F-21: Inventory of SSID Schemes in Central-south Zone (1/2)

	r	1 1	<u> </u>		r
Proj t Name		Kati	2	3	5
Type		Y W	Lentalla	lljdj	
Zone		c/s	·	<u>\</u>	<u>\</u>
Province			C/S	c/s	C/S
I-Λrea	ĥa	S/Shewa	S/Shewa	E/Shewa	S/Shewa
		63	27.	1050	40
	m3/s	0.115	0.065	2.4	0, 075
Bene. (House)	No.	105	35		334
Bene. (Popu.)	No.				
** Intake **					
B. leng.	_ <u>m</u>				28, 8
B. hight	<u> </u>			_	1.9
L. Sway	m		_	_	17. 2
II. Sway	_ <u>m</u>				1,4
** M-Canal **		[
Number	No.		~	2	
T-Leng.	m	5, 400	2,600	10, 400	2, 800
Width	m				0, 85
Dep.	m		-		0.4
Capa.	M3/S	-			
** S-Canal **					
Number	No.	_	-		
T-Leng.	m m	4, 100	2,000	43,600	
Width			2,000		
Dep.	P				
** T-Canal **	_ m				
	Ma				
Number	No.		0.000	60 000	
T-Leng.	_ m	4, 100	2, 000	68,000	
<u>Width</u>	_ <u> </u>				
Dep.	<u>IR</u>				
** Q-Canal **	_ <u>m</u>			32,000	
** Drainage**	M	4,000	3,000	•• 	2,000
Structures					.
No. Flume	No.				·
Culvert	No.				. .
DivBox	No.		-		2_
Drop	No.			-	
C-gate	No.				
T-out	No.				
No. F-road	No.		_		
L. F-road	m	2,000	3,000	18,000	=======================================
T. C. C	Віг	476,000	210,000	7, 600, 000	160,000
** Status **		Comp.	Comp.	Under-C.	Comp.
Design	%	100	25	-	100
Const.	%	75	15	30	65
	%			30	50
On-Farm	Λ	<u> </u>			

		4		
Project		Elala		
Туре		Earth Dam		
Zone		c/s		
Province		E/Shewa		
l-Area	ha	30		
No. of B.		125		
C Area	Km2	47.5.	3	
An. R-fall	mm/y_	813		
An. Dis.	MCM	3.86		
Subm'd area	Km2	300ha		·
Stor. Capa.	MCM	3, 1		
**Facil. **		Earth Dam		
llight	_ m	17. 2		
Length	m	270		
V. Earth	ฮ3	101,612		
Spillway				
Туре		Concrete		
Leng.	m	10		
llight	m	1.5		
Disc. capa.	n3/s	34		
Intake				
Туре		Steel pipe		
Leng.	_m_	60		
Disc. capa.	m3/s	1.84		[
** M-C **				
No.				
Leng.	'n	_		
Bed Width	m	_		
Water Dep.	ji)	-		
S-C				
No.				
Leng.	m	-		
Bed Width	π			
Water Dep.	m			
T-C				
No.				
Leng.	m			
Bed Width	n.			
Water Dep.	TA			
Drain	m			
R-S	- "			
No. Flume	No.			
Culvert	No.	_		
Shute	No.	~		
DivBox	No.			
Drop	No.			
T-out	No.			
C-gate	No.		}	}
No. F-road	No.			
L.F-road	m _			<u> </u>
T. C. C	Birr	900,000		f
Status	P##1-	D-Comp.		·
Design	*	100	t	
Const.	Q.		<u> </u>	
On-Farm	X -	·		1
I on Laim)	1	J	1

G: Inventory of Construction Equipment for SSID Project

G-1: Inventory of Construction Equipment for SSID Project in Main Department G-2: Inventory of Construction Equipment for SSID Project in Central Zone G-4: Inventory of Construction Equipment for SSID Project in Central-south Zone G-5: Inventory of Construction Equipment for SSID Project in Eastern Zone G-6: Inventory of Construction Equipment for SSID Project in Northern Zone G-7: Inventory of Construction Equipment for SSID Project in Northern Zone G-8: Inventory of Construction Equipment for SSID Project in Northwestern Zone G-9: Inventory of Construction Equipment for SSID Project in Northwestern Zone G-10: Inventory of Construction Equipment for SSID Project in Southeastern Zone G-11: Inventory of Construction Equipment for SSID Project in Southwestern Zone G-12: Inventory of Construction Equipment for SSID Project in Southwestern Zone G-13: Inventory of Construction Equipment for SSID Project in Western Zone G-13: Inventory of Construction Equipment for SSID Project by Japanese Assistance

G-14: Present Status of Equipment for SSID Project by Japanese Assistance

G-1: Inventory of Construction Equipment for SSID Project(1/5)

ri. 0.	Machinary Type	Model	Serial Number	Engine Number	Chasses Number	Cost in Brr		ocation Deliv'd	Donner Finance
1	Buildozer	CAT D&C	20X 04661	132 08303	_	-	1986	C-S	UNCDE
2	Bulldozer	CAT DGC	20X 04664	132 08280			1986	N-W	UNCDF
3	Bulldozer Bulldozer	CAT D6D	31X 03780	107 09020			1985	C-S	JAPAN
5	Bulldozer	CAT DED	31X 03781 31X 03782	107 09021 107 09022		i	1986	S-E	JAPAN
6	Bulldozer	CAT DED	31X 03783	102 09023	,	\	1986 1986	C-S	JAPAN JAPAN
7	Bulldozer	CAT D6D	31X 03784	107 09024		1	1986	c-s	JAPAN
8	Bulldozer	CAT DED	31X 03785	102 09025		\	1986	N-E	JAPAN
9	Bulldozer Bulldozer	CAT D6D CAT D7G	31X 03786	10Z 09026		1	1986	N-E	JAPAN
ĭ	Bulldozer	KOMATSU D65E	92V 12464 34724	8Z 23722 26169221			1985	C-S	UNCDE
2	Bulldozer	KOMATSU D65E	34725	26169212			?	C S-E	JAPAN JAPAN
3	Buildozer	KOMATSU D75A	50180	130297		286, 965	1988	C	JAPAN
4	Bulldozer	KOMATSU D75A	50181	30298		286, 965	1988	C	JAPAN
5	Bulldozer Bulldozer	KOMATSU D75A KOMATSU D75A	50182 50183	30299		286, 965	1988	S	JAPAN
7	Bulldozer	KOMATSU D75A	50201	30300 35625		286, 965 318, 270	1988 1988	E	JAPAN Japan
8	Buildozer	KOMATSU D75A	50216	35624		318, 270	1988	S	JAPAN
9	Bulldozer	DRESSER TD15C	1240004/3043	32282		115,010	1988	Š.	UNCDE
0 (Bulldozer	FIATALLIS FD20	008992	008974			1987	C	GOA
1 2	Bulldozer	FIATALLIS FD20	008998	009002	* * *		1987	· N	GOV -
3	Bulldozer Bulldozer	FIATALLIS FD20 FIATALLIS FD20	008999	009000 008905			1987 1987	C N	GOV
4	Bulldozer	FIATALLIS FD20	009002	008976			1987	Ë	GOV
5	Bulldozer	FIATALLIS FD20	009003	009003		ļ · .	1987	Ē	COV
6	Bulldozer	FIATALLIS FD20	009004	009021		1	1987	S-E	GOV
7	Bulldozer	FIATALLIS FD20	009005	008978		ļ	1987	N-E	GOV
8 9	Bulldozer Bulldozer	FIATALLIS FD20 FIATALLIS FD20	009007	00923 008936		1	1987 1987	ਮ-ਸ 2	GOV
οl	Bulldozer	FIATALLIS FD20	009010	009053			1987	E T	GOY
ĭ	Bulldozer	FIATALLIS FD20	009011	009053			1987	N-E	GOV
2	Bulldozer	FIATALLIS FD20	009013	009060			1987	C	GOV
3	Bulldozer	FIATALLIS FD20	009014	009059			1987	E	GOV
5	Bulldozer Bulldozer	FIATALLIS FD20 FIATALLIS FD20	009015 009046	009054 009130			1987 1987	E N-W	GOV
6	LOADER	CAT 926	8NR 0064	45V 52266		}	1988	S	JAPAN
7	LOADER	CAT 926	8NR 0065	45V 52267			1988	N-W	JAPAN
8	LOADER	KOMATSU WA380-1	11234	29893		243, 735	1989	Main D.	JAPAN
9	LOADER	KOMATSU WA380-1	11235	29898	•	100 000	1989	¥	JAPAN
0	LOADER	FURUKAWA FL330-1 VOLVO 4400	33203	82042	3796	129,000 196,813	1988 1986	Assab C	JAPAN
2	LOADER LOADER	VOLVO 4400	33205	80609	6437	130,010	1986	N-W	UNCDF
3	LOADER	BENATI 22SB	222322			}	1987	E	GOV
4	LOADER	BENATI 22SB	222323				1987	S	GOV
5	LOADER	BENATI 22SB	222324	j		1	1987 1987	E	GOV
6	LOADER	BENATI 22SB BENATI 22SB	222325 222326			[1987	S-E	GOV
7	LOADER LOADER	BENATI 22SB	222327	j		1	1987	s	GOV
ğ	LOADER	BENATI 225B	222328			ŀ	1987	E	GOV
0 1	LOADER	BENATI 225B	222329			1	1987	S-E	GOV
ľ	LOADER	BENATI 22SB	222330			1	1987	E S-E	GOV
2 {	LOADER	BENATI 225B	222331 222332	1		1	1987 1987	N-E	GOV
3 4	LOADER LOADER	BENATI 22SB BENATI 22SB	222333				1987	์ "ทั	GOV
5	LOADER (Crawler)	KOMATSU D57-S	08578	25922		1	1986	Main D.	UNCDE
6	LOADER (Crawler)	KOMATSU D57-S	08579	25921		110 100	1986	C C	EEC
7	COMPACTOR	SAKAI SYSICT	10024			113, 160 113, 160	1989 1989	N-E N-E	JAPAN JAPAN
3	COMPACTOR	SAKAI SV91CT SAKAI SV91CT	10023 10020	0617153		113, 100	1989	"E"	JAPAN
1	COMPACTOR COMPACTOR	SAKAI SV91CT	10021	0617159		1	1989	E	JAPAN
í I	COMPACTOR	SAKAI SV91CT	10022				1989	N-W	JAPAN
2	COMPACTOR	SAKAI SV91CT	10025			1	1989	\ \/-\{\ \	JAPAN
3	COMPACTOR	CAT CB-521	6RD 00017				1987 1987	E	E I PRO
1	COMPACTOR	CAT CB-521	6RD 00018 7049320	7049320			1987	C	UNCDE
5	COMPACTOR	DYNAPAC CA25PD DYNAPAC CA25PD	56015	7070000		1	1989	N-E	JAPAN
5	COMPACTOR COMPACTOR	DYNAPAC CA25	575740	7049328		1	1989	C-S	JAPAN
8	COMPACTOR	CAT CB-521	6TD 00008				1990	S ·	UNCDE
9	COMPACTOR	CAT GB-521	6TD 00008	17711000		1	1990 1987	C-S	UNCDI
	GRADER	CAT 120G	87V 07541	17711920 32760	•	184, 065	1988	N-W	UNCDI Japai
	GRADER GRADER	KOMSTSU GD511R MITSUBISHI-KG350	10011 6G000230	517116		175, 500	1989	"E"	JAPAN
1			6G000187	517099		175, 500	1989	E	JAPAN
1 2		METSUBISHI-MG350	000000101				1 1000		LUMBER
1 2 3	GRADER	MITSUBISHI-MG350 DRESSER 450E	11958	8710001531		Į.	1990	S	
1 2 3 4		DRESSER 450E DRESSER 450E	11958 11959	5710001520			1990	S	UNCDI
0 1 2 3 4 5 6 7	GRADER GRADER	DRESSER 450E	11958		44Y00264				UNCDE UNCDE EIPRO EIPRO

G-1: Inventory of Construction Equipment for SSID Project(2/5)

				, 	Chasses	Cost	5.110	Location	Donner
Seri.	Machinary	Mode 1	Serial	Engine	Number	in Brr	Year	Deliv'd	Finance
No.	Туре		Number	Number	104061		1091	P-1-2-9-	THAILCE
ì				050040	14500397		1988	7	GOV
79	GRADER	FIATALLIS FG85	ļ	759848			1988	7	COV
80	GRADER	FIATALLIS FG85		759854	14800398				
81	GRADER	FIATALLIS FG85	Ĭ	769044	14800399		1988	?	GOV
82	GRADER	FIATALLIS FG85	l	760043	14800400		1988	7	GOV
83	GRADER	FIATALLIS FG85		759829	14800401	: :	1988	E	GOV
84	GRADER	FIATALLIS FG85		758892	14800402		1988	?	GOV
85	GRADER	FIATALLIS FG85		759892	14800403		1988	?	GOV
86	GRADER	FIATALLIS FG85	1	759828	14SD0404		1988	7	GOV
87	GRADER	FIATALLIS FG85		730221	14800405		1988_	?	GOV
	EXCAVATOR	MITSUBISHI MS140	2470	6D 389424		7 7 1 1 1		Main D.	JAPAN
88		HITACHI EX200	2110	11280	145-36121	148, 440	1988	S	JAPAN
89	EXCAVATOR			118407	145-36120	148, 440	1988	l E	JAPAN
90	EXCAVATOR	HITACHI EX200	06263	GD31009685		154, 305	1988	ls	JAPAN
91	EXCAVATOR	KATO HD700SE		127228		711 213	1988	Main D.	JAPAN
92	SCRAPER	KOMATSU WS165S	3007	127227		711, 213	1988	S	JAPAN
93	SCRAPER	KOMATSU WS165S	3008			513,000	1991	c-s	JAPAN
94	SCRAPER	CAT 623E	6CB00843	70V 29771	0.000	313,000			
95	BACK-HOE LOADER	VOLVO 646	:	36125	8462	4.00	1988	7	UNCDF
96	BACK-HOE LOADER	VOLVO 646		62327	2988			?	UNCOF
97	BACK-HOE LOADER	3300T	11951014				1988	N-E	GOV
98	BACK-HOE LOADER	3300T	11951015	,			1988	E	GOV
99	BACK-HOE LOADER	3300T	11951016	1.1			1988	E	GOV
100	BACK-HOE LOADER	3300T	11951018	1.4	4.44		1988] E	GOV
	BACK-HOE LOADER_	3300T	11951195		1		1988	N-E	604
101		KUBOTA 87500	52068				1988	S-E	JAPAN
102	TRACTOR	KUBOTA M7500	52069	36660			1988	l c	JAPAN
103	TRACTOR		52070	00000	* -	**	1988	S-E	JAPAN
104	TRACTOR	KUBOTA M7500	52071	4.4			1988	N-18	JAPAN
105	TRACTOR	KUBOTA M7500					1988	N-E	JAPAN
106	TRACTOR	KUBOTA M7500	52072				1988	S-E	JAPAN
107	TRACTOR	KUBOTA M7500	52073	20000					JAPAN JAPAN
108	TRACTOR	KUBOTA M7500	52074	38658		1	1988	C_e	
109	TRACTOR	KUBOTA N7500	52075			. [1988	C-S	JAPAN
110	TRACTOR	KUBOTA M7500	52076	36672	1	1.0	1988	S	JAPAN
111	TRACTOR	KUBOTA M7500	72077	i	,		1988	N-E	JAPAN.
112	TRACTOR	FIAT AGRI]				א	EEC
1113	TRACTOR	FIAT AGRI			1	*		N	EEC
114	TRACTOR	FIAT AGRI				•		N	EEC
115	TRACTOR	FIAT AGRI 65-46				i	1988	N-E	EEC
		FIAT AGRI 8066DT		110329	· •		1988	N-E	EEC
116	TRACTOR	FIAT AGRI 8066DT		110482	i		1988	N-E	EEC
117	TRACTOR		410040					s"	UNCOF
118	TRACTOR	FIAT AGRI	413646	236201			,	S	UNCDF
119	TRACTOR	FIAT AGRI	413647	235635			l		UNCDE
120	TRACTOR	FIAT AGRI	413648	235657	. 1	:.		S	
121	TRACTOR	FIAT AGRI	413649	235641			[: .	S	UNCDE
122	TRACTOR	FIAT AGRI	413650	235654	i. I		!	S	UNCDE
123	TRACTOR	FIAT AGRI	413651	237003			}	S	UNCDE
124	TRACTOR	FIAT AGRI	413645					3	UNCDF
125	TRACTOR	FIAT AGRI	413652				1	3	UNCDF
126	TRACTOR	FIAT AGRI	411068	106679	. [* *	!	E	EIPRD
127	TRACTOR	FIAT AGRI	411069	106997			1	E	EIPRD
128	TRACTOR	FIAT AGRI	411070	110329)	E	EIPRD
129	TRACTOR	FIAT AGRI	411084	110140			l	E	EIPRD
		FIAT AGRI	411079	110469	·		1	Ē	EIPRD
130	TRACTOR		411157	110033		r - 1	}	} F	EIPRD
131	TRACTOR	FIAT AGRI		106825			111	E	ELPRO
132	TRACTOR	FIAT AGRI	411066	100023		182, 438	1988	Main D.	JAPAN
133	TRUCK SEMI-TRAILED	NISSAN CWA45	4~18247	010000	01970				JAPAR
134	TRUCK SEMI-TRAILED	NISSAN CWA45	4-18249	018060	01876	182, 438	1988	Main D.	
135	TRUCK SEMI-TRAILED	MISSAN CWA45	4-18864		10.00	n10 c	1988	Main B.	
136	TRUCK SEMI-TRAILED	HINO SS633SA	4-21832	24804	10186	212, 611	1989	Main D.	
137	TRUCK SEMI-TRAILED	HINO SS633SA	4-21833	24863	10171	212,611	1989	Main D	
138	TRUCK SEMI-TRAILED	HINO SS633SA	4-21834	24838	10170	212,611	1989	Main D.	
133	TRUCK SEMI-TRAILED	HINO SS633SA	4-21835	24821	10169	212,611	1989	Main D.	
140	LOW-BED	NISSAN CWA45	4-22356	018525	00179	253, 163		Main D.	
141	FOM-BED	NISSAN CWA45	4-22357	018523	00180	253, 163	1989	Main D.	
142	LOW-BED	NISSAN CWA45	4-19397	18007	00169	255, 761	1989	Main D.	JAPAN
143	LOW-BED	NISSAN CWA45	4-19398	052758	00001	255, 761	1989	Main D.	JAPAN
144	LOW-BED	SCANIA_112E	4-19863	5295727	1132018		1988	Main D.	
		VOLVO N7	4-18196	131191	010525		1986	Main D	
145	TRUCK		4-19653	131198	010524	1	1986	Main D.	
146	TRUCK	VOLVO N7		905081344		134,550	1991	Main D	
147	TRUCK	SCANIA 93H	4-20731		17420	194, 990	1988	Main D	
148	TRUCK	FIAT	4-16333	205963		100	1988	Main D	
149	TRUCK	FIAT	4-16334	205944	17419	100 000			
150	MOBILE WORKSHOP	NISSAN TFA	4-19467	052758	00001	162,753	1987	Main D	
151	MOBILE WORKSHOP	NISSAN TFA	4-19487	002563	15037	162,753	1987	Main D	
152	MOBILE WORKSHOP	NISSAN TFA	4-21317	053686	00030	170, 775	1989	Main D	
153	MOBILE WORKSHOP	FIAT-IVECO 190. 26	UN1891	197328	4024305	28, 552	1987	E	EIPRD
154		FLAT-LVECO 190.26	4-00804	197388	4024304	\$ 13,793	1987	E	EIPRD
155	MOBILE WORKSHOP	LANDROVER-110	4-15281	243128	137130	ŀ	1986	M. D	EEC
156	MOBILE WORKSHOP	LANDROVER-110	4-15282	243123	137160		1986	M. D	£EC .
,			•	-		7		1.5	14

G-1: Inventory of Construction Equipment for SSID Project(3/5)

