Chapter 1

NACHCHADUWA MAJOR IRRIGATION SCHEME

- Rehabilitation and Improvement Plan by Farmers -

HLD MAIN CANAL

H.L.D 1 | H.L.D 2 | HL.D2A | H.L.D 3 | H.L.D 4 | H.L.D4A | H.L.D5 | H.L.D5A | H.L.D6

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21)

DC

Fe.1

Fe.2

Fe.3

Nachchaduwa main Road

The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Sena Samagi DC Farmers' Organisation**

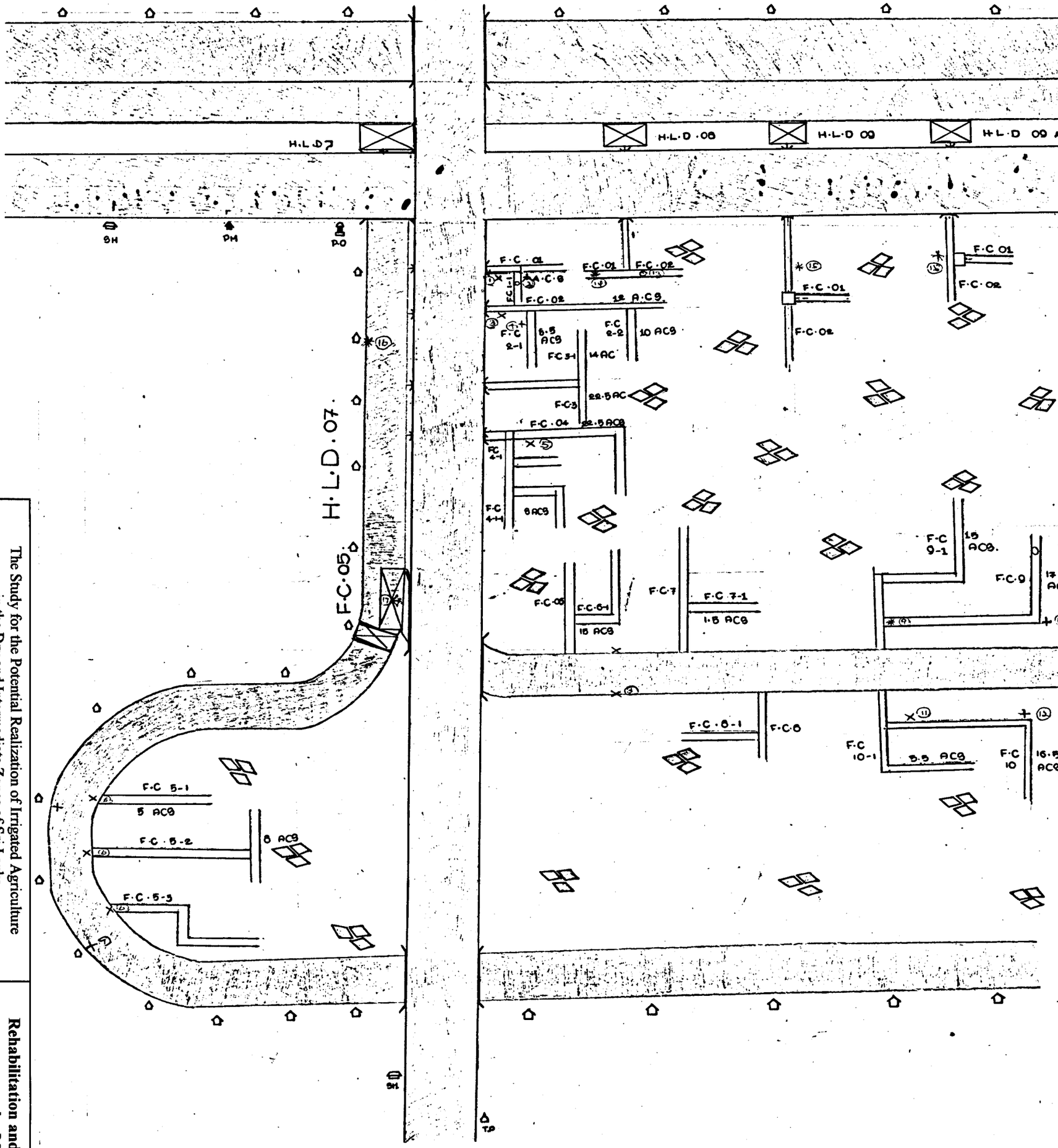
Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Sena Samagi FO (1), HLD1 to 6, Extent of Land 380 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participa-tion
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
1	HLD 01	Two concrete walls (RC Canal)	L 10 ft W 6 inches H 2 ft	Concrete - 1 cube Earth works 2 cu	8,200	Skilled - 1 days Labour - 8 days Labors 4 days	275 1,400 700	1,400 700
2	HLD 02	Rubble masonry wall	L 250m W 1 ft H 2 ft	RRM 37 cu Earth works 125 cu Metal 8 cu	118,400 20,800	Skilled 28 days Labors 185 days Labors 278 days Labors 18 days	7,700 32,375 48,650 3,150	 32,375 48,650 3,150
3	HLD 02 canal road	Earth filling 1 km HLD canal road from HLMC to LLMC	L 1 km W 3m	Earth - 159 cu Gravel - 88 cu	79,500 176,000	Labors 353 days Labors 195 days	61,775 34,125	61,775 34,125
4	HLD 03	Side wall on both sides	L 20 ft W 1 ft H 2 ft	RRM 1 cu Earth works 3 cu Metal 1 cu	6,400 2,600	Skilled 1 days Labors 5 days Labors 7 days Labors 1 days	275 875 1,225 175	 875 1,225 175
5	HLD 03 Canal road	Earth work (Filling)	L 1 km W 3m	Earth - 159 cu Gravel - 88 cu	39,750 176,000	Labors 353 days Labors 195 days	61,775 34,125	61,775 34,125
6	HLD 03	Construction of a culvert	Repair the road replacing 2 inch dia. Hume pipes 2 Nos.	2 ft dia. HP - 20ft RRM 2 cu Earth works 2 cu Metal 1 cu	14,000 6,400 2,600	 Skilled 2 days Labors 10 days Labors 4 days Labors 2 days	 550 1,750 700 350	 1,750 700 350
7	HLD 04	Construction side walls (both sides)	L 50 ft W 1 ft H 2 ft x 2 walls	Included in rehabilitation plan of Irrigation Department of HLD4				
8	HLD 04	Construction of a culvert	2 ft dia. X 8 hume pipes across the main	Included in rehabilitation plan of Irrigation Department of HLD4				
9	HLD 04	Construction side walls (both sides)	L 100ft W 2 ft H 2 ft rubble masonry	Included in rehabilitation plan of Irrigation Department of HLD4				
10	HLD 04 Canal Road Separating the reservations	Earth filling - Rehabilitation Survey and demarcation of reservations on all canals Earth filling 1 km on HLD 04 canal road from HLMC to LLMC	L 1 km W 3m	Included in rehabilitation plan of Irrigation Department of HLD4				
