In Tamil Nadu the same department handles both highways and rural roadworks; it is also the only state where highways have a separate organization within the Public Works Department. This state might, therefore, be an appropriate environment to develop a methodology and organization for a possible feeder-road program as an integral part of highway development;
- (ii) Tamil Nadu has expressed particular interest in "cost accounting" although they seem to have been more interested in control of overruns than in developing criteria for cost effectiveness. This may present an opportunity for a study by some State officials with the participation of a representative of India's Comptroller and Auditor General in developing cost criteria for highway construction and maintenance. We might provide expatriate assistance if requested by the State.

d. Uttar Pradesh

(i) The committee which has been studying cetroi abolition in U.P. is reportedly not going to report in favor of abolition. We should press for a restudy of the problem, possibly with outside assistance on the fiscal aspects of the problem;

- (11) U.P. already has a Planning Organization in its Chief Engineers' Office which is better established than in some other States, its capacity for economic evaluation is limited. As a pilot project, we should seek a strengthening of this organization, if necessary with outside help;
- (iii) A determination should be made of the number of licenses issued on a reciprocal basis (interstate operation) by U.P. and Bihar for commercial vehicles and an increase if this seems warranted. A similar effort would be made for Bihar.
- 3. Our transport policy objectives for the Second Highway Project vis-a-vis the Central Government might include the following:
 - a. A permanent unit in the Ministry of Transport to advise and assist traffic engineering (including transport economics) units in the States on such studies as origin and destination, average trip length and composition of load;
 - b. A review of methods of reporting highery and vehicle statistics;
 - c. A study by the Central Road Research Institute of labor and equipment intensive methods of construction and maintenance, and a study of the effects on vehicle operating costs of different road conditions;
 - d. A study by the Planning Commission of the basic commodity flow projections, which were prepared by various agencies of the Government, a comparison of methodologies and recommendations for improvements;
 - e. Technical assistance or similar support for the cooperative organization of State transport corrissioners; this point might be explored tentatively with the Transport Commissioner for Maharashtra (a 1968 SDI graduate) who is promoting a greatly increased program of interstate cooperation;
 - f. Gradual increase in the proportion of revenues from roaduser taxes presently allocated to the Road Development Fund;
 - g. It is assumed some action will have been taken by the Central Government with respect to taxes on road transport in connection with the proposed industrial imports credit; we should make sure now that this will be the case.
 - h. Ultimately, the completion of guidelines and basic data for the economic evaluation of transportation projects in India.

Cleared with and co: Mesers. Geolot, Hogg, Hardy, Karcher, Mahoney/Mickerson

oc: Mesers. Knox, Kirk

(2 hd)

Mr. M. R. Shroff

January 21, 1970

A. F. Kirk

INDIA - Proposed Second Highway Project

- 1. Further to our memorandum of November 13, 1969 the Association is sending a mission to review the status of work on project preparation in the light of the findings of the Association's consultants now in India.
- 2. The mission will consist of Messrs. Martin Karcher (France), George Mahoney (U.S.) and Tillman Neuner (U.S.). Messrs. Karcher and Neuner will arrive in New Delhi on January 27 at 1110 by AI-136 and Mr. Mahoney on January 28 at 0445 by BA-770.
- 3. The Director General of the Central Roads Wing has already been advised of the mission's arrival times.

MADd MA ty/amp

Cleared with and copy for: Mr. Neuner

cc: NDO

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME OF CABLE:

JANUARY 21, 1970

1455

ROUTING

LOG NO.:

RC 39 / 21

TO:

INTBAFRAD

FROM:

LONDON

ACTION COPY:

TRANSPORTATION PROJECTS

INFORMATION COPY:

DECODED BY:

TEXT:

57 FOR HARDY

REURCAB INDIAN HIGHWAY PROJECT TO HOLLOWAY REGRET ABROAD NEXT WEEK

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME

OF CABLE:

JANUARY 21, 1970

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ROUTING

LOG NO.:

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TO:

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FROM:

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TRANSPORTATION PROJECTS

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COPY: DECODED BY:

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TEXT:

55 FOR HARDY CHIEF TRANSPORTATION DIVISION (1

REURCAB INDIAN HIGHWAYS AGREE YOUR VIEWS REGARDING EXTENSION

OF REFERENCE. PARTICULARLY ACCEPT NEED FOR CRANAGE TO RETURN

LONDON FOR BOTH DEBRIEFING AND COMPLETION JOINT THOMPSON

CRANAGE PROJECT REPORT

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

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DATE AND TIME OF CABLE:

JANUARY 20, 1970

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45 FOR MARDY CHIEF TRANSPORTATION DIVISION I

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RENDEL PAIRER AND TRITTON

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INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE (2

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DATE AND TIME

OF CABLE:

JANUARY 20, 1970

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LONDON

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TEXT:

45 FOR HARDY CHIEF TRANSPORTATION DIVISION 1

REURCALL HOLLOWAY JAN 19 RECOMMAISSANCE TEAM MEETINGS AT THIS OFFICE

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AND HOUNSLOW FOR MAHONEY ANYTIME JANUARY TWENTYSIX. AINSCOW NOT

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NO SIGNAGRE; BEING SERVICED

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Where? RPT office 125, Victoria St Westmans Ger Law January 1970

RENDEL, PALMER & TRITTON.

CONSULTING & DESIGNING
CHARTERED ENGINEERS

CHARTERED ENGINEERS

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS

PARTNERS
H. SCRUTTON, F.I.C.E., F. I.STRUCT. E., M. INST. PET.
J. R. H. OTTER, F. G.S. H. F. I.G.E., ARALGO.
B. G. R. HOLLOWAY, F.I.C.E., F. I.STRUCT. E.
F. IRWIN-CHILDS. F.I.C.E.