Seri.	Machinary	Mode1	Serial	Engine	Chasses	Cost	haliu' d	Location	Donner
No.	Туре		Number	Rumber	Number	in Brr	Year	Deliv'd	
157	MOBILE WORKSHOP	NISSAN CWA45	4-21316	018531	02003		1988	S	UNCDF
158	MOBILE GREASING PLAN MOBILE GREASING PLAN	NISSAN TEA41	4-19455	052758	00001	65, 571	1987	C-S	JAPAN
	MOBILE GREASING PLAN	NISSAN TEA41 NISSAN TEA41	4-19468 4-21318	052757 053682	00002	155, 572	1987	E S-E	JAPAN
161	CRANE	TADANO TS-70ML	238011	033802	00029	153, 014 128, 744	1989 1988	M. D	JAPAN JAPAN
162	CRANE	TADANO TS-70HL	238012			128, 744	1988	H.D	JAPAN
163 164	CRANE WATER BOWSER	TADANO TR-230E LEYLAND 411	530233 4-15434	8640086	00000	309,690	1989	M.D	JAPAN
165	WATER BOWSER	LEYLAND 411	4-15435	8640080	00683 00698		1987 1987	E	EEC EEC
166	WATER BOWSER	LEYLAND 411	4-15436	8640082	00697		1987	-	EEC
167	WATER BOWSER WATER BOWSER	LEYLAND 411 NISSAN CWA45	4-15437	8648874	00661	140.000	1987	E	EEC
169	WATER BOWSER	NISSAN CWA45	4-21890 4-22355	018521 018520	02008 02007	113,060 113,060	1990 1990	CN	JAPAN JAPAN
170	WATER BOWSER	ZIL 5-130	4-14799	868178	2457946	110,000	1986	S-E	GOV
171 172	WATER BOWSER WATER BOWSER	ZIL 5-130 ZIL 5-130	4-14787	568972	2458467		1986	N-₩	GOV
173	DUMP TRUCK	NISSAN TFA21	4-14788 4-14581	528912 115195	2437852 02087		1986 1987	C Main D.	GOV Japan
174	DUMP TRUCK	NISSAN TFA21	4-14582	115134	02067		1987	C	JAPAN
175	DUMP TRUCK	NISSAN TFA21	4-14583	115131	02068		1987	C	JAPAN
176 177	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14584 4-14585	114113 115213	02066 02088		1987 1987	C E	JAPAN JAPAN
178	DUMP TRUCK	NISSAN TFA21	4-14586	115135	02060		1987	Ë	JAPAN
179	DUMP TRUCK	NISSAN TFA21	4-14587	115173	02071		1987	N-E	JAPAN
180 181	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14588 4-14589	115191	02073		1987	N-E	JAPAN
182	DUMP TRUCK	NISSAN TFAZI	4-14590	115170 115172	02070 02072		1987 1987	N-E N-E	JAPAN JAPAN
183	DUMP TRUCK	NISSAN TFA21	4-14591	115198	02085		1987	C-S	JAPAN
184	DUMP TRUCK	NISSAN TFA21	4-14592	115188	02089		1987	N-E	JAPAN JAPAN
185 186	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14593 4-14594	115125 115145	02086 02065		1987 1987	N-E S	JAPAN
187	DUMP TRUCK	NISSAN TFA21	4-14595	115129	02064		1987	Main D.	JAPAN
188	DUMP TRUCK	NISSAN TFA21	4-14595	115141	02067		1987	C	JAPAN
189 190	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14597 4-14598	115128 115125	02062 02053		1987 1987	C E	JAPAN Japan
191	DUMP TRUCK	NISSAN TFA21	4-14599	115138	02069		1987	C	JAPAN
192	DUMP TRUCK	NISSAN TFA21	4-14600	115187	02090	00 500	1987	N-E	JAPAN
193	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18974 4-18975	018015 018031	01819 01858	90, 792	1989 1989	E	JAPAN JAPAN
194 195	DUMP TRUCK	NISSAN CWA45	4-18976	018018	01845		1989	Ē	JAPAN
196	DUMP TRUCK	NISSAN CWA45	4-18977	018033	01851		1989	E	JAPAN
197	DUMP TRUCK	NISSAN CWA45	4-18978	018029	01854		1989 1989	E	JAPAN JAPAN
198 199	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18979 4-18980	018026 018010	01853 01846		1989	E	JAPAN
200	DUMP TRUCK	NISSAN CWA45	4-18981	018024	01856		1989	N~E	JAPAN
201	DUMP TRUCK	NISSAN CWA45	4-18982	018028	01860		1989	E	JAPAN Japan
202	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18983 4-18984	018030 018023	01855 01861		1989: 1988	EC	JAPAN
203 204	DUMP TRUCK	NISSAN CWA45	4-18985	018013	01817		1988	S	JAPAN
205	DUMP TRUCK	NISSAN CWA45	4-18986	018020	01849		1988	SC	JAPAN
206	DUMP TRUCK	NISSAN CWA45	4-18987	018025 018022	01859 01845]	1988 1988] E	JAPAN JAPAN
207 208	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18988 4-18989	018012	01845		1988	Main D.	JAPAN
209	DUMP TRUCK	NISSAN CWA45	4-18990	018009	01851	}	1988	S	JAPAN
210	DUMP TRUCK	NISSAN CWA45	4-18991	018027	01852		1988 1988	Main O. E	JAPAN Japan
211	DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18992 4-18993	018021 018017	01850 01847	90, 792	1988	E	JAPAN
212 213	DUMP TRUCK DUMP TRUCK	NISSAN CWA45	4-21794	018527	02004	86, 408	1988	S	JAPAN.
214	DUMP TRUCK	NISSAN CWA45	4-21795	018525	02000	86, 406	1988	W W	JAPAN
215	DUMP TRUCK	NISSAN CWA45	4-21797	018530 018532	02001 02002	86, 406	1988 1988	Y Y	JAPAN JAPAN
216	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-21799 4-21780	018532	02002		1988	C	JAPAN
217	DUMP TRUCK	VOLVO N 7	4-19505	172791	012348		1986	Main D.	UNCDE
219	DUMP TRUCK.	VOLVO N 7	4-19311	172792	012346 012349		1986 1986	Main D. Main D.	UNCDF
220	DUMP TRUCK	VOLVO N 7 FIAT (AMCE) 682	4-19312 4-16476	172793	100658		1989	Main D.	GOV
221	DUMP TRUCK DUMP TRUCK	FIAT (AMCE)682	4-16477			1	1989	Main D.	GOV
223	DUMP TRUCK	FIAT (AMCE)682	4-16485	136954	100660		1989	E	GOV
224	DUMP TRUCK	FIAT (AMCE)682	4-16699	136950 136913	100661 100700		1989 1989	E	GOV
225	DUMP TRUCK	FIAT (AMCE) 682 FIAT (AMCE) 682	4-17483 4-17485	137069	100764	İ	1989	N-E	GOV
226	DUMP TRUCK DUMP TRUCK	FIAT (AMCÉ)682	4-17484	137076	100763		1989	N-E	GOV
228	DUMP TRUCK	FIAT (IVECO)	4-18841	137221	100856		1988	Main D.	GOY EIPRD
229	I DUMP TRUCK	FIAT (IVECO) 330-3	UN 1852 4-805	197205 197140	4024285 4024283	\	1987	E	EIPRD
230	DUMP TRUCK DUMP TRUCK	FIAT (IVECO) FIAT (IVECO)	4-18842	137252	100857	ļ	1988	Main D	GOV
231 232	DUMPER	YOLYO 861	UN 1756	82153	59896	SDR392, 26		S-E S-E	UNCDF
233	DUMPER	VOLVO 861	UN 1757 4-14749	83281 5078575	59905 110809	 	1987 1988	S-E	GOV
234	DUMP TRUCK	SCANIA 92H	4-14/49	1 2010919	1 110009	•	,	, 2	

G-1: Inventory of Construction Equipment for SSID Project(4/5)

	-			Facilia	Chasses	Cost	Deliv'	Location	Donner
Seri. No	Machinary Type	Model	Serial Number	Engine Number	Number	in Brr	Year	Deliv'd	inance
1111	1 7 P C		111111111111111111111111111111111111111						
235	DUMP TRUCK	SCANIA 92H	4-18351	5078922	1132302	171, 671	1988	N-W	GOV
236	DUMP TRUCK	SCANTA 9211	4-18352	5079357	1132587 1132595	171,671	1988 1988	S	GOV
237	DUMP TRUCK	SCANIA 92H	4-18353	5079118 5079358	1132588		1988	s	GOV
238	DUMP TRUCK	SCARIA 92H	4-18354 4-18355	5079139	1132586	1	1988	W	GOV
239	DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18356	5078756	1132320		1988	l ë	GOV
240 241	DUMP TRUCK DUMP TRUCK	SCANIA 92H	4-18357	5078972	1132362		1988	N-W	GOV
242	DUMP TRUCK	SCANIA 9211	4-18358	5078954	1132556		1988	C	GOV
243	DUMP TRUCK	SCANIA 92H	4-18359	5079017	1132321		1988	N-W	GOV
244	DUMP TRUCK	SCANIA 92H	4-18360	5079355	1132571		1988	S	GOV
245	DUMP TRUCK	SCANIA 92H	4-18361	5079361	1132602		1988	S	GOV
246	DUMP TRUCK	SCANIA 92H	4-18362	5078755	1132343 1132733		1988 1988	G E	GOV
247	DUMP: TRUCK	SCANIA 92H	4-18363 4-18364	5078590 5078571	1131818		1988	R.D	GOV
248	DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18365	5078816	1132318		1988	S-W	GOV
249 250	DUMP TRUCK DUMP TRUCK	SCANIA 92H	4-18366	00,0010			1988	3	COV
251	DUMP TRUCK	SCANIA 9211	4-18367	5079018	1132346		1988	₩-W	GOV
252	DUMP TRUCK	SCANIA 92H	4-18368	5079012	1132277		1988	M.D	COV
253	DUMP TRUCK	SCANIA 92H	4-18369	5078928	1132305		1988	E	GOV -
254	DUMP TRUCK	SCANIA 92H	4-18370	5078762	1132344		1988	C	GOV
255	DUMP TRUCK	SCANIA 92H	4-18371	5079016	1131902		1988	S	GOV
256	DUMP TRUCK	SCANIA 92H	4-18372	5078828	1132359		1988	X-₩	GOV
257	DUMP TRUCK	SCANIA 9211	4-18373	5078764	1131862	1:.	1988 1988	Main D. S-E	GOV
258	DUMP TRUCK	SCANIA 92H	4-18449	5078946 5078924	1132555 1132279	1 1	1988	S-E	COV
259	DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18374 4-18375	5078757	1132105		1988	S-W	GOV
260	DUMP TRUCK DUMP TRUCK	SCANIA 92H	4-18376	2010101		. '	1988	Main D.	GOV
261 262	DUMP TRUCK	SCANIA 92H	4-18377		1131863	l :	1988	Main D.	GOV
263	DUMP TRUCK	SCANIA 92H	4-18378	5078765			1988	N-₩	GOV
264	DUMP TRUCK	SCANIA 92H	4-18379	5078591	1131777		1988	E	GGY
265	DUMP TRUCK	SCANIA 92H	4-18380	5078400	1131434		1988	S-W	GOV
266	DUMP TRUCK	SCANIA 92H	4-18381	5078415	1131432		1988 1986	E S-₩	GOV
267	DUMP TRUCK	SCANIA 92R	4-18382 4-18383	7077289 5078575	1131391 1131390	.*	1988	S-W	COV
268	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18384	5078430	1131387		1988	S-W	GOV
269 270	DUMP TRUCK	SCANIA 92H	4-18385	5078433	1131861	5.11	1988	E	GOV
271	DUMP TRUCK	SCANIA 92H	4-18386	5078429	1131375		1988	E	GOV
272	DUMP TRUCK	SCANIA 92H	4-18387	5078570	1131376		1988	Ė	COV
273	DUMP TRUCK	SCANIA 92H	4-18388	5078228	1132017		1988	Main D.	GOV
274	DUMP TRUCK	SCANIA 92H	4-18389	5078759	1131861		1988	N-W	GOV
275	DUMP TRUCK	SCANIA 92H	4-18390	5078423	1131380	ł : .	1988	S-E	GOV
276.	DUMP TRUCK	SCANIA 92H	4-18391	5078923	1132304		1988	S-E	COV
277	DUMP TRUCK	SCANIA 92H	4-18392	5079127	1132594		1988 1988	C-S N-E	GOV
278	DUMP TRUCK	SCANIA 92H	4-18431 4-18432	5078565 5078431	1131376 1131382	1 1	1988	N-E	GOV
279	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18433	2010421	1131778/1131385		1988	N-E	COV
280 281	DUMP TRUCK	SCANIA 92H	4-18434	5078576	113389	· •	1988	S	SOV
282	DUMP TRUCK	SCANIA 92H	4-18435	5078594	1131781		1988	N-E	GOV
283	DUMP TRUCK	SCANIA 92H	4-14748	5078654	1108232		1988	N-E	COV
284	DUMP TRUCK	SCANIA 92H	4-18436		1131779		1988	N-E	GÓV
285	DUMP TRUCK	SCANIA 92H	4~18438	5078926	1132345		1988	S	COV
286	DUMP TRUCK	SCANIA 92H	4-18439	5078916	1131004		1988	S-E	COV
287	DUMP TRUCK	SCANIA 92H	4-18440	5078921	1132148		1988 1988	N-E Main D.	GOV
288	DUMP TRUCK	SCANIA 92H	4-18441	5078920 5079014	1132276 1132278		1988	N-E	GOV
289 290	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18443 4-18444	5078956	1132557	}	1988	l "s"	GOV
290 291	DUMP TRUCK	SCANIA 92H	4-18445	5079184	1132570	1 to 1	1988	N-E	GOV
292	DUMP TRUCK	SCANIA 92H	4-18446	5079120	1132593		1988	N-E	GÓV
293	DUMP TRUCK	SCANIA 92H	4-18447	5078591	1131337		1988	S-E	GOV
294	DUMP TRUCK	SCANIA 92H	4-18448	5078599	1131735		1988	C	GOV
295	DUMP TRUCK	SCANIA 92H	4-18450	5078415	1131432		1988	E	GOV
296	DÙMP TRUCK	SCANTA 92H	4-18451	5078568	1131734	l :•	1988	S	GOV
297	DUMP TRUCK	SCANIA 92H	4-18452	5078917	1131903		1988	S-E	GOV GOV
298	DUMP TRUCK	SCANIA 92H	4-18453	5078819	1132319	' '	1988	S-E	GOV
299	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18454 4-18455	5079136 5078122	1132572 1132601	·	1988	S-E	GOV
300 301	DUMP TRUCK	SCANIA 92H	4-18456	5078930	1132360		1988	S	GOV
302	DUMP TRUCK	SCANIA 92H	4-18457	5079362	1132603		1988	S	GOV
303	DUMP TRUCK	SCANIA 92H	4-18437	23,000	210000	(1	-	GOV
304	FLAT BED	SCANIA 92H	4-18442	50708815	1132186		1988	C	GOV
305	STATION WAGON	NISSAN	14560			31, 411	1985	N X	JAPAN
306	STATION WAGON	NISSAN	14561	1596128	780148	31, 411	1985	C	JAPAN
307	STATION WAGON	NISSAN	14562	1596092	780089	31,411	1985	S	JAPAN
308	STATION WAGON	NISSAN	15397	169186	781338		1985	Main D.	
309	STATION WAGON	HISSAN	14859	1596093	780072	1	1985	S-W S-E	JAPAN
310	STATION WAGON STATION WAGON	NISSAN NISSAN	15398 18460	169264 001251	781338 100240	31,411	1987	N N	JAPAN JAPAN
311 312	STATION WAGON	NISSAN	18461	000169	100249	31, 411		N-E	JAPAN
1 214	STUTTAN BURGAL		10101	000100	1 1007.10	f Artary	1 1000	1 "4 2	. 4.3

G-1: Inventory of Construction Equipment for SSID Project(5/5)

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Seri.	Machinary	Model	Serial	Engine					
No.	Туре		Number	Rumber	Chasses	Cost		dlocation	
			NOWDY!	<u>unaner</u>	Number	in Brr	Year	Deliv'd	<u>linance</u>
313	STATION WAGON	NISSAN	18462	001587	100004			1	
314	STATION WAGON	HISSAN	18463	001504	100294	31, 411	1988	Main D.	JAPAN
315	STATION WAGON	TOYOTA	21448	1197686	100286	31, 411	1988	E	JAPAN
316	STATION WAGON	TOYOTA	21601	1107504	048174			C-S	JAPAN
317	STATION WAGON	TOYOTA	4-16997	1197524	048130			N-₩	JAPAN
318	STATION WAGON	TOYOTA	19384	1154081	040847			₩	JAPAN
319	STATION WAGON	TOYOTA		1109202	031459		1985	Main D.	UNCDE
320	STATION WAGON	TOYOTA	19493	1109039	031446	i	1985	Main D.	UNCDE
321	STATION WAGON	TOYOTA	19152	8899688	021021	1	1985	S	UNCDF
322	STATION WAGON	TOYOTA	19170 UN 1686	0899688	021032	1	1985	Main D.	UNCDF
323	STATION WAGON	TOYOTA	UN 1691	1123732	035265		1987	Main D.	EIPRD
324	STATION WAGON	TOYOTA		1123921	035322		1987	C-S	EIPRD
325	STATION WAGON	TOYOTA	UN 1765 UN 1766	1115008	911437	·	1987	E	EIPRD
326	STATION WAGON	NISSAN		1115678	911460		1987	E	EIPRD
327	STATION WAGON	NISSAN	22856 22857	038982	107639		1991	Main D.	UNCDF a
328	STATION WAGON	NISSAN		038900	107645		1991	Main D.	UNCDF o
329	STATION WAGON	NISSAN	22564	029009	105672	1	1990	Main D.	IFAD
330	PICK-UP D. CABIN	ISUZU	22697	029714	105619		1990	S-E	_ IFAD
331	PICK-UP D. CABIN	ISUZU	4-18458	280349	7100038	18,000	1988	S	JAPAN
332	PICK-UP D. CABIN	10070	4-18459	280348	7100037	18,000	1988	S-W	JAPAN
333		ISUZU	4-18464	229870	7100040	18,000	1988	S-W	JAPAN
334	PICK-UP D. CABIN	ISUZU	4-18465	280888	7100035	1	1988	N~E	JAPAN
334	PICK-UP D. CABIN	ISUZU ISUZU	4-18466	280351	7100034	1.	1988	Main D.	JAPAN
335 336	PICK-UP D. CABIN	12070	4-18467	279950	7100039	İ	1988	N-W	JAPAN :
330	PICK-UP D. CABIN	ISUZU	18469		7200010		1988	E	JAPAN
337	PICK-UP D. CABIN	ISUZU	18470	280209	7100011		1988	C-S	JAPAN
338	PICK-UP D. CABIN	ISUZU	18471	280219	7100041		1988	E	JAPAN
339	PICK-UP D. CABIN	ISUZU	18472	280347	7100036		1988	N-E	JAPAN
340	PICK-UP D. CABIN	TOYOTA	19168	1626074	0071081		1988	S	UNCDF
341	PICK-UP D. CABIN	TOYOTA	19169	1623267	0070984	1	1988	N-W	UNCDF
342	PICK-UP D. CABIN STATION WAGON	TOYOTA	19196	1628671	5071203		1988	Main D.	UNCDF
343	SIATION WAGON	NISSAN	22856	038982	107639		1991	Main D.	UNCDF
344	STATION WAGON	NISSAN	22857	038900	107645	İ	1991	Main D.	UNCDF
345	STATION WAGON	NISSAN	22564	029009	105672	l	1990	Main D.	IFAD
346	STATION WAGON	NISSAN	22697	029714	105619	ł	1990	S-F	IFAD
347	STATION WAGON	NISSAN		01108			1990	E	İFAD
348	PICK-UP D. CABIN	TOYOTA	21449	1854299	0009416	1	1990	¥	JAPAN
349	PICK-UP D. CABIN	TOYOTA	21450	1853756	0009934			S-E	JAPAN
350	PICK-UP D. CABIN	TOYOTA	21451	178609	0010133		1989	Main D.	JAPAN
351	PICK-UP D. CABIN	TOYOTA	21452	1861011	0009999	1	1989	E	JAPAN
352	PICK-UP D. CABIN	LANDROVER	16801		306790	1	1987	Main D.	EEC
353	PICK-UP D. CABIN	LANDROVER	16802	306712	311757	į.	1987	[C]	EEC
354	PICK-UP D. CABIN	LANDROYER	16803		306879	1	1987	N-W	EEC -
355	PICK-UP D. CABIN	LANDROVER	16804	357380	306872	1	1987	W	EEC
356	PICK-UP D. CABIN	LANDROVER	16805	362210	308594		1987	Main D.	EEC
357	PICK-UP D. CABIN	LANDROVER	16806	35623	308579		1987	W	EEC
358	PICK-UP D. CABIN	TOYOTA	19759	68030	0013971	ļ		S	UNCDF
359	PICK-UP D. CABIN	TOYOTA	UN 0693	1127539	0013960	ŀ		C-S	UNCDF
360	PICK-UP D. CABIN	TOYOTA	UN 0697	1127577	0023911		}	S	UNCDE
361	PICK-UP D. CABIN	TOYOTA	UN 1674	1106515	006384	1	11	N-₩ .	UNCDF
362	PICK-UP D. CABIN	TOYOTA	UN 0972	1123530	0012789	1	1986	E	EIPRD
363	PICK-UP D. CABIN	TOYOTA	UN 1578	11233928	19892	1	1986	E	EIPRD
364	PICK-UP D. CABIN	NISSAN	4-19654	1106673	000643	l	1986	C	SWISS
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G-2: Inventory of Construction Equipment for SSID Project in Main Department