11	HLD 04A at the main canal	Construction of a water control tower with planks	Construction of 3 concrete post to control water with 3 ft high planks	Concrete - 3 cube Earth works 3 cu Others	24,600 6,000	Skilled - 3 days Labour - 23 Labors 7 days	825 4,025 1,225	 4,025 1,225
12	HLD 04A	Construction of side walls (both sides). Construction of 40 ft long 2 ft wide 2 ft high side walls on both sides of canal	L 40 ft W 2 ft H 2 ft	RRM 2 cu Earth works 6 cu Metal 1 cu	6,400 2,600	Skilled 1 days Labors 5 days Labors 13 days Labors 1 days	275 875 1,225 175	 875 1,225 175
13	HLD 05	Construction of side walls (both sides) Construction of 100 ft long 2 ft wide 2 ft high side walls on both sides of canal	L 100 ft W 2 ft H 2 ft	Included in rehabilitation plan of Irrigation Department of HLD5				
14	HLD 05	Construction of side wall Construction 10 ft long 2 ft wide 1 ft high side wall	L 10 ft W 2 ft H 1 ft	RRM 1 cu Earth works 2 cu Metal 1 cu	3,200 2,600	Skilled 1 days Labors 5 days Labors 4 days Labors 2 days	275 875 700 350	 875 700 350
15	HLD 05	Construction of concrete side wall Construction of a 10 ft long 6 inch wide 2 ft high concrete side wall	L 10 ft W 6 ft H 2 ft	Concrete - 1 cube Earth works 2 cu	8,200 	Skilled - 1 days Labour - 8 days Labors 4 days	275 1,400 700	 1,400 700
16	HLD 05 canal road	Earth filling (gravel) Earth filling 1 km on HLD 05 to 5A and rehabilitation	L 1 km W 3m	Earth - 159 cu Gravel - 88 cu	79,500 176,000	Labors 353 days Labors 195 days	61,775 34,125	61,775 34,125
17	HLD 05A	Construction of a side wall with earth Construct 200 ft long 2 ft wide 2 ft high earth wall (canal bund)	L 200 ft W 2 ft H 2 ft	Earth - 21 cubes	10,500	Labors 47 days	8,225	8,225
18	HLD 06	Construction of a side wall (rubble) Construction of 10 ft long 1 ft wide 2 ft high rubble masonry wall	L 10 ft W 1 ft H 2 ft	RRM 1 cu Earth works 2 cu Metal 1 cu	3,200 2,600	Skilled 1 days Labors 5 days Labors 2 days Labors 2 days	275 875 350 350	 875 350 350
19	HLD 06	Earth filling (gravel) canal road Earth filling 1 km on HLD 06 canal road and rehabilitation	L 1 km W 3m	Earth - 159 cu Gravel - 88 cu	79,500 176,000	Labors 353 days Labors 195 days	61,775 34,125	61,775 34,125
20	HLD 06	Construction of a side wall Construction of a 200 ft long 2 ft high side wall with bricks	L 200 ft H 2 ft	RRM 9 cu Earth works 30 cu Metal 2 cu	28,800 5,200	Skilled 7 days Labors 45 days Labors 67 days Labors 4 days	1,925 7,875 11,725 700	 7,875 11,725 700
21	Drain canal between HLD 04 and HLD 05	Clearing drain canal Digging 75 m long 4 ft wide 2 ft deep drain canal	L 75 m W 4 ft H 2 ft	Earth works 29 cu		Labors 64 days	11,200	11,200
	Sub-total				1,265,550		540,450	527,800
	Grand-total				1,806,000			
	(US$/ha)				165			