F. IRWIN-CHILDS, F. I.C.E.
P. M. FRAENKEL, F. I.C.E., F. I.STRUCT. E.
P. A. COX, F. I.C.E.

J. C. MUNRO, F. I.C.E.
K. E. AINSCOW, F. I.C.E., M.I. STRUCT. E.
D. M. S. FAIRWEATHER, F. I. MECH.E., M. I. LOCO, E.

CONSULTANTS:

J. E. G. PALMER, F. I. C. E., F. AM. SOC. C. E.

T. T. LAMBE, F. I. C. E., F. I. MECH. E.

H. F. MERRINGTON, F. I. C. E., M. I. W. E.

ASSOCIATE:
R. DOWNHAM, M.R.I. N.A., M.I. MAR.E.

TELEPHONE: 01-834 8494

pleatelegrams (INLAND & OVERSEAS RENDELS, LONDON, SV

125, Victoria Street,

London s.w.

OUR REF. JGO/BS

YOUR REF.

MAHONEY LICKERSON KARCHER KIRK

20th January 1970.

Dear Mr. Hardy,

Following your telephone conversation with Mr. Holloway last evening, regarding the Indian Highway Project Appraisal assistance, we have pleasure in enclosing the brief, interim report by Mr. Thomson, covering his visit to the sites concerned.

As Mr. Holloway emphasised to you, Mr. Thomson's appreciation of the situation has been expressed in frank terms, and we therefore feel that it is important that no copy of his report shall be allowed to reach the Indian Government.

With regard to the position as it is likely to be at the end of this month, when Mr. Cranage is expected to return to London, we feel that the next logical step is for some, or all, of the proposed Highway Projects to be re-calculated using the information which will have been collected for this purpose by Mr. Cranage. In terms of commitment, however, this treatment would go well beyond the scope of our original reference and we feel that to try to deal with the projects in an abbreviated fashion would yield unsatisfactory results. As mentioned in your telephone conversation yesterday, Mr. Neuner's visit to this office on Friday will provide a suitable opportunity to discuss the question of extending the reference to allow suitable time for the re-calculation that will be required.

RENDEL, PALMER & TRITTON

CHARTERED ENGINEERS

mr, nollows, last evening, regarding the Indian Bighas, Fro sec-

ation that will be zer treds conversable yearen og of a sement's sant to take office in articly Mr. Coulons, in perms of committee to become the First transment

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JAN 23 10 57 AM 1970

S. C. Hardy, Esq.

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20.1.70

We shall therefore look forward to contacting you again in due course, following the report of your own reconnaissance team on the matter.

Yours faithfully,

J. G. Ody

Senior Economist

S. C. Hardy, Esq., Chief, Highways Division 1, Transportation Projects Department, International Bank for Reconstruction & Development, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. INTERNATIONAL DEVELOPMENT **ASSOCIATION**

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION

OUTGOING WIRE

TO: DIRECTOR GENERAL CENTRAL ROADS WING MINISTRY OF TRANSPORT

DATE: JANUARY 20, 1970

CLASS OF SERVICE:

NEW DELHI

LT

COUNTRY: INDIA

TEXT:

Cable No.:

REFERENCE PROPOSED SECOND HIGHWAY PROJECT WE ARE SENDING THREE MAN MISSION FOR FEW DAYS TO REVIEW STATUS PROJECT PREPARATION STOP MISSION MEMBERS ARRIVE NEW DELHI AS FOLLOWS COLON NEUNER AND KARCHER 1110 JANUARY TWENTY SEVEN FLIGHT AI 136 COMMA MAHONEY OLLS JANUARY TWENTY EIGHT FLIGHT BA 770 STOP ALTERNATIVE EXECUTIVE DIRECTOR FOR INDIA IN BANK ALREADY INFORMED

> HARDY INTBAFRAD

INDIA: Prop 2nd Hwy

NOT TO BE TRANSMITTED

AUTHORIZED BY:

NAME

S. C. HARDY

DEPT.

TRANSPORTATION PROJECTS

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPRO

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared and cc: Mr. Kirk cc: Messrs. Abd El Aty, Karcher,

Mahoney, Neuner

For Use By Communications Segtion

Checked for Dispatch:

JANUARY 20, 1976

SEVEN FLIGHT AT 136 COMMA MARCHEY OALS JANUARY PASHTY EIGHT FLIGHT BA 770 ARRIVE WHY DELAI AS FOLLOWS COLON NEBMER AND KARCHER LILO JANGARY TWENTY FOR FEW DAIS TO REVIEW STATUS PROJECT PREPARATION STOP ALBSION MEMBERS REPERENCE PROPOSED SECOND HIGHAR PROJECT WE ARD SEMBING THREE MAN MISSION

INDIA: Frop 2nd Hwy

S. C. HARDY

1970 JAN 20 PH 5: 13

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ce: Messrs. Abd El Aty, Karcher,

Cleared and co: Mr. Kirk

ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

RENDELS

LONDON

DATE:

JANUARY 20, 1970

CLASS OF

SERVICE: LT

COUNTRY:

U.K.

TEXT:

Cable No.:

MAHONEY NEUNER KARCHER VISITING INDIA JANUARY TWENTYSEVENTH UNTIL

THIRTIETH STOP AFTER DISCUSSION WITH YOU AND THOMPSON LONDON AND

ASSESSING POSITION INDIA THEY WILL DETERMINE POSSIBLE NEED EXTENSION

YOUR ECONOMIC SERVICES STOP IF EXTENSION DEEMED DESIRABLE THEN WOULD

APPEAR PREFERABLE THAT CRANAGE REMAIN STOP WOULD HAVE NO OBJECTION

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ROUGH DRAFT YOUR ETHIOPIA REPORT PRIOR TO HIS MISSION STOP PLEASE

ENDEAVOUR HAVE SOMETHING FOR HIM JANUARY 26 REGARDS

HARDY INTBAFRAD

Checked for Dispatch: _____

Re:	INDIA - Proposed Second NOT TO BE TRA	ANSMITTED	
AUTHORIZED BY:	Highway Project	CLEARANCES AND COPY DISTRIBUTION:	
NAME	S. C. Hardy	cc:Messrs. Mahoney Neuner	
DEPT.	Transportation Projects	Karcher Kirk	
SIGNATURE	IGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)	For Use By Communications Section	
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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

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OUTGOING WIRE

TO: RENDELS LONDON

ASSOCIATION

DATE: JANUARY 19, 1970

CLASS OF

SERVICE: LT

COUNTRY:

ENGLAND

TEXT:

Cable No.:

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FOR HOLLOWAY REURCAB DATED JANUARY 14 EXECUTIVE DIRECTOR FOR UK IN
BANK HAS ALREADY TAKEN APPROPRIATE ACTION CONCERNING VISIT INDIA SIR
NORMAN KIPPING STOP PLEASE TAKE NO ACTION YOURSELF THIS MATTER AS
BANK CONSULTANT REGARDS

HARDY

INDIA: Proposed 2nd Hwy	101 10	DE	TRANSMITTED
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AUTHORIZED BY:

NAME

S. C. Hardy

DEPT.