No.	Seri. No.	Machinary Type	Hode l	Serial Number	Engine Number	Chasses Number	Cost in Brr	Delly'd Year	Donner	Remarks
1	38	LOADER	KONATSU WA380-1	11234	29893		243, 735	1989	JAPAN	out of order
2	55	LOADER	KOMATSU D57-S	08578	25922		711, 213	1986 1988	UNCDE	chain loader
3	92	SCRAPER TRUCK SEMI-TRAILED	KOMATSU WS166S NISSAN CWA45	3007 4-18247	127228		182, 438	1988	JAPAN	
5	133 134	TRUCK SEMI-TRAILED	NISSAN CWA45	4-18249	018060	01876	182, 438	1988	JAPAN	
6	135	TRUCK SEMI-TRAILED	NISSAN CWA45	4-18864	0.000	10186	212, 511	1988 1989	JAPAN JAPAN	1
7	136	TRUCK SEMI-TRAILED	HINO SS633SA HINO SS633SA	4-21832 4-21833	24804 24863	10171	212, 611	1989	JAPAN	
8	137	TRUCK SEMI-TRAILED TRUCK SEMI-TRAILED	HINO SS633SA	4-21834	24838	10170	212, 611	1989	JAPAN	[
10	139	TRUCK SEMI-TRAILED	HINO SS633SA	4-21835	24821	10169	212, 611	1989	JAPAN	
11	140	LOW-BED	NISSAN CWA45	4-22356	018525 018523	00179 00180	253, 163 253, 163	1989 1989	JAPAN JAPAN	
12	141	LOW-BED LOW-BED	NISSAN CWA45 RISSAN CWA45	4-22357 4-19397	18007	00169	255, 761	1989	JAPAN	1
14	143	LOW BED	NISSAN CWA45	4-19398	052758	00001	255, 761	1989	JAPAN	
15	144	LOW-BED	SCANIA 112E	4-19863	5295727	1132018		1988	UNCDE	
16	145	TRUCK	VOLVO N7	4-18196 4-19653	131191 131198	010525 010524		1986 1986	UNCDF	[
17 18	146	TRUCK Truck	SCANIA 93H	4-20731	905081344		134, 550	1991	UNCDF	l .
19	148	TRUCK	FlAT	4-16333	205963	17420		1988	GOV	
20	149	TRUCK	FIAT	4-16334	205944 052758	17419 00001	162, 753	1988 1987	GOV JAPAN	[
21	150 151	MOBILE WORKSHOP MOBILE WORKSHOP	NISSAN TFA NISSAN TFA	4-19467 4-19487	002563	15037	162, 753	1987	JAPAN	
23	152	MOBILE WORKSHOP	NISSAN TFA	4-21317	053686	00030	170,775	1989	JAPAN	
24	155	MOBILE WORKSHOP	LANDROVER-110	4~15281	243128	137130		1986	EEC	[
25	156	MOBILE WORKSHOP	LANDROVER-110	4-15282 238011	243123	137160	128, 744	1986 1988	JAPAN	
26 27	161 162	CRANE CRANE	TADANO TS-70ML TADANO TS-70ML	238011			128, 744	1988	JAPAN:	
28	163	CRANE	TADANO TR-230E	530233		2222	309, 690	1989	JAPAN	
29	173	DUMP TRUCK	NISSAN TFA21	4-14581	115195 115129	02087 02064		1987 1987	JAPAN JAPAN	
.30 31	187 208	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN CWA45	4-14595 4-18989	018012	01818		1988	JAPAN	
32	210	DUMP TRUCK	NISSAN CWA45	4-18991	018027	01852		1988	JAPAN	
33	218	DUMP TRUCK	VOLVO N 7	4-19505	172791	012348		1986	UNCDE	
34	219	DUMP TRUCK	VOLVO R 7 VOLVO R 7	4-19311 4-19312	172792 172793	012346 012349		1986 1986	UNCDF	
35 36	220 221	DUMP TRUCK DUMP TRUCK	FIAT (AMCE) 682	4-16476	1,2,30	100658		1989	GOV	ļ.,
37	222	DUMP TRUCK	FIAT (AMCE) 682	4-16477				1989	GOV	
38	228	DUMP TRUCK	FIAT (IVECO)	4-18841	137221	100856 100857		1988 1988	GOV	under EPRDE
39 40	231 248	DUMP TRUCK DUMP TRUCK	FIAT (IVECO) SCANIA 92H	4-18842 4-18364	137252 5078571	1131818		1988	GOV	· .
41	252	DUMP TRUCK	SCANIA 92H	4-18368	5079012	1132277		1988	GOV	
42	257	DUMP TRUCK	SCANIA 92H	4-18373	5078764	1131862		1988	GOV	
43	261	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18376 4-18377		1131863		1988 1988	GOV	under repair
44 45	262 273	DUMP TRUCK	SCANIA 92H	4-18388	5078228	1132017		1988	GOV	
46	288	DUMP TRUCK	SCANIA 92H	4-18441	5078920	1132276	·	1988	GOV	1
47	308	STATION WAGON	NISSAN	15397 18462	169186 001587	781338 100294	31, 411	1985 1988	JAPAN JAPAN	
48 49	313	STATION WAGON STATION WAGON	NISSAN TOYOTA	19384	1199202	031459	31, 411	1985	UNCDF	
50	319	STATION WAGON	TOYOTA	19493	1109039	031446		1985	UNCDF) .
51	321	STATION WAGON	TOYOTA	19170	0899688	021032		1985	UNCOF	
52 53	322 326	STATION WAGON STATION WAGON	TOYOTA NISSAN	UN 1686 22856	1123732 038982	035265 107639	** * *	1987 1991	LIPRD	or IFAD/ADF
54	327	STATION WAGON	NISSAN	22857	038900	107645		1991	UNCDF	or IFAD/ADF
55	328	STATION WAGON	RISSAR	22564	029009	105672		1990	IFAD	
56	334	PICK-UP D. CABIN PICK-UP D. CABIN	ISUZU TOYOTA	4-18466 19196	280351 1628671	7100034 5071203		1988 1988	JAPAN UNCDF	
57 58	342 343	STATION WAGON	NISSAN	22856	038982	107639		1991	UNCDF]
59	344	STATION WAGON	HISSAN	22857	038900	107645	**	1991	UNCDE	
60	345	STATION WAGON	NISSAN	22564	029009	105672		1990 1983	JAPAN	
61	350 352	PICK-UP D. CABIN PICK-UP D. CABIN	TOYOTA LANDROVER	21451 16801	178609	0010133 306790		1987	EEC]
63	356	PICK-UP D. CABIN	LANDROVER	16805	362210	308594		1987	EEC	}
64	78	GRADER	FIATALLIS FG85		759847	14800396		1988	GOV	
65	79	GRADER	FIATALLIS FG85		759848 759854	14S00397 14S00398		1988 1988	GOV	
66 67	80 81	GRADER GRADER	FIATALLIS FG85 FIATALLIS FG85		759854 760044	14800399	: 1	1988	GOV	1
68	82	GRADER	FIATALLIS FG85		780043	14800400		1988	COV	1
69	84	GRADER	FlATALLIS FG85		758892	14800402		1988	GOV	
70	85	GRADER GRADER	FIATALLIS FG85 FIATALLIS FG85		759892 759828	14S00403 14S00404		1988 1988	GOV GOV	1
71 72	86	GRADER	FIATALLIS FG85		730221	14S00404		1988	GOV	
73	95	BACK-HOE LOADER	VOLVO 646	:	36125	8462		1988	UNCDE	
74	96	BACK-HOE LOADER	VOLVO 646	4-15496	62327	2988	·	1987	UNCDF	
75 76	166 303	WATER BOWSER DUMP TRUCK	LEYLAND 411 SCANIA 92H	4-15436 4-18437	8640082	00697		1301	GOV	but of orde
77	88	EXCAVATOR	MITSUBISHI MS140	2470	6D 389424				JAPAN	under repai
78	40	LOADER	FURUKAWA FL330-1		1		129,000	1988	HAPAN	Assab
- !	İ		l	L			l	i	l	J

G-3: Inventory of Construction Equipment for SSID Project in Central Zone

	Seri.	Machinary	Model	Serial	Engine	Chasses	Cost	Deliv'd	Donner	Remarks
No.	No.	Туре		Number	Number	Number	in Brr	Year		
		nga garaga salahan Bartin	ROMADON ASED	7						
1	11	Bulldozer	KOMATSU D65E	34724	26169221		ĺ	?	JAPAN	
2	13	Bulldozer	KOMATSU D75A	50180	130297		286, 965	1988	JAPAN	
3	14	Bulldozer	KOMATSU D75A	50181	30298		286,965	1988	JAPAN	:
4	20	Bulldozer	FIATALLIS FD20	008992	008974			1987	GOV	
5	22	Bulldozer	FIATALLIS FD20	008999	.009000		İ	1987	GOV	
6	32	Bulldozer	FIATALLIS FD20	003013	009060		}	1987	GOY	
7	41	LOADER	VOLVO 4400	33203	82042	3796	196, 813	1986	UNCDF	
8	56	LOADER	KOMATSU D57-S	08579	25921		,	1986		chain loade
9	65	COMPACTOR	DYNAPAC CA25PD	7049320	7049320		Ì	1987	UNCDE	
10	103	TRACTOR	KUBOTA M7500	52069	36660			1988	JAPAN	
11	108	TRACTOR	KUBOTA M7500	52074	36658		ł	1988	JAPAN	Į
12	168	WATER BOWSER	NISSAN CWA45	4-21890	018521	02008	113,060	1990	JAPAN	
13	172	WATER BOWSER	ZIL 5-130	4-14788	528912	2437852	170,000	1986	GOV	
14	174	DUMP TRUCK	NISSAN TFA21	4-14582	115134	02067	1	1987	JAPAN	, i
15	175	DUMP TRUCK	NISSAN TFA21	4-14583	115131	02058	1	1987	JAPAN	ŀ
16	176	DUMP TRUCK	NISSAN TFA21	4-14584	114113	02066	ŀ	1987	JAPAN	4.
17	188	DUMP TRUCK	NISSAN TFA21	4-14596	115141	02067	1	1987	JAPAN	Ι.
18	189	DUMP TRUCK	NISSAN TFA21	4-14597	115126	02062	1	1987	JAPAN	
19	191	DUMP TRUCK	NISSAN TEA21	4-14599	115138	02069	ł	1987	JAPAN	Į.
20	203	DUMP TRUCK	NISSAN CWA45	4-18984	018023	01861		1988	JAPAN	
21	206	DUMP TRUCK	NISSAN CWA45	4-18987	018025	01859	1	1988	JAPAN	
22	216	DUMP TRUCK	NISSAN CWA45	4-21799	018532	02002	1	1988	JAPAN	,
23	217	DUMP TRUCK	NISSAN CWA45	4-21780	010002	02003		1988	JAPAN	
24	242	DUMP TRUCK	SCANIA 92H	4-18358	5078954	1132556	1	1988	GOV	ļ
25	246	DUMP TRUCK	SCANIA 92H	4-18362	5078755	1132343	1	1988	GOV	}
26	254	DUMP TRUCK	SCANIA 92H	4-18370	5078762	1132344	1	1988	GOV	
27	294	DUMP TRUCK	SCANIA 9211	4-18448	5078599	1131735	[1988	GOV	Į
28	304	FLAR BED	SCANIA 92H	4-18442	50708815	1132186		1988	GOV	
29	306	STATION WAGON	NISSAN	14561	1596128	780148	31, 411	1985	JAPAN	1
30	353	PICK-UP D. CABIN	LANDROVER	18802	306712	311757	1 31, 411	1987	EEC.	[
31	364	PICK-UP D. CABIN	NISSAN	4-19654	1106673	000643	1	1986	SWISS	}
ا 1،	304	LION-OL D. ONDIN	II LOOMII	4-13034	1100013	000043		1300	04100	

G-4: Inventory of Construction Equipment for SSID Project in Central-south Zone

Seri No: No.		Model	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Donner	Remarks
1 1 2 3 4 5	Bulldozer Bulldozer Bulldozer Bulldozer Bulldozer COMPACTOR GRADER SCRAPER TRACTOR MOBILE GREASING PLAN DUMP TRUCK STATION WAGON STATION WAGON PICK-UP D. CABIN	CAT DEC CAT DED CAT DED CAT DED CAT DED CAT DED CAT DTG DYNAPAC CA25 CAT 120G CAT 623E KUBOTA M7500 MISSAN TEA41 MISSAN TFA21 SCANIA 92H TOYOTA TOYOTA ISUZU TOYOTA	20X 04661 31X 03780 31X 03782 31X 03784 92V 12464 575740 87V 07541 6CB00843 52075 4-19455 4-14591 4-18392 21448 UR 1691 18470 UN 0693	13Z 08303 10Z 09020 10Z 09022 10Z 09024 8Z 23722 7049328 17711920 70V 29771 052758 115198 5079127 1197686 1123921 280209 1127538	00001 02085 1132594 048174 035322 7100011 0013960	513, 000 65, 571	1986 1985 1986 1986 1985 1987 1987 1987 1987 1988 1987 1988	UNGDF JAPAN JAPAN JAPAN UNCDF JAPAN UNCDF JAPAN JAPAN JAPAN GOV JAPAN EIPRD JAPAN UNCDF	

G-5: Inventory of Construction Equipment for SSID Project in Eastern Zone

	Seri.	Machinary	Model	Serlal	Engine	Chasses	Cost	Deliv'd	Donner	Remarks
No.	No.	Туре		Number	Number	Number	in Brr	Year		
1	16	Bulldozer	KOMATSU D75A	50183	30300		286, 965		JAPAN	
2	24	Bulldozer	FIATALLIS FD20	009002	008976			1987	GOV	•
3	25	Bulidozer	FIATALLIS FD20	009003	009003			1987 1987	GOV	
4	30	Bulldozer	FIATALLIS FD20	009010 009014	009053			1987	GOV	
5	33 34	Bulldozer Bulldozer	FIATALLIS FD20 FIATALLIS FD20	009015	009059 009054			1987	GOV	
7	43	LOADER	l BENATI 22SB	222322		· ·		1987	GOV	
8	46	LOADER	BENATI 22SB	222325 222328				1987	GOV	
9	49	LOADER	BENATI 22SB	222328				1987	GOV	
10 11	51 59	LOADER COMPACTOR	BENATI 22SB	222330 10020	0617153	· .		1989	JAPAN !	i e
12	60	COMPACTOR	SAKAI SV91CT SAKAI SV91CT	10021	0617159			1989	JAPAN I	1.11
13	63	COMPACTOR] CAT CB-521	6RD 00017		4 July 3.79		1987	EIPRD	
14	64	COMPACTOR	CAT CB-521	6RD 00018	C1211C		175, 500	1987 1989 J	EIPRD APAN	
15	72	GRADER	MITSUBISHI-MG350	6G000230 6G000187	517116 517099		175, 500	1989	JAPAN	
16 17	73 76	GRADER GRADER	MITSUBISHI-MG350 FIATALLIS FG85	44Y00266	759358		1.0,000	1988	EIPRD	
18	77	GRADER	FIATALLIS FG85		759675	44Y00264		1988	EIPRD	
19	83	l GRADER	FIATALLIS FG85		759829	14800401		1988	GOV	
20	90	EXCAVATOR	HITACHI EX200	11051015	118407	145-36120	148, 440	1988 1988	JAPAN GOV	
21	98	BACK-HOE LOADER BACK-HOE LOADER	3300T 3300T	11951015 11951016				1988	GOV	
22 23	99 100	BACK-HOE LOADER	3300T	11951018				1988	GOV	
24	126	TRACTOR	I FIAT AGRI	411068	106679			1 1	EIPRD	, d
25	127	l TRACTOR	FIAT AGRI FIAT AGRI	411069	105997				EIPRD	!
26	128	TRACTOR	FIAT AGRI	411070	110329 110140		·		EIPRD EIPRD	
27	129	TRACTOR TRACTOR	FIAT AGRI FIAT AGRI	411084	110469]		EIPRD	100
28 29	130 131	TRACTOR	FIAT AGRI	411079 411157	110033			1 1	EIPRD	
30	132	TRACTOR	FIAT AGRI FIAT AGRI	411066 UN1891	106825	40.560			EIPRD	
31	153	MOBILE WORKSHOP	LF1AT-IVECO 190.26	UN1891	197328	4024305	28, 552	1987	EIPRD	
32	154	HOBILE WORKSHOP	FIAT-IVECO 190.26	4-00804 4-15434	197388 8640086	4024304 00683	US\$13, 793	1987 1987	EIPRD EEC	
33 34	164 165	WATER BOWSER WATER BOWSER	LEYLAND 411 LEYLAND 411	4-15435	8640080	00698		1987	EEC	
35	167	WATER BOWSER	LEYLAND 411	4-15437	8648874	00661		1987	ELC	
36	177	DUMP TRUCK	NISSAN TFA21	4-14585	115213	02088	,	1987	JAPAN	
37	:178	DUMP TRUCK	NISSAN TFA21	4-14586	115135	02060		1987	JAPAN	out of order
38	190	DUMP TRUCK	NISSAN TFA21	4-14598 4-18974	115125 018015	02053 01819	90, 792	1987 1989	JAPAN JAPAN	
39	193	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18975	018031	01858	30, 132	1989	JAPAN	
40 41	194 195	DUMP TRUCK	NISSAN CWA45	4-18976	018018	01845	ĺ	1989	JAPAN	
42	196	DUMP TRUCK	NISSAN CWA45	4-18977	018033	01851		1989	JAPAN	
43	197	DUMP TRUCK	NISSAN CWA45	4-18978	018029	01854		1989	JAPAN	
44	198	DUMP TRUCK	NISSAN CWA45	4-18979	018026 018010	01853 01846		1989 1989	JAPAN JAPAN	
45	199	DUMP TRUCK DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18980 4-18982	018028	01860		1989	JAPAN	
46	201 202	DUMP TRUCK	NISSAN CWA45	4-18983	018030	01855		1989	JAPAN	
48	207	DUMP TRUCK	NISSAN CWA45	4-18988	018022	01845	ļ ·	1988	JAPAN	
49	211	DUMP TRUCK	NISSAN CWA45	4-18992	018021	01850	60 200	1988	JAPAN	
50	212	DUMP TRUCK	NISSAN CWA45 Flat (ANCE) 682	4-18993 4-16485	018017 136954	01847 100660	90, 792	1988 1989	JAPAN GOV	
51 52	223 224	DUMP TRUCK DUMP TRUCK	FIAT (AMCE) 682	4-10483	136950	100661		1989	GOV	
53	225	DUMP TRUCK	FIAT (AMCE) 682	4-17483	136913	100700		1989	GOV	Mark
54	229	DUMP TRUCK	FIAT (IVECO)330-30	UN 1852	197205	4024285		1987	EIPRD	
55	230	DUMP TRUCK	FIAT (IVECO)	4-805	197140	4024283	l · ·		EIPRD	ladan zasat
56	240	DUMP TRUCK	SCANIA 92H	4-18356	5078756 5078590	1132320 1132733		1988 1988	GOV GOV	under repai
57 58	247 250	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18363 4-18366	0070080	1100199	1	1988	GOY	}
59	253	DUMP TRUCK	SCANIA 92K	4-18369	5078928	1132305		1988	GOY	
60.	254	DUMP TRUCK	SCANIA 92H	4-18379	5078591	1131777		1988	GOV	
61	266	DUMP TRUCK	SCANIA 92H	4-18381	5078415	1131432]	1988	GOV	
62	270	DUMP TRUCK	SCANIA 92H	4-18385	5078433	1131861	1	1988	GOV	l
63	271	DUMP TRUCK DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18385 4-18387	5078429 5078570	1131375 1131376		1988 1988		under repai
64 65	272 295	DUMP TRUCK	SCANIA 92H	4-18450	5078415	1131432	1	1988	GOV	detective
66	314	STATION WAGON	NASSAN :	18463	001504	100286	31, 411	1988	JAPAN	
67	324	STATION WAGON	TOYOTA	UN 1765	1115008	911437		1987	EIPRD	
68	325	STATION WAGON	TOYOTA	UN 1766	1115678	911460	1:		EIPRD	
69	336	PICK-UP D. CABIN	ISUZU ISUZU	18469	280219	7200010 7100041		1988 1988	JAPAN JAPAN	Į
70 71	338 347	PICK-UP D. CABIN STATION WAGON	NISSAN	18471	01108	1100041	1000	1990	IFAD	
72	351	PICK-UP D. CABIN	ATOYOTA	21452	1861011	0009999	1	1989	JAPAN	\
73	362	PICK-UP D. CABIN	TOYOTA	UN 0972	1123530	0012789		1986	EIPRD	1
74	363	PICK-UP D. CABIN	TOYOTA	UN 1578	11233928	19892	156 500	1986	EIPRD]
75	159	MOBILE GREASING PLAN	NISSAN TEA41	4-19468	052757	00002	155, 572	1987	JAPAN	ł ·