MAHASEN F.O AUTHORITY AREA

මහසෙන් ගොවි සංවිධාන බල ප්‍රදේශය • MAHASEN/NACHCHADUWA.



MAHASEN FC F.C. DETAILS

මහසෙන් ෆොර් සංවිධානයේ කොණ් ඇල පොටෝතුරු.

* NO. OF F.C. කොණ් ඇලවල් සංඛ්‍යාව : 22
* NO: of D.Canals වෙළුම් ඇලවල් සංඛ්‍යාව : 01
* Length of D.canal වෙළුම් ඇල දිග (මීටර්) : 1862.8 M
* Length of F.C කොණ් ඇලවල මුළු දිග (මීටර්): 11550.9 M
* Projected No. of F.C කොණ් ඇල විලෝපිත සංඛ්‍යාව : 00
* No of Farmers ගොවීන් සංඛ්‍යාව : 290
* Area Acres අක්කර ප්‍රමාණය : 500

- පාසල • School
- රජයේ නිලධාරී කාර්යාලය • R.P.M. office
- පන්සල • Temple
- තැපෑල් කාර්යාලය • Post office
- නිවාස • Houses
- පාලම / මෝස්ඩුව • Bridge / culvert
- ප්‍රධාන මාර්ගය • Main Road
- ඇල මාර්ග • canal
- කුඹුරු යාය • Paddy
- ඇල මාරු ජල • ගොරෝවිල • Sluice
- කොණ් ඇල මාර්ග

The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka

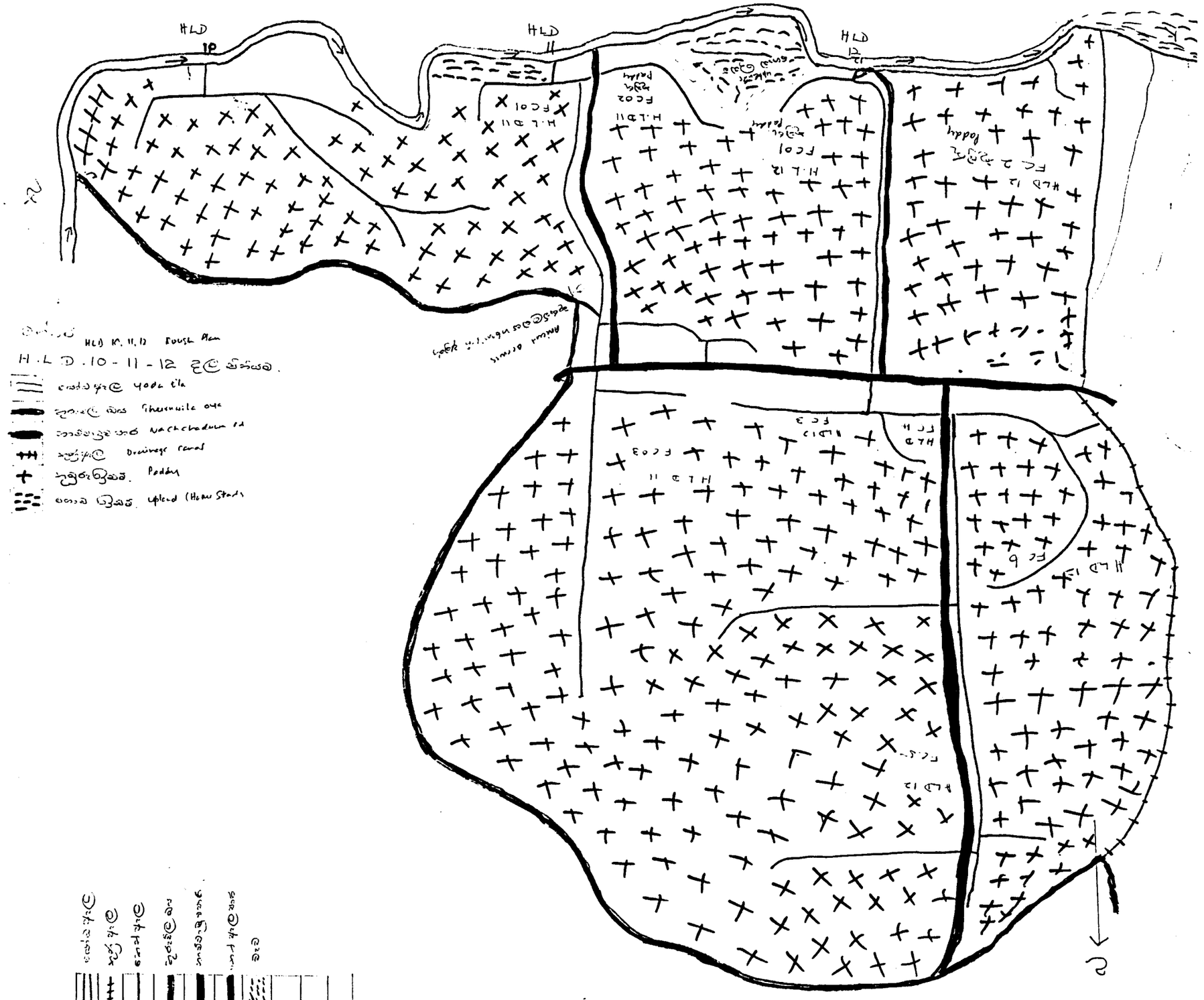
Japan International Cooperation Agency (JICA)