Transportation Projects

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared and cc: Mr.M.P.J.Lynch, Kirk

cc: Messrs. Mahoney, Dickerson, Neuner/Karcher

For Use By Communications Section

Checked for Dispatch:

JANUARY 19, 1970

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FOR HOLLOWAY REURCAB DATED JANUARY IL EXECUTIVE MIRECTOR FOR UK IN BANK HAS AIREADY TAKEN APPROPRIATS ACTION CONCERNING VISIT INDIA SIR NORMAN KIPPING STOP FIELDS TAKE NO ACTION YOURSELF THIS MATTER AS BANK CONSULTANT REGARDS

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S. C. Hardy

Transportation Projects

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Cleared and co: Mr.M.P.J. Lynch, Kirk

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FORM No. 26 (4-69)

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INCOMING CABLE

DATE AND TIME

OF CABLE:

JANUARY 19, 1970

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LOG NO.:

RC 14/20

TO:

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FROM:

LONDON

TEXT:

ACTION COPY:

TRANSPORTATION PROJECTS

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INFORMATION

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38 FOR HARDY CHIEF TRANSPORTATION DIVISION I

REQUIRED REPORT ON STATUS OF ECONOMIC STUDIES IN PREPARATION AND WILL

BE POSTED BY END OF WEEK. PROPOSE CRANAGE RETURN LONDON END OF MONTH of

AS PROGRAMMED. PLEASE CONFIRM THIS IS COMPATABLE WITH TIMING OF BANKS

RECONNAISSANCE MISSION TO INDIA REGARDS

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WARRANGE TOWN AND ADMINISTRATION BROARDS

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

WITH THE COMPLIMENTS OF

MR. J. M. THOMSON

HOUGHTON STREET, ALDWYCH LONDON W.C.2 01-405 7686

IN Highways

INDIA: PROPOSED SECOND HIGHWAY PROJECT STATUS OF ECONOMIC STUDIES

The following report presents briefly my conclusions after a 13-day investigation of the state of the economic assessments currently being prepared in Delhi. I intend to submit a full report in collaboration with Cranage in mid-February.

Co-operation from Indians

During my visit I and the other members of the Bank team were given complete co-operation by officials in Delhi and in the States. There was no difficulty in dealing with the Indians on a straightforward and amicable basis, even though we did not always agree with them on points of detail. Dr. Bhatia, in particular, was most charming and hospitable, and I was impressed by his ability and integrity.

On the other hand it had been made clear before my arrival that Dr. Bhatia, who has many other responsibilities, was not able to devote much more time to the economic assessments and that there was no one else really capable of taking over the work. Consequently it had been agreed that Cranage would endeavour to carry out the reworking which we considered necessary. In order to minimise the possibility of argument later on I explained in detail the kind of alterations we wished to make and I obtained Bhatia's approval in principle.

Scope of investigation

During my visit I had several long discussions with Sinha, Bhatia, Khaturia and Grover. I inspected six of the projects, in Tamil Nadu, Bihar and Uttar Pradesh, and had exhaustive discussions with numerous officials in those States. In Tamil Nadu we were accompanied by Khaturia Grover from Delhi, and in Uttar Pradesh by Saxena. I examined the data and methodology being made by Bhatia and I took account of the views already arrived at by Cranage.

The Indian assessments

In short, although the assessments have been prepared by a very able man,

I consider the results to be nonsense. The human explanation of this situation
is that Bhatia has not visited the roads in question and has been supplied

(innocently) with highly misleading and incomplete information. He has also uncertically accepted unevitiably an estimation technique which I reject as unrealistic.

My main objection is that the potential benefits from all the projects are attributed mainly to the relief of traffic congestion which has been incorrectly assessed. It is perhaps unusual for World Bank highway projects to be crucially involved with the economics of traffic congestion; the main benefits from such projects are usually attributable to savings in road maintenance costs or vehicle operating costs and to developmental gains, due to improved road surfaces or alignments. But in this case the main benefits are seen to result from the relief of very severe traffic congestion which is expected to arise if road capacities are not enlarged. The estimation of of these benefits has, in my view, been grossly distorted by two errors:

- (1) failure to appreciate the capacity characteristics of the roads in question or the way in which these characteristics will be altered by the proposed improvements;
- (2) failure to take proper account of the fact that if the roads become heavily congested the growth in traffic volumes will be thereby inhibited; in other words, there will be some elasticity in traffic demand.

I will say a few words about these two points. First, the road capacities have been treated in a way which is inappropriate. All the roads I have seen consist predominantly of long, level, fairly straight sections interspersed with villages and towns. The road surfaces are invariably black top (or, rarely, concrete) of fair to poor quality. The road widths vary from genuine single-lane, i.e. 12 feet of carriageway with soft or rough shoulders, to two-lane with hard, smooth shoulders. The volumes of motor traffic are low on all roads. Only on the few genuine single-lane roads is there at present any significant traffic congestion, i.e. delay of motor traffic by motor traffic, and most of the roads could accommodate a large increase in traffic volume without much loss of traffic speed.