N	Seri . No.	. Machinary Type	Model	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Donner	Remarks
	21 23 45 54 112 113 114 169 311	Bulldozer Bulldozer LOADER LOADER LOADER TRACTOR TRACTOR TRACTOR WATER BOWSER STATION WAGON	FIATALLIS FD20 FIATALLIS FD20 BENATI 22SB BENATI 22SB FIAT AGRI FIAT AGRI FIAT AGRI NISSAN CWA45 NISSAN	008998 009000 222324 222333 4-22355 18460	009002 008905 018520 001251	02007 100240	113, 060 31, 411	1987 1987 1987 1987 1987	GOV GOV GOV EEC EEC EEG JAPAN JAPAN	

G-6: Inventory of Construction Equipment for SSID Project in Northern Zone G-7: Inventory of Construction Equipment for SSID Project in Northeastern Zone

	Beri.	Machinary	14 1 2		~					
No.		наситнагу Туре	Mode 1	Serial	Engine	Chasses	Cost	Deliv'd	Donner	Remarks
nu,	10.	Туре		Number	Number	Number	in Brr	Year		
1	8	Bulldozer	CAT DCD							
	9	Bulldozer	CAT D6D	31X 03785	102 09025	1		1986	JAPAN	,
2	27	Bulldozer Bulldozer	CAT D6D	31X 03786	10Z 09026			1986	JAPAN	·
	31		FIATALLIS FD20	009005	008978			1987	GOV	
4		Bulldozer	FIATALLIS FD20	009011	009053			1987	GOV	
5	53	LOADER	BENATI 22SB	222332				1987	GOV	
6	57	COMPACTOR	SAKAI SV91CT	10024			113, 160	1989	JAPAN	
7	58	COMPACTOR	SAKAI SV91CT	10023			113, 160	1989	JAPAN	
8	66	COMPACTOR	DYNAPAC CA25PD	56015			,	1989	JAPAN	
y	97	BACK-HOE LOADER	3300T	11951014]		1988	GOV	
10	101	BACK-HOE LOADER	3300T	11951195	1			1988	GOY	
11	106	TRACTOR	KUBOTA M7500	52072				1988	JAPAN	
12	111	TRACTOR	KUBOTA M7500	72077				1988	JAPAN	
13	117	TRACTOR	FIAT AGRI 8066DT	1 1	110482			1988	EEC	· .
14	179	DUMP TRUCK	NISSAN TFA21	4-14587	115173	02071		1987	JAPAN	
15	180	DUMP TRUCK	NISSAN TFA21	4-14588	115191	02073		1987		out of order
16	181	DUMP TRUCK	NISSAN TFA21	4-14589	115170	02070		1987	JAPAN	out of order
17	182	DUMP TRUCK	NISSAN TFA21	4-14590	115172	02072		1987	TAPAN	out of order
18	184	DUMP TRUCK	NISSAN TFA21	4-14592	115188	02089		1987	JAPAN	Jac or oraci
19	185	DUMP TRUCK	NISSAN TFA21	4-14593	115125	02086		1987		out of order
20	192	DUMP TRUCK	NISSAN TFA21	4-14600	115187	02090		1987	JAPAN	out of order
21	200	DUMP TRUCK	NISSAN CWA45	4-18981	018024	01856		1989	JAPAN	
22	226	DUMP TRUCK	FIAT (AMCE) 682	4-17485	137069	100764		1989	GOV	
23	227	DUMP TRUCK	FIAT (AMCE) 682	4-17484	137076	100763		1989	GOV	
24	278	DUMP TRUCK	SCANIA 92H	4-18431	5078565	1131376		1988	GOV	*
25	279	DUMP TRUCK	SCANIA 92H	4-18432	5078431	1131382		1988	GOV	
26	280	DUMP TRUCK	SCANIA 92H	4-18433		1131778/1131385		1988	GOV	
27	282	DUMP TRUCK	SCANIA 92H	4-18435	5078594	1131781		1988	GOV	
28	283	DUMP TRUCK	SCANIA 92H	4-14748	5078654	1108232		1988	GOV	
29	284	DUMP TRUCK	SCANIA 92H	4-18436		1131779		1988	GOV	
30	287	DUMP TRUCK	SCANIA 92H	4-18440	5078921	1132148		1988		inder EPRDF
31	289	DUMP TRUCK	SCANIA 9211	4-18443	5079014	1132278		1988	GOV	maor crapi
32	291	DUMP TRUCK	SCANIA 92H	4-18445	5079184	1132570		1988		ınder EPRDF
33	292	DUMP TRUCK	SCANIA 92H	4-18446	5079120	1132593		1988	GOV	most trubi
	312	STATION WAGON	NISSAN	18461	000169	100249	31, 411	1988	JAPAN	
	333	PICK-UP D. CABIN	ISUZU	4-18465	280888	7100035	٠٠, ٠٠٠	1988	JAPAN	
	339	PICK-UP D. CABIN	18020	18472	280347	7100036		1988	JAPAN	
37	115	TRACTOR	FIAT AGR1 65-46	. 10171	200011	110000	į	1988	EEC	
	116	TRACTOR	FIAT AGRI 8066DT		110329			1988	EEC	
-		ranolon	1.1.1 1000 000001		114450			1300	LLU	

G-8: Inventory of Construction Equipment for SSID Project in Northwestern Zone

	Seri. No.	Machinary Type	Model	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Donner	Remarks
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	2 29 35 37 42 61 62 71 105 1235 241 243 256 263 274 305 316 335 341 354 361	Bulldozer Bulldozer Bulldozer Bulldozer LOADER LOADER COMPACTOR COMPACTOR GRADER TRACTOR WATER BOWSER DUMP TRUCK DUMP TRU	CAT D6C FIATALLIS FD20 FIATALLIS FD20 CAT 926 VOLVO 4400 SAKAI SV91CT SAKAI SV91CT KOMSTSU GD511R KUBOTA M7500 ZIL 5-130 SCANIA 92H	20X 04564 009009 009046 8NR 0065 33205 10022 10025 10011 52071 4-14787 4-18351 4-18357 4-18359 4-18378 4-18467 19169 16803 UN 1674	132 08280 008936 009130 45V 52267 80609 32760 568972 5078922 5078972 5079018 5078828 5078765 5078759 1197524 279950 1623267 1106515	6437 2458467 1132302 1132362 1132346 1132359 1131861 048130 7100039 0070984 306879 006384	184, 065 171, 671 31, 411	1986 1987 1987	GOV GOV GOV GOV	under EPRDF under EPRDF under EPRDF under EPRDF detective under EPRDF

G-9: Inventory of Construction Equipment for SSID Project in Southern Zone

No.	Seri. No.	Machinary Type	Model	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Donner	Remarks
			VANATON DECA	50182	30200		286, 965	1988	JAPAN) 1
1	15	Bulldozer	KOMATSU D75A	50216	30299 35624		318, 270	1988	JAPAN	
2	18	Bulidozer	KOMATSU D75A	4240004/3043	32282		310, 210	1988	UNGDE	
3	19	Bulldozer	DRESSER TD15C	009007	00923	14.4		1987	GOV	
4	28	Bulldozer	FIATALLIS FD20	8NR 0064	45V 52266				JAPAN	1 11
5	36	LOADER	CAT 926	000000	474 2550			1987	GOV	
6	44	LOADER	BENATI 22SB	222323				1987	GOV	
7	48	LOADER	BENATI 22SB	222327 6TD 00008				1990	UNCDF	
8	68	COMPACTOR	CAT CB-521	010 00000			*	1990	UNCDF	
9	69	COMPACTOR	CAT CB-521	6TD 00008	8710001531	*		1990	UNCDF	
10	74	GRADER	DRESSER 450E	11958	5710001531		194	1990	UNCDF	
11]	75	GRADER	DRESSER 450E	11959	2/10001320	145-36121	148, 440	1988	JAPAN	
12	89	EXCAVATOR EXCAVATOR	HITACHI EX200	06263	11280 GD31009685	149-20171	140,440	1988	JAPAN	
13	91	EXCAVATOR	KATO HD700SE KOMATSU WS165S	00200	0001009000		154, 305 711, 213	1988	JAPAN	
14	93	SCRAPER	KUMATSU WS165S	3008	127227	·	111,219	1988	TABAR	
15	110	TRACTOR	KUBOTA M7500	52076	36672			1200	JAPAN UNCDF	
16]	118	TRACTOR	FIAT AGRI	413646 413647	236201			1	UNCDF	
17	119	TRACTOR	FLAT AGRI	413647	235635			}	UNCDF	
	120	TRACTOR	FIAT AGRI FIAT AGRI FIAT AGRI FIAT AGRI	413648	235657		100		UNCDE	117
19	121	TRACTOR	FIAT AGRI	413649 413650	235641 235654]	UNCOL	
20	122	TRACTOR	FIAT AGRI	413650	235654				UNCDF	
21	123	TRACTOR	FIAT AGRI	413651	237003				UNCDF	
22	124	ROTSART	FIAT AGRI	413645					UNCOF	
23	125	TRACTOR	FIAT AGRI	413652					UNCDF	
24	157	MOBILE WORKSHOP	NISSAN CWA45	4-21316	018531	02003		1988	UNCDF	Trailed
25	186	DUMP TRUCK	NISSAN TFAZI	4-14594	115145	02065	4.1	1987	JAPAN	
26	204	DUMP TRUCK	NISSAN CWA45 NISSAN CWA45	4-18985	018013	01817		1988	JAPAN	
27	205	DUMP TRUCK	NISSAN CWA45	1 4-18986	018020	01849		1988	JAPAN	
28	209	DUMP TRUCK	NISSAN CWA45	4-18990 4-21794 4-18352 4-18354	018009	01849 01851 02004 1132587		1988	JAPAN	
29	213	DUMP TRUCK DUMP TRUCK	NISSAN CWA45	4-21794	018527 5079357	02004	86, 406	1988	JAPAN	
30	236	DUMP TRUCK	SCANIA 92H	4-18352	5079357	1132587	171, 671	1988	GOV	
31	238	DIIMP TRUCK	SCANIA 92H	4-18354	! 5079358	1132588		1988	GOV	under repai
32	244	DUMP TRUCK	SCANIA 92H	1 4-18360	5079355 5079361	1132571		1988	GOV	1
13	245	DUMP TRUCK	SCANIA 92H	4-18361	5079361	1132602	,	1988	GOV	
34	255	DUMP TRUCK	SCANIA 92H	4-18361 4-18371	5079016	1131902		1988	GOV	1
35	281	DUMP TRUCK	SCANIA 92H	4-18434 4-18438	5078576 5078926	113389		1988	GOV	}
36	285	DUMP TRUCK	SCANIA 92H	4-18438	5078926	1132345		1988	GOV	
7	290	DUMP TRUCK	SCANIA 92H	4-18444	5078956	1132557	1	1988	GOV	
8	296	DUMP TRUCK	SCANIA 9211	4-18451	5078956 5078568	1131734	,	1988	GOV	detective
38	299	DUMP TRUCK	SCANIA 92H	4-18451 4-18454	5079136	1131734 1132572	l	1988	GOV	
10	301	DUMP TRUCK	SCANIA 92H	4-18456	5078930	1132360	1	1988	GOV	detective
	302	DUMP TRUCK	SCANIA 92H SCANIA 92H	4-18457	5079362	1132603		1988	GOV	
11	307	STATION WAGON	NISCAN	14569	1596092	780089	31, 411	1985	JAPAN	
	309	STATION WAGON	NISSAN NISSAN	14562 14859	1596093	780072	1	1985	JAPAN	1
13		STATION WAGON	TOYOTA	10152	8899688	021021	1	1985	UNCDE	Į.
44	320	PICK-UP D. CABIN	TOYOTA ISUZU TOYOTA	19152 4-18458 19168	280349	7100038	18,000	1988	JAPAN	l
45	330	PICK-UP D. CABIN	TOVOTA	10101	1626074	0071081	10,000	1988	UNCDE	· ·
46	340	UIGN-IID U GYBIN Elou.al Provatu	TOVOTA	19759	68030	0013971] .	1,000	UNCDE	1
17	358	PICK-UP D. CABIN	TOYOTA TOYOTA	UN 0697	1127577	0023911	1	1	UNCDF	}
48	360	PICK-UP D. CABIN	TOTOLA	ו עסט אט ן	114/9//	1 0053311	Į.	1	DUODE	

G-10: Inventory of Construction Equipment for SSID Project in Southeastern Zone

Ι.		ri.	Machinary	Model	Serial	Engine	Chasses	Cost	Deliv'd	Donner	Remarks
N	0. N	0	Type		Humber	Musber	Number	in Brr	Year		
	1123456678890112234456678890112234456678890112234456678890112234566788901122344566	4 12 26 47 550 02 04 07 60 70 70 73 33 33 34 58 59 77 76 86 86 89 89 89 89 89 89 89 89 89 89 89 89 89	Bulldozer Bulldozer Bulldozer Bulldozer Bulldozer Bulldozer Bulldozer LOADER LOADER LOADER TRACTOR TRACTOR TRACTOR MOBILE GREASING PLAN WATER BOWSER DUMPER DUMP TRUCK DUMP TRUC	CAT D6D KOMATSU D65E FIATALLIS FD20 BENATI 22SB BENATI 22SB BENATI 22SB KUBOTA M7500 KUBOTA M7500 KUBOTA M7500 NISSAN TEA41 ZIL 5-130 VOLVO 861 VOLVO 861 VOLVO 861 SCANIA 92H	31X 03781 34725 009004 222326 222329 222331 52068 52070 52073 4-21318 4-14799 UN 1756 UN 1757 4-14749 4-18449 4-18459 4-18494 4-18453 4-18453 4-18453 4-18450 22697 22697 22697	053682 868178 82153 83281 5078575 5078946 5078924 5078924 5078923 5078923 5078917 5078819 5078819 507817	00029 2457946 59896 59806 110809 1132555 1132279 1131380 1132304 1131337 1131903 1132319 1132601 781338 105619 105619	in Brr 153,014 SDR392,260	1986 ? 1987 1987 1987 1988 1988 1988 1988	JAPAN JAPAN GOV GOV JAPAN JAPAN JAPAN JAPAN JAPAN JAPAN UNCDF UNCDF GOV GOV GOV GOV GOV GOV GOV GOV GOV GOV	

G-11: Inventory of Construction Equipment for SSID Project in Southwestern Zone

No.	Seri. No.	Machinary Type	Mode I	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Y <u>ear</u>	Donner	Remarks
2	249 260 265 267 268 269 331 332	DUMP TRUCK DUMP TRUCK DUMP TRUCK DUMP TRUCK DUMP TRUCK DUMP TRUCK DUMP TRUCK PICK-UP D. CABIN PICK-UP D. CABIN	SCANIA 92H SCANIA 92H SCANIA 92H SCANIA 92H SCANIA 92H SCANIA 92H SCANIA 92H ISUZU ISUZU	4-18365 4-18375 4-18380 4-18382 4-18383 4-18383 4-18469 4-18464	5078816 5078757 5078400 7077289 5078575 5078430 280348 229870	1132318 1132105 1131434 1131391 1131390 1131387 7100037	18, 000 18, 000	1988 1988 1988 1988 1988 1988 1988 1988	GOV GOV GOV GOV JAPAN JAPAN	

G-12: Inventory of Construction Equipment for SSID Project in Western Zone

No.	Seri. No.	Machinary Type	Mode I	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Donner	Remarks
1 2 3 4 5 6 7 8 9 10 11	6 17 39 214 215 237 239 317 346 355 357	Bulldozer Bulldozer LOADER DUMP TRUCK DUMP TRUCK DUMP TRUCK DUMP TRUCK STATION WAGON PICK-UP D. CABIN PICK-UP D. CABIN	CAT D6D KOMATSU D75A KOMATSU WA380-1 NISSAN CWA45 SCANIA 92H SCANIA 92H TOYOTA TOYOTA LANDROVER	31X 03783 50201 11235 4-21795 4-21797 4-18353 4-18355 4-16997 21449 16804 16806	10Z 09023 35625 29898 018526 018530 5079118 5079139 1154081 1854299 357380 35623	02000 02001 1132595 1132586 040847 0009416 306872 308579	318, 270 86, 406 86, 406	1950 1988 1988 1988 1988 1988 1988 1988	JAPAN JAPAN JAPAN JAPAN JAPAN GOV GOV JAPAN JAPAN EEC EEC	

G-13: Inventory of Construction Equipment for SSID Project by Japanese Assistance (1/2)