Rehabilitation and Improvement Plan of Irrigation Infrastructure by Mahasen DC Farmers' Organisation

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Mahasen FO (2), HLD7 to 9, Extent of Land 498 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participa-tion
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
1	FC 01 side wall	Must construct a ruble wall	L 100 m W 2' H 2 1/2' - both sides	RRM 27 cu Earth works 50 cu Metal 3 cu	86,400 7,800	Skilled 20 days Labors 135 days Labors 111 days Labors 7 days	5,500 23,625 19,425 1,225	 23,625 19,425 1,225
2	FC 01 - cross canal	Must construct a ruble wall	L 20m W 2' H 2 1/2' - both sides	RRM 4 cu Earth works 10 cu Metal 1 cu	12,800 2,600	Skilled 3 days Labors 20 days Labors 22 days Labors 2 days	825 3,500 3,850 350	 3,500 3,850 350
3	FC 02	Must construct a ruble wall	L 200m W 2' H 2 1/2' - both sides	RRM 36 cu Earth works 100 cu Metal 6 cu	115,200 15,600	Skilled 27 days Labors 180 days Labors 222 days Labors 13 days	7,425 31,500 38,850 2,275	 31,500 38,850 2,275
4	FC 02 - cross canal	Must construct a ruble wall	L 100 m W 2' H 2 1/2' - both sides	RRM 27 cu Earth works 50 cu Metal 3 cu	86,400 7,800	Skilled 20 days Labors 135 days Labors 111 days Labors 7 days	5,500 23,625 19,425 1,225	 23,625 19,425 1,225
5	FC 04 - side wall	Must construct a ruble wall	L 310m W 2' H 2 1/2' - both sides	RRM 56 cu Earth works 155 cu Metal 10 cu	179,200 26,000	Skilled 42 days Labors 280 days Labors 344 days Labors 22 days	11,550 49,000 60,200 3,850	 49,000 60,200 3,850
6	FC 05 1 2 3	Three sluice with doors	must supply 3 sluice doors	Included in rehabilitation plan of Irrigation Department of HLD7				
7	FC 05 up to R.3	Must construct a side wall of FC from land side	L 500 ft W 1 1/2' H 2 1/2' both sides	Included in rehabilitation plan of Irrigation Department of HLD7				
8	FC 06 to FC 08 FC 06 field canal FC 06 structure	Must construct a ruble masonry wall (D canal) About 250m field canal earth bund should concrete	L 600 ft W 2 H 2 1/2' both sides L 250m both sides - earth	RRM 78 cu Earth works 216 cu Metal 14 cu	249,600 36,400	Skilled 59 days Labors 390 days Labors 480 days Labors 31 days	16,225 68,250 84,000 5,425	 68,250 84,000 5,425
9	FC 09 beginning & middle	Construction of drop (Rubble masonry wall) Concrete basin (Rubble masonry wall) Construction of a culvert (Rubble masonry wall)	L 20' W 1 1/2' H 2 1/2' L 25' W 1 1/2' H 2 1/2' L 65' W 1 1/2' H 2 1/2'	RRM 6 cu Earth works 17 cu Metal 1 cu HP dia 300mm - 30 ft.	19,200 2,600 10,500	Skilled 5 days Labors 30 days Labors 38 days Labors 2 days	1,375 5,250 6,650 350	 5,250 6,650 350
10	Fc 09 End drain	Earth filling 40 (10' x 10' x		Earth 1 cu	250	Labors 2 days	350	350
11	Fc 10	Concreting (10 - 1 ft) one wall Concreting (10 - 1 ft) one wall	Length 20 ft Length 450 ft (one side)	RRM 13 cu Earth works 72 cu Metal 2 cu	41,600 5,200	Skilled 10 days Labors 65 days Labors 160 days Labors 4 days	2,750 13,650 20,650 700	 13,650 20,650 700
12	Hidogama spill canal	Construction of a side wall		Concrete 5 cu Earth works 10 cu Metal 1 cu	41,000 2,600	Skilled 5 days Labors 39 days Labors 22 days Labors 2 days	1,375 6,825 3,850 350	 6,825 3,850 350
13	HLD 8 FC02	FC Rubble masonry wall	L 60' W 1 1/2 H 2'	RRM 3 cu Earth works 9 cu Metal 1 cu	9,600 2,600	Skilled 2 days Labors 15 days Labors 20 days Labors 2 days	550 2,625 3,500 350	 2,625 3,500 350
		Construction of a water tank	For water distribution	Earth works 20 cu Others	 5,000	Labors 44 days	7,700	7,700
		Construction of regulator	Construction of regulator	Slide gate W1.00xH0.50 Slide dia. 300 gate Concrete 1 cu Earth works 1 cu	150,000 11,500 16,400 	 Skilled 1 days Labors 8 days Labors 2 days	 275 1,400 350	 1,400 350
		Preparation of canal bund	Earth work of FC 500 ft long	Earth works 16 cu	13,000	Labors 36 days	6,300	6,300
14	HLD 8 FC 1	Construction of water tank	Repairs of FC 1 canal	Earth works 20 cu Others	 5,000	Labors 44 days	7,700	7,700
		Construction of side wall	Repairs of FC 1 canal L 30 m	Concrete 5 cu Earth works 10 cu Metal 1 cu	41,000 2,600	Skilled 5 days Labors 39 days Labors 22 days Labors 2 days	1,375 6,825 3,850 350	 6,825 3,850 350
		Construction of regulator	Repairs of FC 1 canal	Slide dia. 300 gate Concrete 1 cu Earth works 1 cu	11,500 16,400 	 Skilled 1 days Labors 8 days Labors 2 days	 275 1,400 350	 1,400 350
		Provision of a hume pipe	Repairs of FC 1 canal	HP dia 300mm - 30 ft.	10,500			
15	HLD 9 & 9A	All the structures should be repaired	Rubble masonry wall L 100 m	RRM 18 cu Earth works 50 cu Metal 3 cu	64,000 50 7,800	Skilled 15 days Labors 100 days Labors 133 days Labors 9 days	4,125 17,500 23,275 1,575	 17,500 23,275 1,575
16	HLD 7 D canal	Side wall of D canal between FC 02 and FC 03	Side wall of the canal with the bridge on cemetry road	Included in rehabilitation plan of Irrigation Department of HLD7				
17	HLD 7 D canal	From FC 5 regulator/sluice to FC6 to 10 field canal Construction of a sluice with a door near the water issuing culvert	Construction of a sluice with a door near the water issuing culvert	Included in rehabilitation plan of Irrigation Department of HLD7				
18	Dumping earth (gravel) to Field canal roads		gravel 500 loads	Gravel 200 cu	400,000	Labors 200 days	1,000	1,000
	Sub-total				1,715,700		643,400	584,275
	Grand-total				2,359,100			
	(US$/ha)				165			