Yet current traffic speeds are rather low. Between towns and villages

practical speeds are usually limited by the presence of bullock carts, cyclists, pedestrians, cows, sheep, goats, chickens and occasionally camels and elephants. One does not often get completely away from these hazards; but only then is one's speed normally limited by the quality of the road itself. Periodically one comes to a village or town where the incidence of the above-mentioned hazards is enormously increased and speeds fall to a very low level. A motor vehicle is commonly brought to a complete halt in circumstances where there is no other motor vehicle in sight. Additional impediments in towns include railway crossings and cycle rickshaws.

The Indian assessments use a single speed-flow function to describe the traffic capacity of each project route in its entirety, including towns and villages. It would have been far better to have used the speed-flow function only for the sections of road outside towns and villages and to have measured typical journey times through each town and village separately. All the projects include by-passes for the worst towns and villages. The benefit of the by-passes to through-traffic could then have been easily demonstrated. Unfortunately it is now too late to obtain such measurements and we shall probably have to make do with crudely generalised speed-flow functions.

This being the case it is important to select plausible speed-flow functions. In my view this has not been done, except on genuine singelane roads. On two-lane roads the capacity at low speeds is much higher, I believe, than has been assumed by the Indians. This view has been accepted by the man who dealt with this aspect of the assessments. Some roads which are two-lane in effect have been treated as single-lane.

I would

I would also question the p.c.w. values used. I believe that a value of 2, rather than 3, is justified for goods vehicles, given the high proportion of such vehicles on Indian roads. This is especially the case at low speeds. The Indians are resisting this suggestion. I also believe that a higher value - at least 10 - should be given to bullock carts on two-lane roads.

Can we not Keep them on the Shoulders?

These changes mean that journey speeds will not drop as catastrophically as the Indians maintain when the volume of traffic increases. This agrees with my judgment of the traffic situation to be observed on the roads. The Indians have predicted extremely low speeds on most roads at traffic volumes which in my judgment would definitely not cause such low speeds.

On the second point, concerning demand elasticity, the Indians have followed the practice suggested by the Road Research Laboratory of using a cut-off speed; i.e. assuming that the growth of traffic will not be deterred by increasing congestion until some very low speed - chosen arbitrarily - is reached, after which no further growth in traffic will occur until the road capacity is expanded.

The R.R.L. suggested a cut-off speed of 10 miles/hour and they did not envisage it being used over long distances. The Indians have adopted a cut-off speed of 10 Km/hour and have used it over very long distances. In either case, however, the use of a cut-off speed is highly unsatisfactory, being inconsistent with both economic theory and common sense. The reasons why it was suggested by the R.R.L. were that there was no information about demand elasticities and that the concept of demand elasticity was disliked by British engineers. In spite of these difficulties, however, I think it is far better to use an arbitrary demand elasticity than an arbitrary cut-off speed.

The combined use of more realistic speed-flow functions and demand elasticity will have a marked effect in eliminating the absurd conditions of congestion predicted by the Indians and in bringing down the rates of return to more plausible levels.

At the same time there are a number of other less drastic changes which Cranage and I think are desirable. Many of these will tend to push up the rates of return. We have examined the traffic growth rates and have suggested maximum and minimum rates. We have suggested some changes in the treatment of vehicle operating costs and time savings. We are trying to get better information on travel speeds. We have queried the assumptions made about some large by-passes and have asked for order elections information which may or may not be forthcoming.

Further progress

There is no doubt that the final assessments will contain a large element of judgment. It would take years to collect satisfactory data on all the matters involved. Cranage is now busy reworking all the assessments on the lines agreed during my visit. He is also basing his work on his personal knowledge of all the projects after discussion with Pilditch and myself about the peculiar features of each project. The on-the-spot observations and discussions have proved absolutely vital.

After Cranage has received some further information for which he is waiting there would seem little purpose in his staying on in Delhi. This means that he could well return to London at or slightly before the date anticipated (end January) and could complete his calculations there. I would suggest that as soon as the calculations are complete he and I should draft a report on the economic aspects of the projects.

I think it would be premature for any review mission to visit India before our report is ready, which I hope will be about the middle of February.

J. M. THOMSON

J. W. Um Son

17.1. 1970

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

INDIA: Proposed Second 1tig.

INCOMING CABLE

DATE AND TIME OF CABLE:

JANUARY 14, 1970

1550

ROUTING

LOG NO.:

RC 4 / 15

TO:

INTBAFRAD

FROM:

LONDON

ACTION COPY:

TRANSPORTATION PROJECTS

INFORMATION

COPY:

DECODED BY:

TEXT:

FOR HARDY CHIEF TRANSPORTATION DIVISION 1

PILDITCH CABLES AS FOLLOWS "RE REGULATIONS FOR FOREIGN CONTRACTORS IN INDIA SIR NORMAN KIPPING ADVISOR ON INDIA TO CONFEDERATION BRITISH INDUSTRIES VISITING NEW DELHI EARLY FEBRUARY STRONGLY RECOMMEND THAT SECOND INDIAN HIGHWAYS PROJECT BE BROUGHT TO HIS NOTICE WITH VIEW TO HIS GIVING ATTENTION TO INDIAN REGULATIONS AND PROVIDING GUIDANCE ON PROBLEMS INVOLVED". REQUEST PERMISSION TO PROCEED ACCORDINGLY REGARDS

HOLLOWAY

JAN 15 9 07 AM 1970

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

DIRECTOR GENERAL

CENTRAL ROADS WING

MINISTRY OF TRANSPORT

NEW DELHI

DATE:

JANUARY 12, 1970

CLASS OF

SERVICE: LT

COUNTRY:

INDIA

14

TEXT:

Cable No.:

REFERENCE PROPOSED SECOND HIGHWAY PROJECT WE CONFIRM APPRAISAL MISSION ORIGINALLY TENTATIVELY SCHEDULED FOR END JANUARY NOW POSTPONED FOR APPROXIMATELY TWO MONTHS COMMA YOUR GOVERNMENT INFORMED END DECEMBER LAST STOP WRITING REGARDING FURTHER WORK ON PROJECT PREPARATION

HARDY

NOT TO BE TRANSMITTED

INDIA: Proposed Second Highway Project

NAME

S.C. Hardy

DEPT.