		· · ·	the state of the s		· ''				<u> </u>	
No.	Seri. No.	Machinary Type	Model	Serial Number	Engine Number	Chasses Number	Cost in Brr	Deliv'd Year	Location	Remarks
1	3	Bulldozer	CAT D6D	31X 03780	102 09020		ļ.	1985	c-s	
2	4	Bulldozer	CAT D6D	31X 03781	10Z 09021]	1986	S-E	
3	5	Bulldozer	CAT DED	31X 03782	102 09022		1	1986	C-S	
4	6	Bulldozer	CAT DGD	31X 03783	10Z 09023			1986	Ţ	
	7	Bulldozer	CAT DED	31X 03784	102 09024			1986	C-S	
5 6	8	Bulldozer	CAT DGD	31X 03785	102 09025]	1986	N-E	
7	l ğ	Bulldozer	CAT DED	31X 03786	102 09026		1	1986	N-E	
8	1 i	Bulldozer	KONATSU DESE	34724	26169221			?	C	
9	12	Bulldozer	KONATSU D65E	34725	26169212			?	S-E	
10	13	Bulldozer	KONATSU D75A	50180	130297		286, 965	1988	C	
11	14	Bulldozer	KONATSU D75A	50181	30298		286.965	1988	· C ·	
12	15	Bulldozer	KONATSU D75A	50182	30299	**	286.965	1988	S	
13	16	Bulldozer	KONATSU D75A	50183	30300		286.965	1988	E	•
. 4	17	Bulldozer	KONATSU D75A	50201	35625		318, 270	1988	S	
15 16	18	Bulldozer	KONATSU D75A	50216	35624		318, 270	1988	S	
	36	LOADER	CAT 926	8NR 0064	45V 52266			1988	N-W	
17	37	LOADER	CAT 926	8NR 0065	45V 52267 29893		243, 735	1989	Main D.	mechnization
18	38	LOADER	KONATSU WA380-1	11234	29898		240, 100	1989	Wall D.	mccutt154(100
19	39	LOADER	KONATSU WA380-1	11235	23030		129.000	1988	Assab	Assab
20	40	LOADER	FURUKANA FL330-1 SAKAI SY91CT	10024			113. 160	1989	N-E	20000
21 22	57 58	COMPACTOR COMPACTOR	SAKAI SYSICT	10023	[113, 160	1989	N-E	
23	59	COMPACTOR	SAKAI SYSICT	10020	0617153			1989	E	
24	60	COMPACTOR	SAKAI SYSICT	10021	0617153	,		1989	Ē	
25	61	COMPACTOR	SAKAI SV91CT	10022			!	1989	N-¥	
26	62	COMPACTOR	SAKAI SYSICT	10025	[1989	N-1	
27	66	COMPACTOR	DYNAPAC CA25PD	56015			!	1989	N-E	
28	67	COMPACTOR	DYNAPAC CA25	575740	7049328		ļ	1989	≎-S	
29	71	GRADER	KONSTSU GD511R	10011	32760		184.065	1988	N - W	
30.	72	GRADER	NITSUBISHI-NG350	6G000230	517116		175.500	1989	E :: :	
31	73	GRADER	WITSUBISHI-NG350	60000187	517099		175, 500	1989	Ε	
32	88	EXCAYATOR	MITSUBISHI MS140	2470	6D 389424				Addis A.	under repair
33	89	EXCAVATOR	HITACHI EX200		11280	145-36121	148.440	1988	S	
34	90	EXCAYATOR	HITACHI EX200	00000	118407	145-36120	148, 440	1988	E S	
35 36	91	EXCAYATOR	KATO HD700SE	06263	GD31009685		154, 305	1988	Main D.	***************************************
	92	SCRAPER ,	KONATSU VS165S	3007	127228 127227		711, 213	1988	S S	· i
37	93	SCRAPER SCRAPER	KONATSU VS1658 CAT 623E	3008 6CB00843	70Y 29771	**	513,000	1991	c-s	
38 39	94	TRACTOR	KUBOTA N7500	52068	141 8411		7.79.792.	1988	S-E	
40	103	TRACTOR	KUBOTA N7500	52069	36660			1988	C	
41	104	TRACTOR	KUBOTA N7500	52070			!	1988	S-E	ļ.,
42	105	TRACTOR	KUBOTA N7500	52071		1.0		1988	N - N	
43	106	TRACTOR	XUBOTA 37500	52072				1988	N-E	
44	107	TRACTOR	KUBOTA W7500	52073				1988	S-E	
45	108	TRACTOR	KUBOTA N7500	52074	36658		}	1988	C	r i
46	109	TRACTOR	KUBOTA N7500	52075	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1988	C-S	
47	110	TRACTOR	KUBOTA M7500	52076	36672			1988	S	
48	111	TRACTOR	KUBOTA N7500	72077		 		1988	N-E	
49	133	TRUCK SENI-TRAILED	NISSAN CVA45	4-18247	010000	0.400	182, 438	1988	Main D.	
50	134	TRUCK SENI-TRAILED	NISSAN CVA45	4-18249	018060	01876	182, 438	1988	Main D.	
51	135	TRUCK SENI-TRAILED	NISSAN CVA45	4-18864	04004	10.00	010 011	1988	Main D.	
52	136	TRUCK SENI-TRAILED	HINO SS633SA	4-21832	24804	10186	212, 611	1989	Main D.	
53	137	TRUCK SENI-TRAILED	HINO SS633SA	4-21833	24863	10171	212,611	1 1989	Main D. Main D.	,
54	138	TRUCK SENI-TRAILED	HINO SS633SA HINO SS633SA	4-21834 4-21835	24838 24821	10170 10169	212, 611 212, 611	1989 1989	Main D.	
55	139	TRUCK SENI-TRAILED LOW-BED	NISSAN CVA45	4-21035	018525	00179	253, 163	1989	Main D.	
56 57	140 141	LOW-BED	NISSAN CVA45	4-22357	018523	00180	253, 163	1989	Main D.	
58	142	LOW-BED	NISSAN CVA45	4-19397	18007	00169	255, 761	1989	Main D.	
59	143	LOW-BED	NISSAN CWA45	4-19398	052758	00001	255, 761	1989	Main D.	
60	150	MOBILE WORKSHOP	NISSAN TFA	4-19467	052758	10000	162.753	1987	Wain D.	
61	151	NOBILE WORKSHOP	NISSAN TFA	4-19487	002563	15037	162, 753	1987	Main D.	61, 1
62	152	MOBILE WORKSHOP	NISSAN TFA	4-21317	053686	00030	170, 775	1989	Main D.	<u> </u>
63	158	MOBILE GREASING PLAN	NISSAN TEA41	4-19455	052758	00001	65, 571	1987	C-S	
64	159	MOBILE GREASING PLAN	NISSAN TEA4I	4-19468	052757	00002	155, 572	1987	F	
65	160	MOBILE GREASING PLAN	NISSAN TEA41	4-21318	053682	00029	153,014	1989	S-E	
66	161	CRANE	TADANO TS-70NL	238011]	}	128, 744	1988	Main D.	
67	162	CRANE	TADANO TS-70NL	238012	the stage of the	l la la la la la la la la la la la la la	128, 744	1988	Main D.	
	163	CRANE	TADANO TR-230E	530233			309, 690	1989	Main D.	
68	100 1									
	168	WATER BOWSER WATER BOWSER	NISSAN CVA45 NISSAN CVA45	4-21890 4-22355	018521 018520	02008 02007	113,060 113,060	1990	C T	

G-13: Inventory of Construction Equipment for SSID Project by Japanese Assistance (2/2)

	Seri.	Machinary	Node1	Serial	Engine	Chasses	Cost	Deliv'd	location	Remarks
No.	No.	Type		Number	<u> Number</u>	Number	ia Brr	Year		
11	173	DUMP TRUCK	NISSAN TFA21	4-14581	115195	02087		1987	Main D.	
72	174	DUMP TRUCK	NISSAN TFA21	4-14582	115134	02067		1987	C	
73	175	DUMP TRUCK	NISSAN TFA21	4-14583	115131	02068		1987	c	
74	176	DUNP TRUCK	NISSAN TFA21	4-14584	114113	02066		1987	C	
15	177	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14585 4-14586	115213	02088		1987	E	the manual days
76	178	DUMP TRUCK	NISSAN TFA21	4-14587	115135	02060 02071		1987 1987	E N-E	burn out/ooo
17 78	180	DUMP TRUCK	NISSAN TFA21	4-14588	115191	02073	'	1987	N-E	turned over/ooo
79	181	DUMP TRUCK	NISSAN TFA21	4-14589	115170	02070		1987	N-E	burn out/ood
80	182	DUMP TRUCK	NISSAN TFA21	4-14590	115172	02072	,	1987	N-E	turned over/ooo
81	183	DUMP TRUCK	NISSAN TFA21	4-14591	115198	02085		1987	C-S	
82	184	DUMP TRUCK DUMP TRUCK	NISSAN TFA21 NISSAN TFA21	4-14592	115188	02089		1987	N-E	المناز المارات
83	185 186	DUNP TRUCK	NISSAN TFAZI	4-14593 4-14594	115125 115145	02086 02065	•	1987 1987	N-E S	turned over/ooo
84 85	187	DUNP TRUCK	NISSAN TFA21	4-14595	115129	02064		1987	Main D.	
86	188	DUMP TRUCK	NISSAN TFA21	4-14596	115141	02067	} 	1987	C	
87	189	DUMP TRUCK	NISSAN TFA21	4-14597	115126	02062		1987	C	
88	190	DUMP TRUCK	NISSAN TFA21	4-14598	115125	02053		1987	E	
89	191	DUNP TRUCK	NISSAN TFA21	4-14599	115138	02069		1987	C	
90	192	DUMP TRUCK	NISSAN TFA21 NISSAN CVA45	4-14600	115187	02090	00 200	1987	N-E	
91	193.	DUMP TRUCK DUMP TRUCK	NISSAN CVA45	4-18974 4-18975	018015	01819 01858	90.792	1989 1989	E	•
92 93	194 195	DUNP TRUCK	NISSAN CVA45	4-18976	018018	01845	1	1989	3	
94	196	DUMP TRUCK	NISSAN CVA45	4-18977	018033	01851	ļ ·	1989	E	
95	197	DUMP TRUCK	NISSAN CVA45	4-18978	018029	01854		1989	E	
96	198	DUNP TRUCK	NISSAN CKA45	4-18979	018026	01853	1	1989	E	
97	199	DUMP TRUCK	NISSAN CYA45	4-18980	018010	01846	İ	1989	E_	
98	200	DUNP TRUCK	NISSAN CYA45	4-18981	018024	01856		1989	N-E	
99	201	DUMP TRUCK DUMP TRUCK	NISSAN CVA45 NISSAN CVA45	4-18982 4-18983	018028 018030	01860 01855	1	1989 1989	E E	
100	202 203	DUMP TRUCK	NISSAN CYA45	4-18984	018023	01861		1988	Č	
101	204	DUMP TRUCK	NISSAN CVA45	4-18985	018013	01817)	1988	s-c	
103	205	DUMP TRUCK	NISSAN CYA45	4-18986	018020	01849	İ	1988	S-C	
104	206	DUNP TRUCK	NISSAN CRA45	4-18987	018025	01859	}	1988	C	
105	207	DUMP TRUCK	NISSAN CHA45	4-18988	018022	01845	1.	1988	E	
106	208	DUNP TRUCK	NISSAN CYA45	4-18989	018012	01818 01851		1988	Main D. S-C	
107	209	DUNP TRUCK	NISSAN CVA45 NISSAN CVA45	4-18990 4-18991	018009 018027	01852		1988	Main D.	
108	210 211	DUMP TRUCK DUMP TRUCK	NISSAN CVA45	4-18992	018021	01850		1988	E	Į
109	212	DUMP TRUCK	NISSAN CTA45	4-18993	018017	01847	90,792	1988	E	
111	213	DUNP TRUCK	NISSAN CWA45	4-21794	018527	02004	86.406	1988	S	
112	214	DUMP TRUCK	NISSAN CTA45	4-21795	018526	02000	86, 106	1988	¥	,
113	215	DUMP TRUCK	NISSAN CYA45	4-21797	018530	02001	86, 406	1988	T C	
114	216	DUMP TRUCK	NISSAN CVA45	4-21799	018532	02002	\	1988 1988	c	
115	217	DUMP TRUCK	NISSAN CWA45 NISSAN	4-21780 14560		02003	31,411	1985	N - W	
116	305 306	STATION VACON STATION VACON	NISSAN	14561	1596128	780148	31,411	1985	C	-
118	307	STATION WAGON	NISSAN	14562	1596092	780089	31.411	1985	S	
119	308	STATION WAGON	NISSAN	15397	169186	781338		1985	Rain D.	1
120	309	STATION WAGON	NISSAN	14859	1596093	780072	1	1985	S.¥ S-E	1
121	310	STATION VACON	NISSAN	15398	169264	781338 100240	31,411	1987	T T	{
122		STATION VACON	NISSAN NISSAN	1846G 18461	000169	100249	31.411	1988	N-E	1
123 124	312 313	STATION VACON STATION VACON	NISSAN .	18462	001587	100294	31, 411	1988	Main D.	1
125	314	STATION WAGON	NISSAN	18463	001504	100286	31.411	1988	E	1
126	315	STATION WAGON	KTOYOT	21448	1197686	048174			C-S	
127	316	STATION WAGON	TOYOTA	21601	1197524	048130	i	1	N-1	
128	317	STATION VACON	TOYOTA	4-16997	1154081	040847	18, 000	1988	S	
129	330	PICK-UP D. CABIN	ISUZU	4-18458	280349 280348	7100038	18,000	1988	S-Y	
130	331	PICK-UP D. CABIN	18020	4-18459	229870	7100031	18.000	1988	S-T	
131	332	PICK-UP D. CABIN	ISUZU ISUZU	4-18465	280888	7100035		1988	N-E	
133	333	PICK-UP D. CABIN PICK-UP D. CABIN	18020	4-18466	280351	7100034	1	1988	Main D.	
134	335	PICK-UP D. CABIN	ISUZU	4-18467	279950	7100039		1988	N-T	
135	336	PICK-UP D. CABIN	ISUZU	18469		7200010		1988	E	
136	337	PICK-UP D. CABIN	ISUZU	18470	280209	7100011		1988	C-S	
137	338	PICK-UP D. CABIN	ISUZU	18471	280219	7100041 7100036		1988 1988	E N-E	
138	339	PICK-UP D. CABIN	ISUZU	18472	280347 1854299	0009416	1	1990	"Y"	
139	348	PICK-UP D. CABIN	TOYOTA TOYOTA	21449	1853756	0009934		1500	S-E	
140 141	349 350	PICK-UP D. CABIN PICK-UP D. CABIN	TOYOTA	21451	178609	0010133	1	1989	N.D	
142		PICK-UP D. CABIN	TOYOTA	21452	1861011	0009999		1989	E	1
L'	1 11 20			<u> </u>	J	1	L			4
felip	-	VRIDNI, NJ21								•

[FILE : INVRIDUD. NJ2]

[|] J. WJ2 | /ooo = out of order | / Ooo = Aural Infrastructure Development Main Department of MOA | Station. Main D. = Rural Infrastructure Development Main Department of MOA | N : Northern zone (Wekele), E : Eastern zone (Harar), N-E : North Eastern zone (Dese) | N-W : North Western zone (Bahar Dar), W : Western zone (Mekemte), C : Central zone (Addis Ababa) | C-S : Central South zone (Nazaret), S-E : South Eastern zone (Asela), | S-W : South Western zone (Jimma), S : Southern zone (Awasa)

G-14: Present Status of Equipment for SSID Project by Japanese Assistance

٠	location i	Fastern	pra	1−.	-	N	6	Couthern	١.	3	Mac	Wastorn	0	U	2	Contral	No+h	1	A N	1	Maria Date	1	-	-	
		5) (5)	5	0	S	0	10			3	T _G		3	0				ı		3		·	6
J	Bulldozer	0	 ,	0		0	-	2	2	0	╁		-	2	, 0	~	, 0	-	0	7	2	0		1	9
1					-					J	_			,			•••••						-	750	710
L	Wheel Loader	0	0	0	1	, C	0	0		0	0	0	0		0	0	0	0	0	0	2 G	0	(c) (c)	950	750
I	Motor Grader	0	7	0	0	0	0	0	0	0	0	0	0		0	0	C)	0	0			0	l	200	640
f	Motor Scraper	0	0	0		 O	0	0	0	0	1 (1)		0	0	0	မ	(1)	ဖ	0	0		0	ري د	500	006
L	Dump Truck	0	15	0 0	0 0	4(2)	၈၀	0 0	1.0	0 (1	$\frac{1}{(1)}$		0	0	0	ဖ	2 (2	ထ	0	0	က	7 ~	(5)		
·	Hydro. Scraper	0	0	0		0	. 2	0) : 0	0 0	0	0	0	0	0	0	0,	0	0	0	12	[009	
l	Mobile Workshop	0	0	0	0	0	0	0	Ö	0	0 0	0	0	0	0	0	0	0	0	0) 	(2)	3		
<u></u>	Mobile Greas's Plant	C	0	0	-1	0	0	0	1	0	0	0 0	0	⊷	0	0	0	0	0	0	 O		m		
L	Semi-trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	g (3)	0	99		
l	Water Tanker	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0		0	0	0	0	2		
	Station Wagon		0	0	2	0	- E	0	2	0	1	0	0	1	0	0	0		1 (1)	-1	2	0	(2)		: .
I	pick-up		(1)	0	1		73	0		0	1	0 0	0	-		0	0	0	0	(E)	,	2)	14 (5)		:
·	Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	2		(E)		
	Vibro-Roller	0	7	0	, -	0	0	0	0	0	0	0 0	0	1	0 .		0	0 .	0	2	⊷ 7	0	(3)	009	970
	Agri. Tractor	0	0	T (E)	2	- (3)		o ' ;	0	0	0	0 0	0		1 (3)		0	0	0	1	0	T (F)	10 (4)		
·	Total	2	(2)	1	11	9 (3)	8 (2)	0	8	0	4 (2)	9 0	1	∞ .	(1)	12	(1)	∞ .	1 (1)	(1)	23 (2) (8 13	139 (26)		
	GRAND TOTAL		24		12		14		90			9		တ		4		10		-		31	139		
	Note: G: Garage S: Store (): Number of Machinery	Масһ	liner		& ···· € @⊖	-	Annual Op Japanese repaired	Operational e Standard	erationa Standard		. ₹	0 °C)													

H. : CONSTRUCTION VOLUME AND COST

H-1: Construction Volume

H-2: Construction Volume (Northern Zone)

H-3: Construction Volume (North-Eastern Zone)

H-4: Construction Volume (North-Western Zone)

H-5 : Construction Volume (Western Zone)

H-6: Construction Volume (South-Western Zone)

H-7: Composition of Unit Cost

H-8: Unit Cost

				Earth Works				Concrete Works	Works
Equipment	Bulldozer W	Wheel Loade	Backhoe Loader	Vibro	Motor	Dump Truck	Motor	Stone	Concrete
Unit	т3	EE	m3	Dam Works	TOTO E	cr.	1907 Tangr	Crusner m3	MIXEL
Weir/Pump Type	Type							0111	
Avarage Ir	'.''!	of Weir	System 171.	4ha					
Intake	5, 400	2,880	720		90,000	3. 500		730	730
M-Cana1	29, 456	11, 782	3, 314		3,682	22, 828			
S-Canal	22, 970	9, 188	459		4, 594	13, 782			
I-Canal									
Droinne	36 36					:			
N Fluid	00. 200		17, 978		17, 978				
Critical							-	1,872	1,872
Dir. Ber						1 1		614	614
Dags Stails								2,664	2,664
TOP STIUC.								8, 592	8, 592
Trunout Trum Dood	000	.07						1, 709	1, 709
TOTAT	10 T 0 23	30.481		,	5, 609	46, 555			
101AL	199	74, 331	22, 471		121,863	86, 765	0	16, 182	16, 182
Auantity/na	202	434	131		711	506	0	94	94
Dam Type									
Avarage Irrigati	Tigation Area	of Dam System	stem 286 1ha	84					
Pacilities			15		000 00	000 100	100 400		
Spillway			200		30, 000	257,033	158, 435	0	
Intake	12,600	6.720	7, 680			001		3, 113	3, 113
M-Cana1	51.184	20.474	5, 758		8 3 9 8	30 568		067	
S-Canal	18,690	7,476			3. 738	11.214			
T-Canal						1			
C-Drain	30, 938		15, 469		15, 469				
No. Flume								432	482
Culvert								912	912
Shute									
DivBox								1 440	1 440
Drop									
Turnout			•					96	98
Farm Road	56.090	56, 090			4,633	41,990			
TOTAL	48	302, 087	39,847	1	120, 238	323, 165	158, 495	13,659	13,659
Ones + i + i / h.		-							

Construction Volume (Northern Zone)

	REMAEK																										
TOTAL		300	2			510, 128	316,763	41, 783	2	126,080	338,866	166, 196	_	•		-	_	1	1	-	_		1	1	1	14, 323	14, 323
16/96		0	0			0	0	0	0	0	0	0	1	1		_		_	1	1	_	_	_		1	0	0
92/36		0	0			0	0	0	0	0	0	0	•	1	!	_			±.	1	_		1	ı	1	0	0
94/95	Даш	200	1			340, 085	211, 176	27,856	1	84,053	225, 910	110,797	i.	ì	•	_	1	-	I	_	-	ī	1	1	1	9, 549	9,549
93/94	Dam	100	1			170,043	105, 588	13, 928	1	42,027	112, 955	55, 399	ı	1	1	1	1	•	-	-		1	1	1	1	4, 774	4.774
(:				Dam Type	Quantity/ha	1, 700	1,056	139		420	1,130	554	1			1	1	1	-	1		-	1		1	48	48
tion Schedule (year		(ha)		Unit	ď	m3	113	т3	Dam Works	rž E	8⊞	т3	Const. Works	Const. Works	ha	Machine	Const. Works	Const. Works	Const. Works	Const. Works	Machine	Const. Works	Const. Works	Machine Dam Works	Const. Works	m3	m3
Implementation Sc	Intake Type	Irrigation Area (Construction Unit			Bulldozer	Wheel Loader	Backhoe Loader	Wibro Compactor	Motor Grador	Dump Truck	Motor Scraper	ower		Tractor	Trailor	Truck	rkshop	Mobil Grasing (r Cycle	Crane	(agon		hine	ator	Stone Crusher	Concrete Mixer
				Item											On-farm		Suport Works					Suport Works		Inspection		Concrete Works Stone Cr	

: Construction Volume (North-Eastern Zone)

									_					-							-						
	REMARK																										
TOTAL		965	9			875, 369	418, 494	126, 514	0	686, 101	488, 496	_	1.	-		1	T:	l	ł	-	l	1	-	ı	_	91, 104	91, 104
86/97	l	0	0 .			0	0	0	0	0	.0		<u> </u>	1	_	_		1	1	1	1	ì	1	1	-	0	0
95/36	Weir	300	1			272, 135	130, 102	39, 331	0	213, 296	151,864		-	1	1	_	1	1	1	1	1	i	-	1	_	28.323	28, 323
94/95	Weir	280	တ			253, 993	121. 428	36, 709	0	199,076	141,740	_	-	-	1	1	1	l	1	1	1	Į.	1	1	ı	26, 434	26, 434
93/94	Weir	385	2			349, 240	166,964	50,475	0	273, 730	194, 892	_	1	1	1	1	1	1	1	1	ì	1	1	1	١	36, 347	36, 347
r)				Weir Type	Quantity/ha	907	434	131		711	508	0	•	1	ì	ľ	i	1	1	1	I	Í	ł	l	ı	94	76
ation Schedule (year)		(ha)		Unit	S	т3	m3	т3	Dam Works	mX	ш3	m3 (Const. Works	Const. Works	ha	Machine	Const. Works	Const. Works	Const. Works	Const. Works	Machine	Const. Works	Const. Works	Machine Dam Works	Const. Works	ш3	m3
Implementation Sc	Intake Type	on Area	Construction Unit			Bulldozer	Wheel Loader	Backhoe Loader	Wibro Compactor	Motor Grador	Dump Truck	Motor Scraper	rower	oller	Tractor	Trailor	×	rkshop			Crane	Moon	dn-	Drilling Machine	ator		Concrete Mixer
1.1		I	ඊ	Item		Earth Works									On-farm	Suport Works								Inspection	ļ	Concrete Works Stone Crusher	2000