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Parakrama DC Farmers' Organisation**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization (1/2)

Name of Scheme : Nachchaduwa

Name of FO, etc. : Parakrama FO (3), HLD10 to 17, Extent of Land 575 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participa-tion
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
1	HLD 11 /FC2 FC1 Canal	Concreting side walls and bottom of the canal (RC Canal)	L 65' ft W 3' ft H 3' ft	Concrete 4 cu	32,800	Skilled 4 days	1,100	
						Labors 31 days	5,425	5,425
				Metal 1cu	2,600	Labors 2 days	350	350
				Earth works 10 cu		Labors 22 days	3,850	3,850
2	HLD 11 /FC2 Side wall of rubble masonry	One side wall should be constructed	L 15' ft, H 3' ft	RRM 1 cu	3,200	Skilled 1 days	275	
						Labors 5 days	875	875
				Earth works 2 cu		Labors 4 days	700	700
				Metal 1 cu	2,600	Labors 2 days	350	350
3	HLD 12 / FC2 Repair regulator Basin & earth filling	Earth filling	Length 10' ft, W 3' ft, H 1' ft	RRM 1 cu	3,200	Skilled 1 days	275	
						Labors 5 days	875	875
				Earth works 2 cu		Labors 4 days	700	700
4	HLD 12 / FC2 Repair regulator Basin & earth filling	Earth filling	Length 10' ft, W 3' ft, H 1' ft	RRM 1 cu	3,200	Skilled 1 days	275	
						Labors 5 days	875	875
				Earth works 2 cu		Labors 4 days	700	700
5	HLD 12 / FC2	Earth filing	L 6' ft, W 3' ft, H 1'	Earth works 1 cu	250	Labors 2 days	350	350
6	HLD 12 / FC2	Earth filing	L 6' ft, W 3' ft, H 1'	Earth works 1 cu	250	Labors 2 days	350	350
7	HLD 12 / FC2	Earth filing	L 6' ft, W 3' ft, H 1'	Earth works 1 cu	250	Labors 2 days	350	350
8	HLD 12 / FC2	Earth filing	L 6' ft, W 3' ft, H 1'	Earth works 1 cu	250	Labors 2 days	350	350
9	HLD 12 / FC2	Construction of side walls of culvert and fixing door		Concrete 1 cu	8,200	Skilled 1 days	275	
						Labors 8 days	1,400	1,400
				HP dia. 600mm	14,000			
				Slide gate dia. 300	11,500			
				Earth works 1 cu		Labors 2 days	350	350
				Others	2,000			
10	HLD 12 / FC2	Construction of side walls of culvert and fixing door		Concrete 1 cu	8,200	Skilled 1 days	275	
						Labors 8 days	1,400	1,400
				HP dia. 600mm	14,000			
				Slide gate dia. 300	11,500			
				Earth works 1 cu		Labors 2 days	350	350
				Others	2,000			
11	HLD 12 / FC2	Construction of farm gate		Concrete 1 cu	8,200	Skilled 1 days	275	
						Labors 8 days	1,400	1,400
				HP dia.6"	2,100			
				Earth works 1 cu		Labors 2 days	350	350
				Others	2,000			
12	HLD 11 /FC2	Construction of a new road	L 500m Width 12' ft	Earth - 901 cubes	225,250	Labors 2000 days	350,000	350,000
				Gravel - 106 cubes	212,000	Labors 235 days	41,125	41,125
13	HLD 11 /FC2	Construction of	L 500m, W 3' ft	Earth 200 cubes	100,000	Labors 444 days	77,700	77,700
14	HLD 11 /FC2	Side wall of	L 150m	RRM 27 cu	86,400	Skilled 20 days	5,500	
						Labors 135 days	23,625	23,625
				Earth works 75 cu		Labors 167 days	29,225	29,225
				Metal 5 cu	13,000	Labors 11 days	1,925	1,925
15	HLD 11 /FC2	2 small culverts	4 hume pipes for	RRM 4 cu	12,800	Skilled 3 days	825	
						Labors 20 days	3,500	3,500
				HP 24" - 40 ft	28,000			
				Earth works 4 cu		Labors 9 days	1,575	1,575
				Metal 2 cu	5,200	Labors 4 days	700	700
16	HLD 11 /FC2	Side wall of	L 100m	RRM 18 cu	57,600	Skilled 14 days	3,850	
						Labors 90 days	15,750	15,750
				Earth works 50 cu		Labors 111 days	19,425	19,425
				Metal 3 cu	7,800	Labors 7 days	1,225	1,225
17	HLD 11 /FC2	Two culverts for		RRM 4 cu	12,800	Skilled 3 days	825	
						Labors 20 days	3,500	3,500
				HP 24" - 40 ft	28,000			
				Earth works 4 cu		Labors 9 days	1,575	1,575
				Metal 2 cu	5,200	Labors 4 days	700	700
18	HLD 11 /FC3 upper section	D-Canal	L 150m	RRM 34 cu	108,800	Skilled 26 days	7,150	
						Labors 170 days	29,750	29,750
				Earth works 75 cu		Labors 167 days	29,225	29,225
				Metal 5 cu	13,000	Labors 11 days	1,925	1,925
19	HLD 11 /FC3 upper section	FC3 Field canal	L 350m	Concrete 78 cu	639,600	Skilled 78 days	21,450	
						Labors 605 days	105,875	105,875
				Earth works 175 cu		Labors 389 days	68,075	68,075
				Metal 26 cu	67,600	Labors 58 days	10,150	10,150
20	HLD 11 /FC3	FC 3 lower section	L 500 m, W 1m H 2 1/2 ft	Concrete 93 cu	762,600	Skilled 93 days	25,575	
						Labors 721 days	126,175	126,175
				Earth works 250 cu		Labors 555 days	97,125	97,125
				Metal 37 cu	96,200	Labors 82 days	14,350	14,350
21	HLD 11 /FC3	FC3 additional field	L 200m, W 3' ft H 2 ft	Earth - 68 cubes	17,000	Labors 151 days	26,425	26,425
22	HLD 11 /FC3	Field canal road	Length 1 km	Earth - 159 cu	79,500	Labors 353 days	61,775	61,775
				Gravel - 88 cu	176,000	Labors 195 days	34,125	34,125

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization (2/2)