Transportation Projects

SIGNATURE_

ckerson/jp

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

CLEARANCES AND COPY DISTRIBUTION:

Cleared with and cc: Mr. Kirk

cc: Messrs. Votow, Abd. El Aty, Hansen, Neuner, Mahoney

For Use By Communications Section

Checked for Dispatch:

JAMBARY 12, 1970

APPROXIMATELY TWO MONTHS COMMA YOUR GOVERNMENT IMPORMED BND DECEMBER. LAST STOP WEITING REGLERANDE PURCHERS WORK ON PROJECT PRICEARATION

THULA: Proposed Second Highway Project

Marie Cherrach ip

Cleared with and co: Mr. Kirk

ec: Mesara. Votow, Abd. El Aty,

Hansen, Neumer, Mahoney

IN- Highways January 9, 1970 Rendel, Palmer & Tritton 125 Victoria Street Westminister London, S.W. 1 England Attention: B.G.R. Holloway, Esq. Dear Sirs: INDIA: Proposed Second Highway Project Appraisal Assistance

Thank you for your letter of January 2, 1970. We confirm that we have informed the Indian Government of the postponement of the Bank appraisal mission's visit. We have since received an acknowledgement to this effect from the Government.

We are now considering sending a brief reconnaissance mission to India at the end of January, which would be concerned primarily with the status of the economic evaluation of the proposed project. A final decision on the need for such a mission will be made after we have received and reviewed Mr. Thompson's short factual report which we requested in our cable of December 29, 1969, We would therefore like this report, (in letter form) to be in the Bank by January 23, 1970.

We acknowledge having received Mr. Pilditch's Interim Report which we are now reviewing. We will forward our comments to you (copy) to Mr. Pilditch) within the next few days.

Yours sincerely,

S.C. Hardy Chief. Highways Division I Transportation Projects Department

MWDickerson/lt Cleared with Mr. Kirk cc: Messrs. Votaw, Abd. El Aty Karcher, Mahoney, Neuner

IN- Highways

January 9, 1970

Rendel, Palmer & Tritten 125 Victoria Street Westminister, London, S.W. 1

Attention: B.G.R. Holloway, Esq.

Dear Sirs:

Re: IMDIA: Proposed Second Highway Project Appraisal Assistance

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COWMUNICATIONS.C. Hardy

Transportation Projects Department

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MwDickerson/lt Cleared with Mr. Kirk DEUEINEN

cc: Messrs. Votaw, Abd. El Aty Karcher, Mahoney, Neumer

IN- Highways

January 9, 1970

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Yeurs sincerely,

Lou

JAN 12 5 49 PH 1970 Projects Department COMMUNICATIONS C. Hardy

Manicherson/lt Cleared with Mr. Kirk

BECEIVED

ce: Mesera. Woten, Abd. El Aty Karcher, Mahoney, Memer

INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO:

Files

January 8, 1970

FROM:

Tillman Neuner

SUBJECT:

Current Status of Second Highway Project

- On December 24, 1969, a discussion took place on the above subject among Messrs. Hardy, Mahoney, Dickerson, Karcher and Neuner for the Transportation Projects Department and Messrs. Votaw and Kirk for the South Asia Department. Mr. Dickerson reported on his recent visit to New Delhi and on progress achieved in preparation of the project. Transportation representatives indicated that an appraisal could take place in January as scheduled, but would not be fruitful until the Association had decided what rules it wished applied to construction contracting on this project. The Association had made a number of proposals to the Government beginning with Mr. Votaw's letter of May 16, 1969 to C.S. Swaminathan (repeated subsequently to Dr. Patel on November 17, 1969), but the Government had given no substantial reply. Accordingly, all agreed that appraisal should be delayed until the Government of India had made an adequate response, and a revised tentative timing of March 1970 was set for appraisal. It was understood that this would delay presentation of the project to the Board beyond the close of current fiscal year.
- During the discussion one or another of the participants touched upon the following significant points:
 - Indian Road Contracting Industry. All agreed that India did not appear to have urgently needed experienced road contractors if it were to sustain a large and well executed road construction program; the capacity of existing contractors was a subject being studied by the consultants in the field. Several proposals were mentioned as to how the proposed projects might further this end; a portion of the work might be set aside for Indian contractors and might be designed so as to cater to their capabilities, without prejudice, however, to proper quality standards in the end product. Indian contractors might be encouraged to make joint ventures among themselves or with foreign firms or to act as subcontractors on other sections of the project. Furthermore, there clearly was a large group of civil construction contractors in India who could readily adapt to highway work and needed only the incentive of steady business to equip themselves for it. It was understood that there was no lack of experienced Indian firms in bridge building.
 - Foreign Contractors. The Government was not likely to settle b. on a formula which would tend to give all the road business under the project to foreign firms; some concessions would probably have to be made to give Indians a share of the business. However,

there was also the danger that the conditions of tender could be made so unattractive as to preclude any foreign participation. With appropriate safeguards a reasonable response might be expected, but a test of interest by actual tender was thought to be inescapable.

- by foreign contractors on this project were likely to be beyond the experience of Indian highway engineers who have thus far built roads only by labor-intensive force account method or some variation thereof. Some form of foreign supervision was therefore considered essential; Mr. Votaw reported that Mr. Aldewereld had stressed this point at a recent meeting. A foreign supervisor could possibly be required to countersign on behalf of the Association all, approving payment to the contractor. Or an Indian consulting firm could joint venture with a foreign consultant or a reputable Indian firm (e.g. Tata Ebasco) could be authorized to supervise on the understanding that expatriate engineers (acceptable to the Bank) are hired to do the actual work.
- Amount of Loan. It was suggested that the IDA Credit cover about 60% of total project costs.
- After the meeting, the Transportation Department representatives reviewed the remaining preparatory work required on this project. The consultant's junior economist would shortly be joined in India by a senior specialist in economics and together they would prepare and submit to the Association by mid-January an interim report on the economic justification of the project. This would be followed, if needed, by a brief visit of a Bank mission to India about the end of January. Engineering work would continue by the state PwD's under the guidance of our consultants and is expected to be finished by March or April.