H-4 : Construction Volume (North-Western Zone)

	REMARK		akening n		· Paine																						
TOTAL		3, 237	25			2, 976, 006	1.434.907	424, 788	-	2, 286, 926	1, 669, 780	27, 699	1	_	i	1	_		1		I,	1	1	l	•	303, 257	303, 267
16/96	Weir .	752	80			682, 153	326, 121	98, 589	0	534, 661	380, 673	0	-	1	-	_		•		I	1	1	1	ı	1	70,995	70, 995
92/36	Weir	795	ഹ			121, 159	344, 769	104, 227	0	565, 234	402,440	0	ŀ	1	1	1		-	1	T		_	1		1	75,055	75,055
94/95	Weir	1,140	∞			1,034,114	494, 386	149,457	0	810,524	577,083	0	_	1	1	1.	-	1	1	#			1		1	107, 626	107, 626
	Total	550	4			538, 580	269, 630	72, 515	ş4	376,506	309, 584	27, 699	1	1	•	1	1	1	•	•	1	1	ī		1.	49, 591	49, 591
93/94	Dam	50	1			85,021	52, 794	6,964	1	21,013	56, 478	27, 699	ı	ľ	-	1	-	1	1	_	-	1	1		1	2, 387	2, 387
	Weir	200	3		:	453, 559	216,836	65, 551	0	355, 493	253, 107	0	-	1		1		1			-	1	1	•	1	47, 204	47, 204
				Dam Type	uantity/ha	1, 700	1,056	139	1	420	1, 130	554	_	1	1	-	1	1	I	_	_	ı	1		1	48	48
(ر				Weir Type	Quantity/haQuan	206	434	131	1	711	506	0	1	-	_	1	1		1	_	ı	-	1	-	-	94	94
hedule (year		(ha)		Unit	Ö	т3	шŝ	m3	Dam Works	Κπ	т3	m3	Const. Works	Const. Works	ha	Machine	Const. Works	onst. Works	Const. Works	Const. Works	Machine	Const. Works	Const. Works	Dam Works	Const. Works	т3	ш3
Implementation Schedule (year)	Intake Type	Irrigation Area (Construction Unit	Equipment		Bulldozer	Wheel Loader	Backhoe Loader	Wibro Compactor	Motor Grador	Dump Truck	Motor Scraper		Wark Roller K		Trailor	Truck	Mobil Workshop Const. Works	Mobil Grasing C	. 1	Crane	Station Wagon Const. Works	Pick-up (Drilling Machine Dam Works	Generator	Stone Crusher	Concrete Mixer
)	Item		Earth Works									On-farm	Suport Works								Inspection		Concrete Works Stone Crusher	

: Construction Volume (Western Zone)

	REMARK																										
TOTAL		1,185	6			1,074,935	513,901	155, 357	0	842, 518	599,863	0	1	-	Ì	-	-	1	t	1	i	1	1	-	1	111,874	111.874
78/98	Weir	580	3			526, 128	251, 530	76.040	0	412, 372	293, 604	0	-	_		1	1	1	I	1	ì	!	1		1	54, 757	54, 757
95/36	Weir	255	2			231, 315	110,586	33, 431	0	181, 301	129, 084	0		1	•	\$	1	1	1	;	3	١	1	,		24,074	24,074
94/95	Weir	140	1			126, 996	60, 714	18,354	0	99, 538	70,870	0	1	-	-	1	1	1	1	_	 I	1	1	1	1	13, 217	13, 217
93/94	Weir	210	3			190, 495	91, 071	27, 532	0	149, 307	106,305	0	1	1	1	1	1	1	1	l	I	1	į.	l	l	19,826	19,826
				Weir Type	Quantity/ha	907	434	131	_	711	506	0	1	-	-	-	-	-	1	1	-	1	-	1	-	94	94
tion Schedule (year		ha)		Unit	Ö,	m3	m3	m3	Dam Works	kπ	т3	m3	Const. Works	Const. Works	ha	Machine	Const. Works	Const. Works	Const. Works	Const. Works	Machine	Const. Works	Const. Works	Machine Dam Works	Const. Works	m3	т3
mplementation Sc	Intake Type	Irrigation Area (ha)	Construction Unit	Equipment		Bulldozer	Wheel Loader	Backhoe Loader	Wibro Compactor	Motor Grador	Dump Truck	Motor Scraper	Water Brower		Tractor	Trailor		dous:			пе	Wagon	dn-	Drilling Machine	ator	Concrete Works Stone Crusher	Concrete Mixer
			C	ltem		Earth Works									On-farm	Suport Works								Inspection	1	Concrete Works	

H-6 : Construction Volume (South-Western Zone)

	REMARK																										
TOTAL		1. 200				1,088,541	520,407	157, 323	0	853, 183	607, 456	0	1	***		1		1		1		1	*	1		113, 290	113, 290
16/96	Weir	0	0			0	0.	0	0	0	0	0	ł	1	_	1	_	1	_	-	_		ł	1	-	0	0
95/36	Weir	310	2			281, 207	134, 438	40,642	0	220, 406	156,926	0	1	i	1	1	-	-		-		_	_	1.	1	29, 267	29, 267
94/95	Weir	715	4			648, 589	310,076	93, 738	0.	508, 355	361,943	0	1	1	_	1	1	1	1	J	**	•	1	1	1	67, 502	67, 502
93/84	Weir	175	Ţ			158, 746	75,893	22, 943	0	124, 423	88, 587	0		1	•		4						•	ì	1	16, 521	16, 521
T)				Weir Type	Quantity/ha	- 307	434	131	1	711	506	0	-	1	-	_	_	_	1	I.		.1.	-	-	-	₹6	94
hedule (year)		(ha)		Unit	<u>C</u>	m3	33	m.3	Dam Works	kт	m3 (m3	Const. Works	Const. Works	ha	Machine	Const. Works	Const. Works	Const. Works	Const. Works	Machine	Const. Works	Const. Works	Machine Dam Works	Const. Works	т3	т3
Implementation Schedule	Intake Type		Construction Unit			Bulldozer	Wheel Loader	Backhoe Loader	Wibro Compactor	Motor Grader	Dump Truck	Motor Scraper			or	Trailor	Truck	Mobil Workshop Const. Works	Mobil Grasing (ycle	Crane	Fagon	dn-	hine	ator	Stone Crusher	Concrete Mixer
				tem		Earth Works									On-farm	Suport Works								Inspection	1	Concrete Works Stone Cr	

H-7 : Composition of Unit Cost

:			Purc		osts	Tra	ansport Co		Furnished
- '			Out-tax	Tax	With-tax		Inter-lo	Total	on sites
====	Materials I		Birr	Birr	Birr	Birr	Birr	Birr	Birr
	Clear's top soil	m2	0	0	0	.====== 0	====== 0	0	0
	Exc. earth	m3	Õ	ő	0	0	0	0	0
	Exc. soft rock	m3	0	0	ő	0	0	0	0
	Exc. sound rock	m3	Ô	ő	0	0	0	. 0	0
	Backfill earth	m3	õ	0	. 0	0	0	0	Ô
	Backfill rock	m3	0	ő	0	0	0	0	0
	Compa'd earth fill	m3	Ď	Ď	Ő	. 0	0	. 0	0
	Comp'd rock fill	m3	0	Õ	0	0	0	0	0
	Adjust't side slope	m2	0	ő	0	0	0	0	0
	Grment P. C	·t	Õ	Õ	180	100	150	250	430
	Sand 0.5/5	m3	Õ	0	15	25	0	25	40
	Gravel 10/20	m3	ŏ	ő	60	25	0	25	85
	Crush'd stone 20/100	m3	Õ	ő	60	25	0	25	85
	Stones 100/200	m3	Ŏ	ő	30	25	0	25	55
	Trim'd stone 200	m2	Ö	Ö	80	25	0	25	105
		ocs	0	0	0.2	0.05	0.05	0.1	0.3
		ocs	ŏ	ŏ		0. 2	. 0	0. 2	2
		ocs	0	0	4	4	0	4	8
		ocs	Õ	ő	6	6	Õ	6	12
		ocs	Õ	Õ	8	8	Õ	8	16
		ocs	0	0	10	10	0	10	10
		ocs	Õ	0	15	12	Õ	12	27
		ocs	ő	0	20	15	0	15	35
		ocs	0	ő	25	20	0	20	45
		ocs	0	0	35	25	. 0	25	60
		ocs	0	0	50	30	0	30	80
	Concrete pipe $\phi 100$		Õ	0	80	35	. 0	35	115
	Reinford g iron	kg	0	0	1.5	0 1	0.1	0. 2	17
	Black wire	kg	0	0	2. 5	0.1	0.1	0. 2	2.7
	Galvanized wire	kg	0	0	3	0. 1	0. 1	0. 2	3. 2
	Nails	kg	0	0	3	0.1	0. 1	0. 2	3. 2
	Roofing Nails	kg	0	0	3	0. 1	0. 1	0. 2	3. 2
	Angle iron	kg	Õ	0	3	0. 1	0. 1	0. 2	3. 2
	Flat iron	kg	. 0	0	3	0. 1	0. 1	0. 2	3. 2
			Ö	0	3	0.1	0. 1	0. 2	3. 2
	Shape iron	kg kg	0	0	3	0.1	0. 1	0. 2	3. 2
	Shut Iron		0	0	3	0. 1	0. 1	0. 2	3. 2
	Corgated iron steel	kg	0	0	32	2	2	4	36
	Gabion 1-1-0.5	pc	0	0	48	4	4	8	56
	Gabion 2-1-0.3	pc	0	0	80	4	4	8	88
	Gabion 2-1-1	pc		0	60	3	3	. 6	66
	Iron spindle ϕ 48mm	m2	0	0	3·	0.1	0.1	0. 2	3. 2
	Welding Elechodu	kg	. 0	-		160	0.1	160	3. £ 1760
	Timber	m3	0	0	100 40	100	0	100	44
	Planks 400-25-2. 5	pc	0	0	40 40	4	0	4	. 44
	Logs 400-12.5-5	pc	0		40 5	1	. 0	1	. 44 6
46	Euealyp	рc	0	0	J	i	. 0	1	9

Works		Output MD/U	Salary Br/MD	Cost Birr	Output MD/U	Salary Br/MD	Labor ;; Costs Cost Labor Birr Birr	Costs O-Nead Birr	Cost Tota Bir
1 Clear's top soil	m2	0.00	THE ST. 1	0.00	0. 25	2, 00	0.50 0.50	0, 50	1.
2 Exc. earth	m3	0.00	0.00	0.00	1.00	2.00	2.00 2.00	2, 00	4.
3 Exc. soft rock	m3	0.00	0.00	0.00	4.00	2.00	8.00 8.00		16.
4 Exc. sound rock	m3	0.00	0.00	0.00	8.00	2.00	16.00 16.00	16.00	32.
5 Backfill earth	m3	0.00	0.00	0.00	1.00	2.00	2.00 2.00	2.00	4.
6 Backfill rock	m3 -	0.00	0.00	0.00	1.00	2.00	2.00 2.00	2.00	4.
7 Compa'd earth fill	m3	0.00	0.00	0.00	2.00	2.00	4.00 4.00	4.00	8.
8 Comp'd rock fill	m3	0.00	0.00	0.00	2.00	2.00	4,00 4.00	4.00	8.
9 Adjust't side slope	m2	0.00	0.00	0.00	1.00	2.00	2.00 2.00	2.00	4.
10 Concrete work 150kg	m3	2.00	12.00	24.00	4.00	2.00	8.00 32.00	32.00	64.
11 Concrete work 250kg	m3	2.00	12.00	24.00	4.00	2.00	8.00 32.00	32.00	64.
12 Concrete work 350kg	m3	2, 00	12.00	24, 00	4.00	2.00	8.00 32.00	32.00	64.
13 Marsonry bricks	m2	1.00	12.00	12.00	2.00	2.00	4.00 16.00	16,00	32.
14 Marsonry hole PC ston		0.50	12.00	6.00	1.00	2.00	2.00 8.00	8.00	16.
15 Marsonry stones	m3	2.00	12.00	24.00	4.00	2, 00	8.00 32.00	32.00	64.
16 Plastering 3cm	m2	0. 25	12.00	3.00	0.50	2.00	1.00 4.00	4.00	8.
17 Jointing (concrete)	m2	0.25	12.00	3, 00	0.50	2.00	1.00 4.00	4.00	8.
18 Jointing (tar)	m2	0.25	12.00	3.00	0.50	2.00	1.00 4.00	4.00	. 8.
19 Riprap (dry)	m3	1.00	12.00	12.00	2.00	2. 00	4.00 16.00		32.
20 Riprap (marsonry)	m3	1.50	12.00	18.00	3.00	2.00	6.00 24.00	24.00	48.
21 Placing Culvert ϕ 10	pc	0. 25	12.00	3.00	0.50	2.00			8.
22 Placing Culvert ϕ 15	рc	0. 25	12.00	3.00	0.50	2.00			8.
23 Placing Culvert \$\phi 20	рс	0. 25	12.00	3.00	0, 50	2. 00	1.00 4.00		8.
24 Placing Culvert φ25	pc	0.25	12.00	3.00	0.50	2.00	1.00 4.00		8.
25 Placing Culvert ϕ 30	pc	0. 25	12.00	3. 00	0.50	2.00	1.00 4.00		8.
26 Placing Culvert ϕ 40	pc	0.50		6.00	1.00	2.00	2.00 8.00		16.
27 Placing Culvert ϕ 50	pc	0.50	12.00	6.00	1.00	2.00			16.
28 Placing Culvert ϕ 60	рc	0.50		6.00	1,00	2.00			16.
29 Placing Culvert ϕ 80	pc	0.50	12.00	6.00	1.00	2.00	2.00 8.00		16.
30 Placing Culvert \$\phi\$100	pe	0.50	12.00	6.00	1.00	2.00	2.00 8.00		16.
31 Iron fastening	kg	0.01	12.00	0.12	0.02	2.00	0.04 0.16		0.
32 Form work iron	. kg	0. 10	12.00	1. 20	0. 20	2.00	0.40 1.60		
33 Prep+Inst Iron Gate	kg	0.10	12.00	1. 20	0. 20	2. 00		1. 60	3.
34 Prep+Inst Spindle		1.00	12.00	12.00	2. 00	2.00		16.00	32.
35 Form work wood	m m2	0.50	12.00	6.00	1.00	2.00	2.00 8.00		16.
	m2	1.00	12.00	12.00	2. 00	2.00		The second secon	32.
36 Preptinst wood gate	m2	0.50	12.00	6,00	1.00	2.00		•	16.
37 upporting works		1.00	12.00	12.00	2, 00	2.00			32.
38 Foundation works	m2		12.00	6.00	1.00	2.00	2.00 8.00		16.
39 Inst gabion 1-1-0.5	pc	0.50				2.00	The state of the s		16.
40 Inst gabion 2-1-0.3	pc	0.50	12.00	6.00	1,00				10. 64.
41 Inst gabion 2-1-1	pc	2, 00	12.00	24.00	4.00	2.00	8.00 32.00		32.
42 Inst Filter	m3	1.00	12.00	12.00	2.00	2.00			

H-8: Unit Cost

CD	Work items	CD	Materials	Unit	Qt	UC	Mat. Br	Labour Br	Ben. Br	Tota Br
	clear'g top soil		Soil Varied	m2	======: 1	0	0	======:]	 0	====)
	•		Total	m2	1	0	0	î	ĭ	
2	Exc. earth	2	Soil Varied	m3	1	0	0	4	Ô	
			Total	m3	1	0	0	4	i	,
3	Exc. soft rock	3	Soft Rock	m3	i	0	Õ	16	0	
			Total	m3	1	0	0	16	. 4	20
4	Exc. sound rock	4	Sound Rock	m3	1	0	0	32	0	
	Property of the second		Total	m3	1	0	0	32	8	4
5	Backfill earth	5	Soil Varied	tn 3	1	0	0	4	Ō	-
			Total	m3	1	0	0	4	1	
6	Backfill rock	6	Rock Varied	m3	1	Ö	0	4	ō	
	•		Total	m3	1	0	0	4	1	
7	Compa'd earth fill	7	Rock Varied	m3	1	. 0	0	8	Ō	
	- : :		Total	m3	1	0	0	8	2	1
8 :	Comp'd rock fill	8	Rock Varied	m3	1	0	0	8	0	_
			Total	m3	ī	0	0	8	2	1
9	Adjust't side slope	9	Slope Surface		1	Ō	0	4	õ	_
	•		Total	m2	1	Ô	. 0	4	1	
0	Concrete work 150kg	10	Cement	t	0. 15	430	65	ō	Ô	
			Sand	m3	0.4	40	16	Ō	0	
			garvel	m3	0.8	85	68	0	Ő	
			Total	m3	l	0	149	64	38	25
11	Concrete work 250kg	10	Cement	t	0. 25	430	108	0	0	
•	control work brong		Sand	m3	0.4	40	16	0	Õ	
			garvel	m3	0.6	85	51	ő	0	
			Crush'd stone		0. 3	85	26	Õ	Õ	. 2
	and the second second		Total	m3	1	0	201	64	51	31
2 1	Concrete work 350kg	10	Cement	t	0. 35	430	151	0	0	٠,
	powerote work occus		Sand	m3	0. 4	40	16	0	Õ	
			garvel	m3	0.8	85	68	Ö	0	
		10	Total	m3	1	0	235	64	59	35
2	Marsonry bricks	10	Cement 250kg	t	0.012	430	6	0	0	•
. 0 1	mar sour a prices		Sand	m3	0.05	40	2	Õ	Õ	
			bricks	pc	100	0.3	30	0	Ō	
		. 10	Total	m3	1	0.0	38	32	10	8
.1 1	Marsonry hole PC stones	10	Cement 250kg	t	0.012	430	6	0	0	
4 1	waisonly hore to stones		Sand	m3	0.05	40	2	0	0	
					15	2	30	ő	0	
		10	bricks	рс m3	10	Õ	38		10	6
٠.		10	Total		0. 125	430	54		0	,
0.1	Marsonry stones		Cement 250kg	t m²	0. 123	.40	20		0	
			Sand	m3	1.0	55	22		0	
			stones	m3 2	0.4					Ą
		6.1	Trim'd stone	m3 9	0.4	105	42		95	
1.4			Total	m3	0.010	0	138		35	23
.6	Plastering 3cm		Cement 400kg	ŧ	0.012	430	6		0	
		11	Sand	m3	0.03	40	2		0	
٠, ١	According to the control of the cont		Total	m3	l =======	0	8	8	2]

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(Cont.)