Name of Scheme : Nachchaduwa
Name of FO, etc. : Parakrama FO (3), HLD10 to 17,

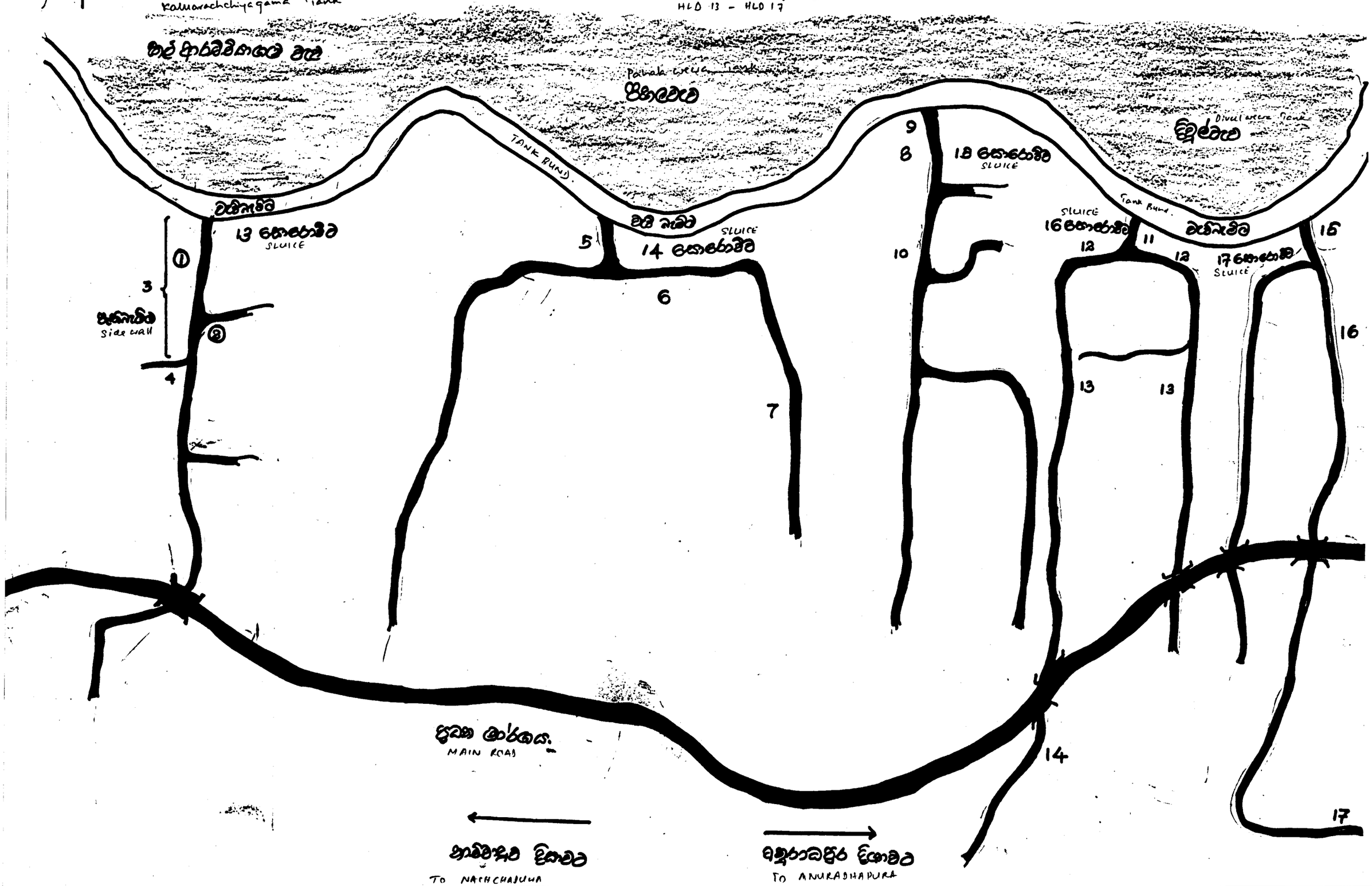
No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participation
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
23	FC 3	FC 3 Field canal Entire field canal should be re-constructed with concrete	Length 1200' ft, W 3' ft H 1 1/2' ft	Concrete 50 cu Earth works 183 cu Metal 25 cu	410,000 65,000	Skilled 50 days Labors 388 days Labors 406 days Labors 56 days	13,750 67,900 71,050 9,800	 67,900 71,050 9,800
23	FC3	Common threshing yard	2500 sq. ft	Earth - 40 cubes	20,000	Labors 89 days	15,575	15,575
24	FC3	Culvert near FC3 Construction of a culvert	Length 8' ft Width 8' ft	RRM 2 cu HP 24" - 20 ft Earth works 2 cu Metal 1 cu	6,400 14,000 2,600	Skilled 2 days Labors 10 days Labors 4 days Labors 2 days	550 1,750 700 350	 1,750 700 350
25	HLD 12 FC 4 & 5	Concreting the D canal Concreting both sides and bottom of canal 4" inches thick	Length 1/2 km, W 3' ft, H 3 1/2' ft	Concrete 107 cu Earth works 250 cu Metal 34 cu	877,400 88,400	Skilled 107 days Labors 829 days Labors 505 days Labors 75 days	29,425 145,075 88,375 13,125	 145,075 88,375 13,125
26	HLD 12 FC 4 & 5	FC 4 field canal Concreting both sides and bottom of canal4" inch thick	Length 1/2 km, W 3' ft, H 3 1/2' ft	Concrete 107 cu Earth works 250 cu Metal 34 cu	877,400 88,400	Skilled 107 days Labors 829 days Labors 505 days Labors 75 days	29,425 145,075 88,375 13,125	 145,075 88,375 13,125