TNeuner:nb

Cleared with and cc: Messrs. Kirk, Hardy

cc: Messrs. Knox, Geolot, Votaw, Hogg, Carmichael,

Dickerson, Mahoney, Karcher

cc IN agree Cresit (Adagaint)
ce Power Transpies (and)

Mr. C.G.F.F. Melmoth

A. F. Kirk

INDIA - Monthly Meeting with Mr. Aldewereld

January 7, 1970
CC FCI Felicina
ec Monnegas Pat
cc Maghways (2)
cc agro-aviation

- 1. You asked for comments on the timetables for this month as compared with forecasts made in the preceding month.
- 2. I would like first to mention briefly where we stand on the 1970 IDA program for India. Of the "goal" of \$236 million, the Railways credit already approved accounted for \$55 million; the Kadana Irrigation Project scheduled for consideration on January 27 is for \$35 million; and the Sixth Industrial Imports Project scheduled for Board consideration in March is for \$75 million. This gives a total of \$165 million. The balance of \$71 million will be made up out of the following:

Gujarat Credit - \$20-\$37 million Punjab Credit - \$20 million FCI fertilizers - undecided Power Transmission II - undecided Agricultural Aviation - \$5 million.

- 3. The Gujarat credit appraisal report has been cleared by the concerned Departments and negotiations are expected towards the end of February. Apart from deciding on the amount of the credit, problems that will probably arise will include the method of procurement for tractors to be imported and the rate of interest to be charged the sub-borrowers. I expect both of these to be resolved satisfactorily. Punjab credit appraisal report is still expected for mid-March and Board presentation remains set for June. As for Gujarat, the problems for discussion will include tractor procurement and interest rates.
- h. Power Transmission II The appraisal mission returned this week and consider that a project of up to about \$50 million covering nine State Electricity Boards and being used for the imputed foreign exchange component of the program is possible. The alternative proposed, namely that international competitive bidding should be invited with a 27-1/2 percent preference for Indian suppliers, but the Bank disbursing against Indian bids only if the successful Indian bidder needs 15 percent or less, poses problems. The mission really has no idea of the extent to which Indian bidders could be successful on this basis.
- 5. FCI fertilizers Delhi Office was cabled on December 31 to request further information on process comparison data and we await a reply. A mission (Cash and Tixhon) will go to India once we feel requisite information is available to make it worthwhile.

- 2 -

IIV Who head

6. Other projects:

- (a) Mormugao Port Engineers of Superintendence Inc. are to visit ciation with other Indian suppliers to complete the project in good time.
- (b) Highways II has been moved to fiscal year 1971 because of the delay in GOI replying to our questions on the possibility or international bidding and the need for adequate supervision.
- (c) Agro-Aviation Although a small project, this can be processed quickly and Picciotto is urging its inclusion for this fiscal year rather than, as at present scheduled, for FY 1971.
- 7. On the Bank side the only project is TCICI. The appraisal mission is now scheduled for early February and no serious problems are anticipated.
- 8. As for 1971, the principal IDA projects that may face problems are Krishna Godavari and Godavari Barrage because of change in A.P.'s State Plan. Power Transmission III will depend on the outcome of Power Transmission III.

cc: Messrs. Cargill Votaw

My AFK/bj

India - Highways Project

Mr. S. Clifford Hardy

January 6, 1970

A. F. Kirk

INDIA - Highways II

Following the meeting we had with Mr. Votaw on December 2h, I spoke to Mr. Shroff confirming that the Association would not be prepared to send an appraisal mission in respect of the above until we had had a response from the Government of India to the letters sent by Mr. Votaw to C. S. Swaminathan and I. G. Patel.

Shroff called me yesterday to say that he had been informed by Swaminathan that a reply to these letters would be mailed from Delhi this month.

cc: Messrs. Votaw
Mahoney
Dickerson
Neumer
Karcher

AFK/bj

INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

WIN-Huge/24

TO: Files DATE: January 6, 1970

FROM:

S. C. Hardy

SUBJECT:

Possible Joint ILO/Bank Study of Labor Uses in Developing Countries

I participated as observer from the Bank in the U.N. ECAFE Conference held in Thailand during December 1969. In informal discussions outside the conference, observers from the International Labor Organization (ILO) expressed considerable interest in participating jointly with the Bank in any studies we might initiate regarding the relative merits of labor-intensive versus equipment-intensive methods of highway construction and maintenance in developing countries. The subject arose primarily in connection with the proposed second highway project in India, but would have relevance in any country where similar conditions prevail regarding surplus labor.

The individuals in ILO with whom I discussed the subject were: 2.

Mr. Edgar Tilly

- ILO Regional Co-operative Adviser.

Mr. Helge FJermestad

- ILO Regional Adviser for Asia, Management Development and Productivity.

Prof. Belshaw

- University of New England, New South Wales. Regional Economic Adviser to ILO (Asian Office)

- The ILO representatives are seeking to further their research and studies of the most appropriate uses of labor in developing countries, and the relative merits of labor versus equipment in civil works construction. Limited ILO funds preclude substantial research activities and the ILO representatives would welcome the opportunity to participate with the Bank in any theoretical or practical studies we have in mind on this subject. Professor Belshaw has amassed considerable knowledge on labor intensive operations in developing countries, and furnished me with a list of publications on the subject (see Annex).
- I mentioned the possible inclusion of a study in the next Indian Highway Project directed towards estimating the lowest total transportation cost on roads constructed with different blends of labor and equipment, in which ILO cooperation and assistance might be mutually beneficial. I suggested to the representatives that ILO take the initiative by writing to the Bank indicating its desire to participate in the Indian project.