		٠.				· · · · · · · · · · · · · · · · · · ·	- m		nazab	
CD	Work items	CD		Unit	Ωt	UC		Labour Br		
:=s==s=	FECTERESEES	UU =====	5202020202					======	2222	
17 Joi	nting (concrete)	10	Cement 400kg	t	0.004	430	1	0	0	0
		11	Sand	m3	0.01	40	1	. 0	0	. 0
			Total	m3	1	0	2	8	1	- 11
18 Joi	nting (tar)	47	Tar	kg	1	. 0	0	0	0	. 0
			Total	m2	1	0	. 0		0	0
19 Rip	rap (dry)	12	gravel	m3	0. 2	85	17		0	(
	† .	14	stones	m3	0.8	55	44	0	0	(
•			Total	m3	1	0	61		15	108
20 Rip	rap (marsonry)		Cement 250kg		0.075	430	32	. 0	0	
			Sand	m3	0.3	40	12	0	0	
			gravel	m3	0. 2	85	17	0	0	(
		14	stones	_	0.8	55	44	0	0	44
			Total	m3	1	0	105	48	26	17
21 Pla	cing Culvert ∮10	18	culvert \$\phi\$ 10	pc	1	8	8		0	(
			Total	pc	1.	0	8		2	13
22 Plac	cing Culvert ϕ 15	19	culvert φ 15	pc	1	12	12	0	0	(
			Total	pc	1	0	12		3	2
23 Plac	cing Culvert ϕ 20	20	culvert ≠ 20	pc	I	16	16	0	0	. (
			Total	pc	1	0	16	4.7	- 4	
24 Plac	cing Culvert ϕ 25	21	culvert ϕ 25	pc	1	20	20		0	1
		٠.	Total	pc	1	0	: 20		5	3
25 Plac	cing Culvert Ø30	22	culvert ≠ 30	pc	. 1	27	27	0	. 0	
	•		Total	рc	1	0	27	8	6	4
26 Plac	ing Culvert ϕ 40	23	culvert ≠ 40	pc	1	35	35	0	0	- 1
			Total	pc -	1	0	35	16	9	6
27 Plac	ing Culvert ∮50	24	culvert ø 50	pc	1	45	45	0	0	
			Total	pc	1	0	45	16	11	7
8 Plac	ing Culvert ∮60	25	culvert ≠ 60	pc	1	60	60	0	0	
			Total	bc -	1	0	60	16	15	9
9 Plac	ing Culvert φ80	26	culvert ø80	pc	1	80	80	0	0	4.1
			Total	pc	. 1	0	80	16	20	
O Plac	ing Culvert ϕ 100	-27	cuivert ≠ 100	pc	1	115	115	0	0	
			Total	pc	. 1	. 0	115	16	29	
1 Iron	fastening		Rein. iron	kg	1	1.7	1. 7	0	0	
	•	29	black wire	kg	0.04	2. 7	0.1		0	
			Total	kg	1	0		0.32		2. 5
2 Form	work iron		anglw iron	kg	0.5	3. 2	1.6	0	0	
	•		shut iron	kg	0.5	3. 2	1.6	0	0	
		42	weld elech	kg	0. 1	3. 2	0.32		0	
			Total	kg	. 1	. 0	3. 52		0. 9	
3 Prej	+Inst Iron Gate	33	anglw iron	kg	0. 5	3. 2	1.6	and the second second	0	
		36	shut iron	kg	0.5	3. 2	1.6			
		42	weld elech	kg	0. 1				. 0	
			Total	kg	1	0			0.9	7. 6
34 Prep	o+Inst Spindle	41	iron spindle	. 10	1	66	66	0	0	
•		42	weld elech	kg	0.1	3. 2	0. 32			
			Total	m3	1	0	66.32	32	16.7	115

(Cont.)

	,42446644664666			=====	======	====:		======:	s=z==:	======
ΔD	Rt- 1 1 1	05					Mat.	Labour	Ben.	Total
CD	Work items	CD	Materials	Unit	Qt	UC	Br	Br	Br	Br
35.	Form work wood	44	planks	pc	1	44	44	0	:===: 0	0
			nails	kg	0. 5	3. 2	1.6	0	0	0
			Total	m2	1	0. 2	45. 6	16	11.4	73
36	Prep+Inst wood gate	44	planks	pc	ì	44	44	0	0	0
		45	logs	pc	ĩ	. 44	44	ő	Õ	ű
	•	31	nails	kg	1	3. 2	3. 2	0	0	0
			Total	m2	1	0	91. 2	32	22. 8	146
37	upporting works	45	logs	рc	1	44	44	0	0	0
		46	poles	pc	4	- 6	24	0	0	0
		31	nails	kg	1	3. 2	3.2	0	-0	0
			Total	m2	1	0	71.2	16	17.8	105
38	Foundation works	46	poles	р¢	4	6	24	0	0	0
		14	stones	m3	0.4	55	22	0	0	0
			Total	m2	1	0	46	32	12	90
39	inst gabion 1-1-0.5	14	stones	m2	0.5	55	28	0	0	0
		38	gabion baske	t pc	1	36	36	0	0	0
		30	gabion wire	kg	1	3. 2	3. 2	0	0	0
			Total	pc	1	0	67. 2	16	16.8	100
40	Inst gabion 2-1-0.3		stones	m2	0.6	55	33	0	0	0
			gabion baske	t pc	1	56	56	. 0	0	. 0
		30	gabion wire	kg	1	3. 2	3. 2	0	0	0
			Total	pe	1	0	92. Z	16	23	131.2
41	Inst gabion 2-1-1		stones	m2	2	55	110	0	0	0
٠			gabion baske	t pc	1	88	88	0	0	0
		30	gabion wire	kg	1	3. 2	3. 2	0	0	0
			Total	pc	1	0	201. 2	64	51	316. 2
42	Inst Filter	11	sand	m3	0.5	40	20	0	0	0
		12	gravel	m3	0.5	85	42.5	0	0	0
			Total	m2	1	0	62.5	32	16.5	111

I. : CONSTRUCTION CAPACITY OF MACHINERY

I-1	:	Hourly Yield of Bulldozer
I - 2	:	Hourly Yield of Scraper
I - 3	:	Hourly Yield of Backhoe
I-4	:	Hourly Yield of Wheel Loader
I - 5	• :	Hourly Yield of Dump Truck
I - 6	:	Hourly Yield of Motor Grader
I - 7	:	Hourly Yield of Walk-type Compactor
I - 8	:	Hourly Yield of Vibration Roller
I - 9	•	Daily Yield of Various Works

I-1 Hourly Yield of Bulldozer Excavation

Hourly production of bulldozer excavation can be estimated by the following equation;

$$Q = \frac{60 \times q \times f \times E}{Cm}$$

where, Q : hourly yield (m3/hr)

q : work volume of one cycle (m3)

= 2.81 m3 for 21 ton class bulldozer

f : bulk factor

E: efficiency of the works

Cm: cycle time of the works (min.)

 $Cm = 0.027 \times L + 0.79 \times L$ where L :dozing distance (m)

Work efficiency of natural bank excavation and dozing by site conditions and soil conditions are tabulated as follows,

Site condition	Good	Normal Bad
Sandy soil	0.85	0.80 0.75
Gravely Soil	0.70	0.65 0.60
Clayey soil	0.65	0.60 0.55

Therefore hourly production of excavation and dozing of natural bank is tabulated as follows;

		(m3	3/hr)
Work efficiency	Dozing	distance	(m)
E	20	40	60
0.40	50.7	36.1	28.0
0.50	63.4	45.1	35.0
0.60	76.1	54.1	42.0
0.70	88.7	63.1	49.0
0.80	101.4	72.1	56.0
0.90	114.1	81.1	63.0
<u> </u>			

Hourly Yield of Scraper Excavation and Hauling

Hourly production of excavation and hauling by scraper excavation can be estimated by the following equation;

$$Q = \frac{60 \times q \times f \times E}{Cm}$$

where, Q : hourly yield (m3/hr)
 q : work volume of one cycle (m3)
 f : bulk factor
 E : efficiency of the works
 Cm: cycle time of the works (min.)

q = q0 X K

where q0 :loading capacity = 16 m3 :loading coefficient = 0.88

 $Cm = 1.40 + 0.0073 \times L$ L :hauling distance (m) where

Work efficiency of natural bank excavation and dozing by site conditions and soil conditions are tabulated as follows,

Site condition	Good	Normal	Bad	Standard
Sandy soil	0.85	0.65	0.50	0.65
Clayey soil	0.55	0.45	0.35	0.45

Therefore hourly production of excavation and dozing of natural bank is tabulated as follows;

Work effic	iency	
E	1.0	2.0
0.35	18.5	34.2
0.45	23.8	44.0
0.50	26.4	48.9
0.55	29.0	53.8
0.65	34.3	63.5
0.85	44.9	83.0

I-3 Hourly Yield of Excavation and Loading by Backhoe (Hydraulic Excavator)

Hourly production of excavation and loading by backhoe can be estimated by the following equation;

$$Q = \frac{3,600 \times q \times f \times E}{Cm}$$

where, Q : hourly yield (m3/hr)

q : work volume of one cycle (m3)

f : bulk factor

E : efficiency of the works

Cm: cycle time of the works (min.)

 $q = 0.98 \times q0$ where q0: bucket capacity = 0.6 m3

Cycle time (Cm) is estimated by the turning angle of loading works

turning angle	45	90	135	180
Cycle time(Cm)	28	30	32_	35

Work efficiency of natural bank excavation and loading by site conditions and soil conditions are tabulated as follows,

Site condition	Good	Normal	Bad
Sandy soil	0.80	0.65	0.50
Clayey soil	0.75	0.60	0.45

Therefore hourly production of excavation and loading of natural bank is tabulated as follows;

(m3/hr)

Work effic	iency 45	Turnin 90	ng angle 135	e (degree) 180
. Б				
0.45	34.1	31.9	29.9	27.3
0.50	37.9	35.4	33.2	30.3
0.60	45.5	42.5	39.8	36.4
0.65	49.3	46.0	43.1	39.4
0.70	53.1	49.6	46.5	42.5
0.75	56.9	53.1	49.8	45.5
0.80	60.7	56.6	53.1	48.5
0.85	64.5	60.1	56.4	51.6

I-4 Hourly Yield of Excavated Soil Loading by Wheel Loader

Hourly production of excavated soil loading by wheel loader can be estimated by the following equation;

where, Q: hourly yield (m3/hr)
q: work volume of one cycle (m3)

f : bulk factor

E : efficiency of the works

Cm: cycle time of the works (40 sec.for wheel type)

 $q = 0.94 \times q0 - 0.03$ q0 :bucket capacity = 2.1 m3 where

Work efficiency of excavated soil loading by site conditions and soil conditions are tabulated as follows,

Site condition	Good	Normal	Bad
Sandy soil	0.75	0.60	0.45
Clayey soil	0.65	0.50	0.35

Therefore hourly production of loading of excavated soil is tabulated as follows;

Work efficiency	wheel	loader 2.1 m3
E		
0.30	46.7	
0.35	54.5	
0.40	62.3	
0.45	70.1	
0.50	77.9	
0.55	85.6	
0.60	93.4	
0.65	101.2	
0.70	109.0	
0.75	116.8	

I-5 Hourly Yield of Soil Transportation by Dump Truck

Hourly production of soil transportation by dump truck can be estimated by the following equation;

$$Q = \frac{60 \times q \times f \times E}{Cm}$$

where, Q: hourly yield (m3/hr)

q : work volume of one cycle (m3)

f : bulk factor

E: efficiency of the works

Cm: cycle time of the works (min.)

q = T / W where

T :loading capacity = 13.5 ton

W :unit weight of soil

Soil : 1.8 ton/m3

 $Cm = 0.48 \times L + 10$

where L : hauling distance (km)

Therefore, the hourly yield of transportation by dump truck is estimated as follows;

(m3/hr)Hard Normal Soft Hauling Distance Soil Rock Rock (km) 13.2 12.0 16.6 4 11.6 10.3 14.2 5 9.0 12.5 10.2 6 9.1 8.0 11.1 7 7.2 10.0 8.1 8 6.6 7.6 9.1 9 6.4 8.8 7.1 10

I-6 Hourly Yield of Soil Spreading and Leveling by Motor Grader

Hourly production of soil spreading of embankment material and land leveling by motor grader can be estimated by the following equation;

WXVXE

where, A: hourly yield (m3/hr)

W: effective width of blade or scarifier (m)

specification	blade	effective scarifier	width(m)
3.1 m	2.4 m	0.9 m	
3.7	2.9	1.1	

V : work Velocity (m/hr)

for land leveling

2,150 m/hr.

for spreading material 1,900 m/hr

E : efficiency of the works

N : number of times to be worked

for land leveling scarifying 2 times for land leveling blading 4 times for spreading material blading 8 times

Working efficiency by the type of works and site conditions are as follows;

work condition	land	E leveling	spreading
3		0.75	0.65
good			
normal		0.65	0.55
bad		0.55	0.45

Therefore, the hourly yield of motor grader works are estimated as follows;

land leveling

(m2/hr)

working efficiency	0.75	0.65	0.55	0.45
		1,013.2 2,026.4	875.3 1,714.6	701.4 1,402.9

spreading subgrade material

(m2/hr)

working efficienc	y 0.75	0.65	0.55	0.45	
spreading	516.6	447.7	378.8	310.0	

Hourly Yield of Soil Compaction by Walk-type Roller

Hourly production of soil compaction of embankment material by walk-type compactor(1ton) can be estimated by following equation;

$$Q = \frac{W X V X D X E}{N}$$

where, S: hourly yield (m2/hr)

Q : hourly yield (m3/hr)

W: effective width of compaction (= 0.70 m)

V : work velocity (= 1,000 m/hr)
E : efficiency of the works (= 0.4 for normal case)

N : number of compaction (usually 5 times)

D: thickness after compaction (m)

Therefore, the hourly yield of compaction by walk-type compactor(1 ton) are estimated as follows;

land leveling

(m3/hr)

compacted thickness	0.10	0.15	0.20	0.25	0.30
work volume	5.6	8.4	11.2	14.0	16.8

I-8 Hourly Yield of Soil Compaction by Vibration Roller (10ton)

Hourly production of soil compaction by vibration roller (10ton) can be estimated by the following equation;

where, Q1: hourly yield (m3/hr)

Q2: hourly yield (m2/hr)

W: effective width of compaction (= 1.80 m)
V: work velocity (= 3,500 m/hr)
E: efficiency of the works

site	conditions	good	normal	bad
E	e financia de la compansión de la compan	0.6	0.4	0.2

N : number of compaction

compacted	thickness	0.30 m	0.20 m
number of	compaction	5	7

D : thickness after compaction (m)

Therefore, the hourly yield of soil compaction by vibration roller(10 ton) are estimated as follows;

in volume

(m3/hr)

work efficiency	0.20	0.40	0.60	
sub-grade	36	72	108	
embankment	76	151	227	

in area

(m2/hr)

work efficiency	0.20	0.40	0.60	
sub-grade	180	360	540	
embankment	252	504	756	

I - 9 : Daily Yield of Various Works

		Exca	ivatio	Bac	kf111/		ExcavationBackfill/ CompactionLoading	P Oa	ding	Gradin	GradingConvey-Land	Land	Carrie	Service	CarrierServiceInspectFempo.	Tempo.	Sorie.		
Equipment	Unit			Enb	Embankment	+)					ance	Level				Work	Work	TOTAL	REMARK
		96	Capa.	36	Capa.		Сара.	96	Capa.	Capa.	Capa.	Capa.	Capa.	Capa.	Capa.	Capa.	Capa.	Capa.	
Bulldozer	m3/day	50	312	25	25 379	3 25	865											467	
Wheel Loader	m3/day	20	380					50	380									380	
Backhoe Loader	m3/day	20	216		:			50	216		.:							216	
Wibro Compactor	Unit/Dam Works					100	ເນ					 	 					3	
Motor Grador	m/day	<u> </u>								494								484	
Dump Truck	m3/day							_			63	_						63	
Motor Scraper	m3/day	20	274	20	909						:							390	
Water Brower	Water Brower Unit/Const.Works	· ·				100	-											T	
Wark Roller	Unit/Const. Works	75				001						_	_					4-4	
Tractor	ha/day											2						2	
Trailor	Unit/No.Machine												∞					80	
Truck	Unit/No. Machine												23					23	
Mobil Workshop	Mobil Workshop Unit/No. Machine													42				42	
Mobil Grasing	Unit/No.Machine													147				147	
Motor Cycle	Unit/Const. Works	0		_	_													5	
Crane	Unit/No. Machine					-							86					98	
Station Wagon	Unit/Const. Works	ळ												2				2	
Pick-up	Unit/Const. Works	0		_										1				1	
Drilling Machin	Orilling Machine Unit/Dam Works				_										1			*	
Generator	Unit/Const. Works	ত		_		_										1		1	
Stone Crusher	m3/day	_				_			_								43	43	
Concrete Mixer	m3/day				_	-	_										43	43	

J. : REQUIRED EQUIPMENT J-1 : Estimation of Total Required Equipment J-2 : Estimation of Required Equipment in Northern Zone J-3 : Estimation of Required Equipment in North-Eastern Zone J-4 : Estimation of Required Equipment in North-Western Zone J-5 : Estimation of Required Equipment in Western Zone J-6 : Estimation of Required Equipment in South-Western Zone

J - 1 Estimation of Total Required Equipment in Ethiopia

						`	18					10, 50			20,00		20, 20	ŧ.	,
implementation	implementation Schedule (year)						93/34					34/35			35/36		36/51	MAA. KEU	KECOLINED
Intake Type					Weir		Dam	ţ	total	₩e	Weir	Dam		total	Feir		Weir		
Irrigation Area (ha)	1 (hs)				1, 270		150		1, 420	2	2, 275	200		2,475	1, 660	Q	1, 332	2,475	
Construction Unit	nit				6		2		11	_	16			17		10	11	17	
It.	Equipment	Unit of Total	Capacit,	CapacityCapacity	Total No	No. of To	Total No. of		Total No	No. of Total	al No. of	f Total	No. of	Total No. of	of Total	No of	Total No.	No. of Total	No. of
		Quantity	per day	per day per year	Quantity	UnitsQuantity		ts Out	Units Quantity Units Quantity	its Quar		UnitsQuantity		Units Quantity Units Quantity Units	ts Quantit	y Units	Quantity	Units Quantity	/Units
Earth Works	Bulldozer		467	467 170,455 1,152,04	1, 152, 040	9.1 25	255, 064 2.	2.0 1, 40	407, 104 11.2	<u>. 63</u>	063, 693 16. 4	340,085		2. 7 2, 403, 778 19. 1 1,		5 11.9	505, 815 11. 9 1, 208, 281 9.	9. 6 2, 403, 778	19
	Wheel Loader	m3	380	138, 700	550, 764	5. 4 158,	382	1. 5 1	709, 145 6.	o	985, 604 9, 6	211, 176	2,11	197, 780 11.7	7 719,895	6 7.0	577, 651 5.	5 11, 197, 780	12
	Backhoe Loader	113	216	78,840	156, 498	2.9	20, 892 0.	0.4 18	187, 350 3,	. 2 298,	3, 255 5, 1	27,855	0.5	326, 110 5.	6 217, 628	8 3.7	174, 626 3	3.0 326, 110	9
	Wibro Compactor	Wibro Compactor Units*Dam Works	4	7	0	0 0	2 8	9.0	2 8	0	0.00		14.0	1 4.0	. 0	0 0 0	0 0	0.0	2 8
	Motor Grader	m/day	494	180,310	902, 949	6.8	63,040 0.		965, 988 7.	. 2 1, 617	7, 487, 12, 1	84, 053	0.6 1,	, 701, 539 112.8	8 1, 180, 232	2 8.8	947, 029 7. 1	1 1, 701, 539	13
	Dump Truck	m3/day	63	22, 995	642,892	37.8 159, 433	9, 433 10.0	· .	812, 325 47.	8 1, 151	1, 637, 67. 7	225, 910	13,3 1	377, 547 81.0	840,	315 49. 4	674, 277 39. 6	6 1, 377, 547	81
	Motor Scraper	m3/day	390	142, 350	0 0	0.0	83,098 0.		83, 098 0.	.8	0 0 0	110, 797	1.1	110, 797 1.	1	0.0	0 0	0.0 110,797	1
	Water Brewer	Water Brewer Units*Cons. Works	22	2	6	4.5	2 1.	1.0	11 5.	. 5	16 8.0	1	0.5	17 8.	5	0 2 0	11 5.	5 17	6
	Work Roller	Units*Cons. Works		1	ڻ ص	9.0	2 2.	2.0	11 11	11.0	15 16.0	1	1.0	17 17.0]	0 10 0	11, 11.0	0 17	1.7
On-farm	Tractor	ha/day	2	130	0	0.0	0 0.	0	0 0	0	0.0	0	0.0	0.0		0 0 0	0 0	0.0	0
Suport Works	Trailor	Units / Machine	7	7	26 (5. b	15 3.	-1	41 10	က	47 11.8	11	2.8	58 (14.6		33 8.2	7 62	3	1.5
	Truck	Units / Machine	12	12	26	2.2	15 1.	- 7	41 3.	4	47 3.9	11	0.9	58 4.	9	33 2.7	29 2.	58	2
	Mobil Workshop	Mobil Workshop Units / Machine	80	8	26	83	15 I.	50	41 5.		47 5.9	J.	1.4	58 7.	3	33 4. 1	29 3.	7 58	-1
	Mobil Greasing	Mobil Greasing Units / Machine	29	29	26	0.9	15 0.	.51	41	1.4	47 1.6	11	0.4	58 2, 0		33 1.1	29 1.	0 58	2
	Motor Cycle	Units / Machine	1	_	6	9.0	2 2.	-	11 11	0	16 15.0		1.0	17 117. (0	10 110 0	11 (11.	17	17
	Crane	Units / Machine	20	20	26	1.3	15 0.		41 2	2.1	47 2.4	11	9 0	58 2.	σ ₁	33 1.6	29 1.	5 58	က
	Station Wagon	Station Wagon Units*Cons. Works	2	2	6	18.0	2 4.	0	11 22.	0	15 32.0		2.0	17 24.0		10 00 01	11 22.	0	34
	Pick-up	Units*Cons. Works	-75		6	9.0	2 2.	ا	11 11	11.0	16 16.0		1.0	17 17.0		10 10 0	11 11.	0 17	17
Inspection	Drilling Machin	Inspection Drilling MachineUnits*Dam Works	2	2	0	0.0	1	0		0	0 0.0	0	0.0	0.0		0.0	0 0	0	-7
Temporary	Generator	Units*Cons. Works	75		6	9.0	2 2.		11	0	16 16.0		- - - -	17 17. (0	0 70 0	11 11	17	17
Concrete Works	Concrete Works Stone Crusher	m3/day	43	15, 695	119,899 10.3	0.3	7, 161 0.	0.6	127,060 110.	. 9 214,	1, 779 18. 5	9,549	0.8	224, 328 119, 3	3 156, 718	8 13.5	125, 752 10.8	8 224, 328	19
	Concrete Mixer		43	15.695	119,899 10.3	_	7, 161 0.	0.6	127, 060 10.9	_	214, 779 18, 5	9,549	0.8	224, 328 19. 3	- 1	155, 718 13.5	125, 752 10.8	8 224, 328	19