27	HLD 12 FC 4 & 5	FC5 field canal Side wall	Length 1/2 km, W 9" inch H 4' ft	RRM 138 cu Earth works 250 cu Metal 16 cu	441,600 41,600	Skilled 104 days Labors 690 days Labors 555 days Labors 36 days	28,600 120,750 97,125 6,300	 120,750 97,125 6,300
28	HLD 12 FC 4 & 5	FC 5 Additional canal Concreting both sides and bottom of canal - 4" inch thick	Length 400m W 2 1/2' ft H 3' ft	Concrete - 74 cu Metal - 24 cube Earth works 200 cu	606,800 62,400 	Skilled 74 days Labors 574 days Labors 53 days Labors 444 days	20,350 100,450 9,275 77,700	 100,450 9,275 77,700
29	HLD 12 FC 4 & 5	Threshing yard Repair the threshing yard	2500 sq. ft	Earth - 40 cubes	20,000	Labors 89 days	15,575	15,575
30	HLD 12 FC 4 & 5	Field canal road Earth filling - surface gavel	Length 2 km W 3 m	Earth - 318 cu Gravel - 177 cu	159,000 354,000	Labors 706 days Labors 393 days	123,550 68,775	123,550 68,775
31	HLD 12 FC 4 & 5	2 culverts for threshing yard 1 1/2' ft dia and 2' ft dia	Length 16' ft	HP dia 450mm - 20 ft. HP dia 600mm - 20 ft. Concrete 4 cu Earth works 4 cu Metal 2 cu	10,800 14,000 32,800 5,200	 Skilled 4 days Labors 31 days Labors 9 days Labors 2 days	 1,100 5,425 1,575 350	 5,425 1,575 350