SCHardy: dfw

cc: Messrs. Baum, Baldwin, Knox, Geolot, Young, North, Hogg, Neuner, van der Tak, Karcher, Mahoney, Dickerson, Votaw/Kirk, Consolo, Franco-Holguin.

Labor v. Equipment

List of Publications.

Ref.	Topic							
ı	U.N. ECAFE "Earth-moving by Manual Labor and Machines". Flood Control Series, No.17. Bangkok, 1961.							
2	ILO "Men who Move Mountains". Management Development Productivity Mission to India, 1963.							
3	TLO "Technical Meeting on Productivity and Employment on Public Works in African Countries". Lagos, December 1963. Management Development Series, No.1. Geneva, 1964.							
4	ILO Meeting on "Productive Employment in Construction". Bangkok, October-November 1968. Sponsored by the ILO in association with the Committee for the Co-ordination of Investigations of the Lower Mekong Basin.							
5	IBRD "Substitution of Labor for Equipment in Road Construction". Report No. TO-447. May 1965.							
6	Issues of U.N. Bulletin. "Industrialization and Productivity".							
7.	"International Labor Review". Economic Development, "Employment and Public Works in African Countries". January 1965.							
8.	K. Gain and K.L. Rao. "River Valley Projects in China". New Delhi, 1955. Published by Central Water & Power Commission. Government of India.							

- Central Files

I.D.A. Appraisal Assistance Team Room 215A,

Central Roads Wing,

Ministry of Transport & Shipping,

New Delhi.

Ref: IDA/India/8

5 January, 1970

The International Development Association, 1818 H Street, N.W., Washington, DC. 20433, U.S.A.

MAN 1 3 1970 Projects Dept. Correspondente ANS'D BY not requi

For the attention of S.C. Hardy, Esq., Highway Division I, Transportation Projects Department.

Dear Sirs,

INDIA: ASSISTANCE IN HIGHWAY PROJECT APPRAISAL

PROGRESS REPORT NO. 1.

In accordance with the Terms of Reference contained in the Consultant's Proposal dated 11 November, 1969, and amended by your letter dated 14 November, 1969, we submit herewith our Progress Report No. 1 in quadruplicate.

STATUS OF EACH PROJECT ELEMENT

- (i) Roads No change since Interim Report dated 23 December, 1969.
- See Annexure No. 1 attached. Preliminary estimated (ii) Bridges costs are likely to be nearer to an accuracy of plus or minus 15% than 5% previously reported.

ASSISTANCE TEAMS PROGRESS B.

(i) Visits Visits of inspection have been made to the undermentioned Project elements by members of the Team since the the submission of the Interim Report.

Date	El ement		Visited by			
2/1/70	U1, U2, U2B1		J. Trnka			
5/1/70	Start of visit to T1 and T2	}	J. Trnka B.E.Cranage J.M.Thomson			

The following further visits of inspection are planned:

B1, B2, B4 (Bakhtiapur P.Pilditch 9-11/1/70 to Barauni only) J.M. Thomson 13/1/70 U2, U2B1, U2B2 J.M. Thomson

I.D.A. Appraisal Assistance Team, Room 215A, Central Roads Wing, Ministry of Transport & Shipping,

Ref: IDA/India/8

5 January, 1970

New Delhi.

The International Development Assolation, 1818 H Street, N.W., Washington, EC. 20433,

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GENERAL FIL	E2 Ing further visits	of ins	spection are
COMMUNICATI		,)	B. E. Cranage J.M. Thomson
5/1/70	Start of visit to T1 and T2	3	J. Trnka
2/1/70	ul, uz, usbl		J. Trnka
Date	Blement		Visited by

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8-11/1/70 BI, B2, B4 (Bakhtiapur P.Filditch to Barauni only) J.M.Thomson

13/1/70 UZ, UZBI, UZBZ J.M. Thomson

(ii) Central Roads Wing Proposals for typical pavement designs

based on the recommendations of Road Note 29 and R.R.L. Report LR 279 have been submitted to C.R.W. for comment, in the apparent absence of any Indian specifications on the subject. Initial C.R.W. reaction is that total pavement thickness can be determined from C.B.R. test results using R.R.L. curves E and F, applying a factor of 2 for bituminous surfacing. C.R.W. appear to have no reliable cost data for, and little practical experience of, asphaltic concrete, and seem to disregard the increasing load effect produced by increasing traffic volumes when designing the thickness of a bituminous wearing course.

I stank he means fatigue.

A request has been made for the whole of the proposed paper alignment for U1, U2, U3 and U4 to be submitted to the Team in New Delhi for examination.

(iii) In the States

The visit to U1 and U2 on 2/1/70 revealed that a number of alterations to alignments and by-passes are being proposed since the previous Team visit on 23/11/69, and it was requested that all intended changes be sent to C.R.W. for detailed examination by the Team. Noteworthy revisions are the widening of Sengur River Bridge instead of complete new construction at another site, and the provision of a by-pass at Pukrayan where unauthorised encroachment on either side of the main street has reduced the clear width between the building frontages, the P.W.D. lacking the authority to remove the offending properties.

Good.

(iv) Economic Feasibility

Good but mut news!

Mr. J. M. Thomson, Consultant Transportation Economist, arrived in New Delhi on 2/1/70 and after being introduced to the D.G., Mr. Sinha, discussed with Mr. Cranage the revised calculations which the latter has been making to determine possible changes in the Internal Rates of Return from those estimated by Dr. Bathya. Having decided that there were a number of points of disagreement or doubt Mr. Thomson, accompanied by Mr. Cranage, then held a meeting with Dr. Bathya which was frank and cordial the outcome of which was a satisfactory measure of agreement by all concerned on the issues in doubt, and recognition that Indian rates of return might in consequence prove to be not of the order hitherto stated. Messrs. Thomson and Cranage are currently visiting Tamil Nadu roads Tl and T2.

ATIONAL FINANCE DRPORATION	INTERNATIONAL	
ROUTING SLIP	Date	
NAME	RO	OM NO

C. SUITABILITY OF PROJECT FOR APPRAISAL

It is understood that the Bank intends to defer Appraisal until, March, 1970. Notice of this intention has not been conveyed to the C.R.W. for fear that it might produce a relaxation of effort in the preparation of the Project.