J-2 Estimation of Required Equipment in Northern Zone

		(1) (1) (1) (1) (1) (1)			10/60	10,10	20, 10			- 1	7
	Implementation schedule	יכוזפחתום (יושור)			30/24	34/30	35/68		36/87	MAA. KEUUIKED	즲
	Intake Type				Dam	Dam	. 1		1		
	Irrigation Area (ha)	(ha)			100	200	0		0	200	
	Construction Unit	1.				1	0		0		
Item	Equipment	Unit of Total	CapacityCapacity	apacity	Total No. of	f Total No. of	of Total	No. of	Total No. of	Total	No. of
		Quantity	per day p	per year	Quantity Unit	UnitsQuantity Uni	UnitsQuantity	Units	Quantity Units	Unitspuantity	Units
	Bulldozer	= 3	467	126,090	170,043 1.3	340,085 2.	7	0	0 0,0	340,085	82
	Wheel Loader	E 83	380	102, 600	105,588 1.0	211, 176 2.	1	0.0	0 0.0	211, 176	2
	Backhoe Loader	13	216	58, 320	13,928 0.2	27, 855 0.	5	0.0	0.0	27,855	0
	Vibro Compactor Units*Dam	Units*Dam Works	0.25	0.25	1 4.0	1 4.	0	0.0	0 0 0	1	4
	Motor Grater	m/day	494	133, 380	42,026 0.3	84,053 0.	9	0.0	0.0	84,053	
	Dump Truck	m3/day	63	17,010	112,955 6.6	225, 910 13.	3	0.0	0.0	225, 910	13
	Motor Scraper	m3/day	390	105, 300	55,398 0.5	110, 797 1.	1 0	0.0	0 0 0	110,797	y-3
	Water Brewer	Units*Cons. Works	2	2	1 0.5	1 0.	5	0.0	0 0 0	1	
	Work Roller	Units*Cons. Works	1	1	1 1.0	1 4 5 2 1 1.	0 0	0.0	0 0 0		+
On-farm	Tractor	ha/day	2	540	0 0 0	0 0.	0 0	0.0	0.0	0	0
	Trailor	Units / Machine	4	4	8 2.0	11 2.	8 0	0.0	0 0 0	11	က
Suport Works	Truck	Units / Machine	12	12	8 0.7	11 0.	6	0.0	0 0 0		* t
	Mobil Workshop Units	Units / Machine	60	8	8 1.0		4	0.0	0 0 0		
	Mobil Greasing Units	Units / Machine	58	29	8 0.3	11 0.	0	0.0	0 0 0	11	0
	Motor Cycle	Units / Machine		1	1 1.0	1	0	0.0	0 0 0	1	-
	Crane	Units / Machine	70	20	8 0.4	11 0.	9	0.0	0 0 0	11	
Suport Works	Station Wagon	Units*Cons. Works	2	2	1 2.0	1 2.	0	0.0	0 0 0		2
	Pick-up	Units*Cons. Works			1 1.0	0 1 1	0 0	0.0	0.0	+ -1	1
Inspection	Inspection Drilling MachineUnits*Dam	eUnits*Dam Works	2	2	0 0 0	0 0	0	0.0	0 0 0	0	0
Temporary	Generator	Units*Cons. Works			1 1.0		1.0	0.0	0.0.0	-	
Concrete Works	Concrete Works Stone Crusher	m3/day	43	11,610	4,774 0.4	9, 549 0,	0	0.0	0 0.0	9, 549	+4
	Concrete Mixer	m3/day	43	11,610	4, 774 0. 4	9, 549 0.	8	0.0	0.0	9,549	

- 3 Estimation of Required Equipment in North-Eastern Zone

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	Implementation Schedul	Schedule (year)			93/94	G.	94/85	တ	98/38		16/98	W	MAX. REOU	REQUIRED
	Intake Type	e de la companya de l			Weir	:3E=	Weir	Se	Weir	-	•			
	Irrigation Area (ha)	(ha)			385		280		300		0		385	
	Construction Unit	it			2		က	-			0		3	
Item	Equipment	Unit of Total	CapacityCapacity	Capacity	Total No.	No. of T	Total No	No. of T	Total N	No. of	Total W	No. of	Total	No. of
		Quantity	per day	per year	Quantity Un	UnitsQuantity		UnitsQuantity		nitsQu	UnitsQuantity Un	nitsQt	UnitsQuantity	Units
Earth Works	Bulldozer	щ3	467	126,090	349, 240 2.	8 253,	3, 993 2	0 272,	135	2.2	0	0.0	349, 240	က
	Wheel Loader	⊞3	380	102,600	166,964 1.	6 121.	1,428 1	. 2 130.), 102	.3	0	0,0	166,964	2
	Backhoe Loader	m3	216	58,320	50, 474 0.	9	36, 708 0	9	39, 330	0.7	0	0.0	50, 474	
	Wibro Compactor Units*	Units*Dam Works	0.25	0.25	0 0	0	0 0	0	0	0.0	0	0.0	0	0
	Motor Grater	m/day	494	133,380	273, 728 2.	1 199	9,075 1	. 5 213,	3, 295	1.6) 0	0.0	273, 728	2
	Dump Truck	m3/day	63	17,010	194, 892 11.	5 141	1, 740 8	3 151	864	8.9	0 0	0	194,892	11
	Motor Scraper	т3/бау	390	105,300	0 0	0	0 0	0	0	0,0	0 0	0	0	0
	Water Brewer	Units*Cons. Works	2	2	2 1.	0	3 1	5	1 (0, 5	0 0	0	33	2
	Work Roller	Units*Cons. Works		1	2 2.	0	3 3	0	1	1.0	0 0	0.0	33	က
On-farm	Tractor	ha/day	2	540	0 0	0	0 0	0	. 0 (0.0	0 0	. 0	0	0
Suport Works		Units / Machine	7	7	7 1.	80	7 .1	-	ъ	.3	0 0	0	7	2
	Truck	Units / Machine	12	12	7 0.	w	7 0	ဖ	5	O. 4	0 0	0	-	~-1
	Mobil Workshop Units	Units / Machine	∞.	∞	7 0.	<u></u>	7 0.	6.	5	9.0	0	0	-	
	Mobil Greasing Units	Units / Machine	29	29	7 0	8	7 0	2	5	0.2	0	0	7	0
	Motor Cycle	\forall			2 2.	0	3	0	-	0.	0 0	0	3	63
	Crane	Units / Machine	20	20	7 0	~ 0*	7 0	₆₀	5 (0.3	0 0	0	7	0
	Station Wagon	Units*Cons. Works	62	2	2 4.	0	3	0	1	2.0	0	0	က	9
	Pick-up	Units*Cons. Works		~~	2 2.	0	3 3	0	1	0	0 0.	0	က	33
Inspection	Drilling Machin	Drilling MachineUnits*Dam Works	2	2	0 0	0	0 0.	-	0	0.0	0 0	0	0	0
Temporary	Generator	Units*Cons. Works		_	2 2.	0	3	0	1	0 1	0 0	0	3	33
Concrete Work	Concrete Works Stone Crusher	m3/day	43	11,610	36, 347 3.	1 2	6, 434 2.	3 28	323	2.4	0 0	0	36, 347	w
	Concrete Mixer	m3/day	43	11,610	36, 347 3.	1 2	26, 434 2.	3 28,	323	2. 4	0 0	0	36, 347	52
			ì					•						

- 4 Estimation of Required Equipment in North-Western Zone

		Implementation 5	Schedule (year)					93/94				94/95		95/36		76/98	MAXIMUM	MUM REQUIRED	IRED
		Intake Type				Weir		Лаш		Total		Weir		Weir		Weir			
		Irrigation Area	(ha)			500	-	50		550		1,140		795		752		1,140	
		Construction Unit	1.			က				4		∞		L?		8		89	
	ltem	Equipment	Unit of Total	Capa.	Capacity	Total N	No. of	Total	No. of	Total No	No. of	Total N	No. of	Total N	No. of	Total No	No. of	Total M	No. of
			Quantity	per day	per day per year	Duantity U	InitsQu	UnitsQuantity W	nitsou	UnitsQuantity Un	Units Q	Quantity V	nitsou	UnitsQuantity U	nitsQu	UnitsQuantity Un	Units Qua	Quantity W	Units
띪	Earth Works	Bul idozer	EE.	467	126,090	453, 559	3.6	85,021	0.7 5	538, 580 4	4.3 11.	034, 114	8.2 7	21, 159	5.7 6	682, 153 5	4 1	034.114	₀
		Wheel Loader	m3	380	102, 600	216.836	2.1	52, 794	0.5 2	69, 630	2. 6	494, 386	4.8	344.769	3, 4 3	326, 121 3	. 2	494,386	ιΩ
L		Backhoe Loader	E .	216	58, 320	65, 550	1	6, 964	-1	72, 514	7. 7	149, 455	2.6 1	104, 225	1.8	98, 538 1	1.7.1	49,455	က
		Vibro Compactor	Vibro Compactor Units*Dam Works	0.25	0.25	0	0.0		4.0	-	4.0	0	0.0	0	0.0	0 0	0.0		-4
		Motor Grater	m/day	767	133,380	355, 492	2.7	21,013	0.2	376, 505	2.8	810, 521	6.1.5	565, 232	4.2 5	534, 659 4	1.0 8	10, 521	60
<u> </u>		Dump Truck	m3/day	63	17,010	253, 107 1	14.9	56, 478	.3 .3	309, 585 18	8.2	577.084 3	9.9	402,440 2	3.7	380, 673 22	2.4 5	77,084	34
-4		Motor Scraper	m3/day	390	105,300	0	0	27, 699	0.3	27, 699 (0.3	0	0	О	0.0	0 0	0.0	27, 699	0
<u>_</u>		Water Brewer	Units*Cons. Works	2	2	က	£ 5		0.5	4	2.0	8	4.0	ις.	2.5	8 4	4.0	80	4
		Work Roller	Units*Cons. Works		-	82	3.0		0	4	4.0	∞	8.0	5	0	60	8.0	∞	က
	On-farm	Tractor	ha/day	2	540	0	0 0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Su	Suport Works	Trailor	Units / Machine	4	4	10	2.5	-	9	16	11	24	5.9	16	4.0	18 4	4.5	24	တ
		Truck	Units / Machine	12	12	10	8	-	0.5	1.6	1.4	24	2.0	16	.3	18	1.5	24	2
		Mobil Workshop	Mobil Workshop Units / Machine	8	œ	10	1.2		0.8	16	2. 1	24	2.9	16	2.0	18 2	2.3	24	ന
		Mobil Greasing Units	Units / Machine	58	29	10	0 3	2	0.2	1.6	0.6	24	8 0	16	0.5	18 0	0.6	24	
		Motor Cycle	Units / Machine	ı	1	85	3.0	1	1.0	7	4.0	80	8.0	S	5.0	8	8.0	∞	∞
		Crane	Units / Machine	20	20	10	0.5	,	0.3	16	0.8	24	1.2	16	8.	18 0	0.9	24	
		Station Wagon	Station Wagon Units*Cons. Works	2	2	m	8.0	-	2.0	Ą	8.0	8	0.8	5	10.0	8 118	6.0	α Σ	16
		Pick-up	Units*Cons. Works	1		co	3.0	-1	1.0	4	4.0	8	8.0	2	5.0	8	8.0	SO	∞
⊢	Inspection	Drilling Machin	Drilling MachineUnits*Dam Works	2	2	0	0			0	0	0	0	0	0	0	0		-
{-	Temporary	Generator	Units*Cons. Works			ຕ	3.0	-	1.0	4	4.0	80	8.0	υş	5.0	8	8.0	8	00
L	Concrete Works	s Stone Crusher	m3/day	43	11,610	47, 204	4.1	2, 387	0.2	49, 591	4.3	107,626	62 63	75,055	55	70, 995	6. 1	107, 526	σ,
		Concrete Mixer	m3/day	43	43 11.610	47.204	4.1	2, 387	0.2	49.591	4.3	107, 626	9.3	75,055	6.5	70,985 6	6.1	107, 626	6;
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- 5 Estimation of Required Equipment in Western Zone

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	Implementation Schedule	chedule (year)			93/94	1	94/95	1	92/36	_	96/97		MAX. REQUIRED	EE
	Intake Type				Weir		Weir		Weir		Weir			
	Irrigation Area (ha)	(ha)		-	210	-	140		255		580		580	
	Construction Unit	ţ			တ		-		2		က		33	
Item	Equipment	Unit of Total	CapacityCapacity	apacity	Total N	No. of	Total No.	of.	Total	No. of	Total	No. of	Total	No. of
		Quantity	per day p	per year	Quantity U	nitso	UnitsQuantity U	ni tso	UnitsQuantity N	ini ts	UnitsQuantity	Units	Quantity	Units
Earth Works	Bulldozer	т3	467	126,090	190, 495	1.5	126, 996	0	231, 315	1.8	526, 128	4.2	526, 128	4
	Wheel Loader	m3	380	102, 600	91,071	0.9	60, 714	9.0	110, 586	1:1	251, 530	2.5	251, 530	2
	Backhoe Loader	т3	216	58, 320	27, 531	5.	18, 354	0.3	33, 431	9.0	76,039	1.3	76,039	
	Vibro Compactor Units*Da	Units*Dam Works	0.25	0.25	0	0.0	0	0 0	0	0.0	0	0.0	0	0
	Motor Grador	m/day	494	133, 380	149, 306	-	99, 538	0.7	81, 301	1. 4	412, 370	3.1	412, 370	8
	Dump Truck	m3/day	63	17,010	106, 305	6.2	70,870	4.2	129, 085	7.6	293, 604	17.3	293, 604	17.
	Motor Scraper	m3/day	390	105, 300	0	0.0	0	0	0	0.0	0	0 0	0	0
	Water Brower	Units*Cons. Works	2	2	3	6.0	1	2.0	2	4.0	83	6.0	8	ω
	Wark Roller	Units*Cons. Works			က	3.0	1	0	2	2.0	3	3.0	33	85
On-farm	Tractor	ha/day	2	540	0	0.0	0	0.0	0	0 0	0	0.0	0	0
Suport Works	_	Units / Machine	4	7	G	1.5	3	0.7	5	1.4	11	2. 7	11	ω
		Units / Machine	12	12	9	0.5	33	0.2	ъ	5	11	0.9	11	-
	Mobil Workshop Units	Units / Machine	8	∞	မ	0.7	623	0.4	22	0.7	11	1. 4	11	-
	Mobil Grasing	Units / Machine	29	29	လ	0.2	83	0.1	C)	0.2		0.4	11	0
	Motor Cycle	Units / Machine	1		ლ	3.0	-1	0	2	2.0	3	3.0	6.3	co
	Crane	Units / Machine	20	20	မ	0 3	~	0:1	2	0.3	11	0.5	11	7
	Station Wagon	Units*Cons. Works	2	2	က	0.9		2.0	2	4.0	63	6.0	3	9
	Pick-up	Units*Cons. Works	+~4	T	က	3.0		0	2	2.0	3	3.0	က	80
Inspection	Drilling MachineUnits*Dam	eUnits*Dam Works	2	2	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Temporary	Generator	Units*Cons. Works	1	1	m	3.0	-1	0	2	2.0	82	3.0	8	82
Concrete Work	Concrete Works Stone Crusher	m3/day	43	11,610	19,826	1.7	13, 217	1, 1	24,074	2.1	54, 757	4.7	54, 757	ເດ
	Concrete Mixer	E #	43	11,610	19,826	1.7	13, 217		24.074	2.1	54, 757	4. 7	54,757	2

6 Estimation of Required Equipment in South-Western Zone

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	Implementation Schedule ()	Schedule (year)		93/94	94/95	95/96	96/97	MAX. REQUIRED
	Intake Type			Weir	Weir	Weir	Weir	
	Irrigation Area (ha)	(ha)		175	715	310	0	715
	Construction Unit	it		1	4	2	0	4
Item	Equipment	Unit of Total	CapacityCapacity	/ Total No. of	f Total No. of	f Total No. of	Total No. of	f Total No. of
		Quantity	per day per year	Quantity	UnitsQuantity Unit	UnitsQuantity Units	UnitsQuantity Units	s Quantity Units
Earth Works	Bulldozer	m3	467 126,090) 158,746 1.3	648, 589	281, 207 2, 2	0 0 0	648, 589 5
	Wheel Loader	S ₽	380 102, 600	0 75,893 0.7	310,076 3.0	134, 438 1.3	0 0 0	310,076 3
	Backhoe Loader	.m3	216 58, 320	3 22, 343 0.4	93, 737 1. 6	40, 541 0.7	0 0 0	93, 737 2
	Wibro Compactor Units*Dam	Units*Dam Works	0.25 0.25	5 0 0 0.0	0 0 0	0 0 0	0 0 0	0 0
	Motor Grador	m/day	494 133,380	124, 422 0.	9 508,353 3.8	220, 405 1.7	0.0	508, 353 4
	Dump Truck	m3/day	63 17,010	88, 587 5.	2 361,943 21.3	156, 926 9.2	0 0 0	361,943 21
	Motor Scraper	m3/day	390 105,300	0 0 0 0	0 0 0	0 0 0	0 0 0	0
	Water Brewer	Units*Cons. Works	2	2 1 2.0	4 8.0	2 4.0	0 0.0	4 8
	Work Roller	Units*Cons. Works	y	1 1.0	4 4.0	2 2.0	0 0.0	4 4
On-farm	Tractor	ha/day	2 540	0 0.	0 0 0 0	0 0 0	0 0 0	0
Suport Works	. Trailor	Units / Machine	7	3 0.8	8 14 3.4	6 I.6	0 0.0	14 3
	Truck	Units / Machine	12	2 3 0.	3 14 1.1	6 0.5	0 0,0	14 1
	Mobil Workshop Units		8	3 0.	4 1.7	6 0.8	0 0 0	14 2
	Mobil Greasing Units	Units / Machine	29 29	9 3 0.	14 0.5	6 0 2	0 0 0	14 0
	Motor Cycle	Units / Machine	-	1 1. (0 4 4.0	2 2.0	0.0	A A
	Crane	Units / Machine	20 2	20 3 0.	2 14 0.7	8 0	0 0.0	14
	Station Wagon	Units*C	2	2 1 2.	0 4 8.0	2 4.0	0 0.0	4 8
	Pick-up	Units*Cons. Works		1 1.(0 4 4.0	2 2.0	0 0 0	4 4
Inspection	Inspection Drilling MachineUnits*Dam	eUnits*Dam Works	2	2 0 0.	0 0 0 0	0 0 0	0 0 0	0
Тетрогагу	Generator	Units*Cons. Works	T	1 1 1.	0 4.0	2 2.0	0.00	<u>ቅ</u>
Concrete Work	Concrete Works Stone Crusher	m3/day	43 11, 610	16, 521 1.	4 67.502 5.8	29, 267 2, 5	0 0.0	67, 502 6
	Concrete Mixer		43 11,610	16.521 1.	4 67, 502 5.8	29, 267 2, 5	0.0	67,502 6