D. CONTRACTORS

To date no list of road contractors has been made available to the Team.

Yours faithfully,

P.Pilditch Project Leader.

cc. Rendel, Palmer & Tritton.

STATUS OF BRIDGES AT 13/12/69

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References 1 Number of structures												
2 Total length of structures (feet)												
3 Field survey & collection of hydraulic data - % completed												
4 Foundation investigation - "												
	5	Col	lectio	n of	detai	ils of	exist	ing st	ructu	re -	11	
6 Check on waterway and foundation depth - "												

Preparation of plans for preliminary estimates

Preparation of preliminary estimates

7

GMR/ILJ

RENDEL, PALMER & TRITTON.

CONSULTING & DESIGNING CHARTERED ENGINEERS

MEMBERS OF
THE ASSOCIATION OF CONSULTING ENGINEERS

PARTNERS

H. SCRUTTON, F.I.C.E., F.I.STRUCT.E., M.INST.PET.
J. R. H. OTTER, F.C.G.I., F.I.C.E., A.R.I.C.S.

B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E.

F. IRWIN-CHILDS, F.I.C.E.
P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E.
P. A. COX, F.I.C.E.

J. C. MUNRO, F.I.C.E.

K. E. AINSCOW, F. I. C. E., M. I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH. E., M. I. LOCO. E.

YOUR REF.

OUR REF. 02136/13760

CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. AM. Soc. C. E.

T. T. LAMBE, F.I.C.E., F.I.MECH.E. H. F. MERRINGTON, F.I.C.E., M.I.W.E.

ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I. MAR. E.

The International Development Association,

1818 H Street N.W.,

Washington D.C. 20433,

U.S.A.

For the attention of S.C. Hardy Esq., Highway Division I, Transportation Projects Dept.

Dear Sirs,

Highway Projects Appraisal - India

We are in receipt today of a cable from Mr. Pilditch in which he expresses concern in case you may not have received his Interim Report dated 23rd December 1969.

We ourselves received a copy a few days ago and, in case the original of the report has not reached you, we enclose a photo-copy for your use.

We confirm also that Mr. J.M. Thomson has now joined Mr. Pilditch in India until the 14th January and together with Mr. Cranage will be concentrating on the identification and quantification of the economic benefits from the proposed road improvement schemes.

> Yours faithfully, for RENDEL, PALMER & TRITTON

> > G. Mulk Ruhard

JAN 8 1970

INLAND & OVERSE RENDELS LONDON SW

125, Victoria Street, Westminster.

TELEPHONE: 01-834 8494

TELEGRAMS

5th January 1970

RENDEL PALMER & TRITTON

CHARTERED ENGINEERS

JAN 8 1 30 PM 1970 GENERAL FILES COMMUNICATIONS

RECEIVED

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE CORPORATION

Files. IN Highways 2nd

INCOMING CABLE

DATE AND TIME

OF CABLE:

JANUARY 5, 1970

1830

ROUTING

LOG NO.:

WUI / 6

TO:

HARDY INTBAFRAD

FROM:

NEW DELHI

INFORMATION COPY:

ACTION COPY:

DECODED BY:

WI AAN

TRANSPORTATION PROJECTS

TEXT:

14 RE INDIAN HIGHWAYS FOUR COPIES PROGRESS REPORT NUMBER ONE

DISPATCHED TODAY UNDER TWO SEPARATE COVERS

PILDITCH

JAN 6 8 59 AM 1970

GMR/ILJ RENDEL, PALMER & TRITTON. CONSULTING & DESIGNING CHARTERED ENG NEERS Maurice THE ASSOCIATION OF CONSULTING ENGINEERS draw up repliteLEGRAMS INLAND & OVERSEAS
RENDELS, LONDON, S W I PARTNERS believe tholia was H. SCRUTTON, F.I.C.E., F.I.STRUCT. E., M.INST. PET.
J. R. H. OTTER, F.C.G. I., F.I.C.E., A.R.I.C.S.
B. G. R. HOLLOWAY, F.I.C.E., F.I.STRUCT. E.
F. IRWIN-CHILDS, F.I.C.E. enformed thro' Exce Director tra possible 125 Victoria Street. P. M. FRAENKEL, F.I.C.E., F. I.STRUCT. E. P. A. COX, F.I.C.E. J. C. MUNRO, F.I.C.E. economists of traling Hestminster, London, S.W.1. K. E. AINSCOW, F. I.C.E., M.I. STRUCT. E. D. M. S. FAIRWEATHER, F. I. MECH. E., M. I. LOCO. E. CONSULTANTS: J. E. G. PALMER, F. I.C.E., F. AM. Soc. C. E. T. T. LAMBE, F. I.C.E., F. I. MECH. E. OUR REF. 02136/13752 H. F. MERRINGTON, F.I.C.E., M.I.W.E. ASSOCIATE: R. DOWNHAM, M.R.I. N.A., M.I. MAR. E. The International Development Association, 2nd January 1970 1818 H Street N.W., Washington D.C., U.S.A. For the attention of S.C. Hardy Esq., Highway Division I, Transportation Projects Dept. Dear Sirs, Highway Projects Appraisal - India

We refer to Mr. Hardy's telephone discussion with Mr. Holloway on the 24th December 1969 in which we were informed that the Bank now did not intend to commence its appraisal of the Indian projects until March 1970.

Mr. Pilditch has been informed of this decision and we, together with Mr. Pilditch, assume that you will be advising the Indian Government direct of the postponement of the arrival of the Appraisal Team.

Yours faithfully, for RENDEL, PALMER & TRITTON

J. Mille Ruhard

JAN 6 1970

Frejetts Dept. Correspondente

ANS'D BY _____

DATE

COMMUNICATIONS

JAN 6 11 22 M 1970

RENDEL, PALMER & TRITTON

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GENERAL FILES COMMUNICATIONS

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RECEIVED