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participation
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
32	HLD 12 FC 4 & 5	Field canal road	Length 16' ft	HP 450mm - 200 ft. Concrete 20 cu Earth works 20 cu Metal 10 cu	108,000 164,000 26,000	Skilled 20 days Labors 155 days Labors 44 days Labors 22 days	5,500 27,125 7,700 3,850	 27,125 7,700 3,850
33	HLD 12 / FC6	Replacement of sluice door of field canal		Slide gate dia. 300 - 2	23,000			
34	HLD 12 / FC6	Side walls of FC2 6" x 9" rubble masonry	Length 500' ft H 3 1/2' ft	RRM 37 cu Earth works 76 cu Metal 5 cu	118,400 13,000	Skilled 28 days Labors 185 days Labors 169 days Labors 11 days	7,700 32,375 29,575 1,925	 32,375 29,575 1,925
35	HLD 12 / FC6	Rehabilitation of anicut 4" inch thick concrete wall	Length 120' ft, W 3' ft H 3 1/2' ft	Concrete - 17 cu Metal - 4 cu Earth works 18 cu	139,400 10,400 	Skilled 17 days Labors 132 days Labors 9 days Labors 40 days	4,675 23,100 1,575 7,000	 23,100 1,575 7,000
36	HLD 12 / FC6	FC6 field canal 6" x 9" rubble masonry wall at end of FC on both sides	Length 124' ft, W 3' ft H 3 1/2' ft	RRM 9 cu Earth works 19 cu Metal 1 cu	28,800 2,600	Skilled 7 days Labors 45 days Labors 42 days Labors 2 days	1,925 7,875 7,350 350	 7,875 7,350 350
37	HLD 12 / FC6	FC5 Field canal 6" x 9" rubble masonry wall at end of FC on both sides	Length 125' ft, W 3' ft H 3 1/2' ft	RRM 9 cu Earth works 19 cu Metal 1 cu	28,800 2,600	Skilled 7 days Labors 45 days Labors 42 days Labors 2 days	1,925 7,875 7,350 350	 7,875 7,350 350
38	HLD 12 / FC6	Construction of 5 culverts		HP 450mm - 100 ft. Concrete 10 cu Earth works 10 cu Metal 5 cu	54,000 82,000 13,000	Skilled 10 days Labors 78 days Labors 22 days Labors 11 days	2,750 13,650 3,850 1,925	 13,650 3,850 1,925
39	FC1	Side wall of FC1	Length 250' ft W 1' ft H 3' ft	RRM 16 cu Earth works 38 cu Metal 2 cu	51,200 5,200	Skilled 12 days Labors 80 days Labors 84 days Labors 4 days	3,300 14,000 14,700 700	 14,000 14,700 700
40	FC1	Threshing yard	2000 sq. ft	Earth - 40 cubes	20,000	Labors 89 days	15,575	15,575
41	HLD 12 / FC1	Total length of the canal is	Additional canal both sides concreted	Concrete 1 cu Earth works 1 cu Metal 1 cu	8,200 2,600	Skilled 1 days Labors 8 days Labors 2 days Labors 2 days	275 1,400 350 350	 1,400 350 350
42	HLD 12 / FC1	Sluice door of canal is		Slide gate dia. 300	11,500			
	Sub-total				7,997,150		2,936,050	2,716,875
	Grand-total				10,933,200			
	(US$/ha)				662			

සමගි දවඩුම් අල රනාවි සංවිධානය - බල ප්‍රදේශය.

HLD 13 සිට 17 දක්වා

HLD 13 - HLD 17



	The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Samagi DC Farmers' Organisation**

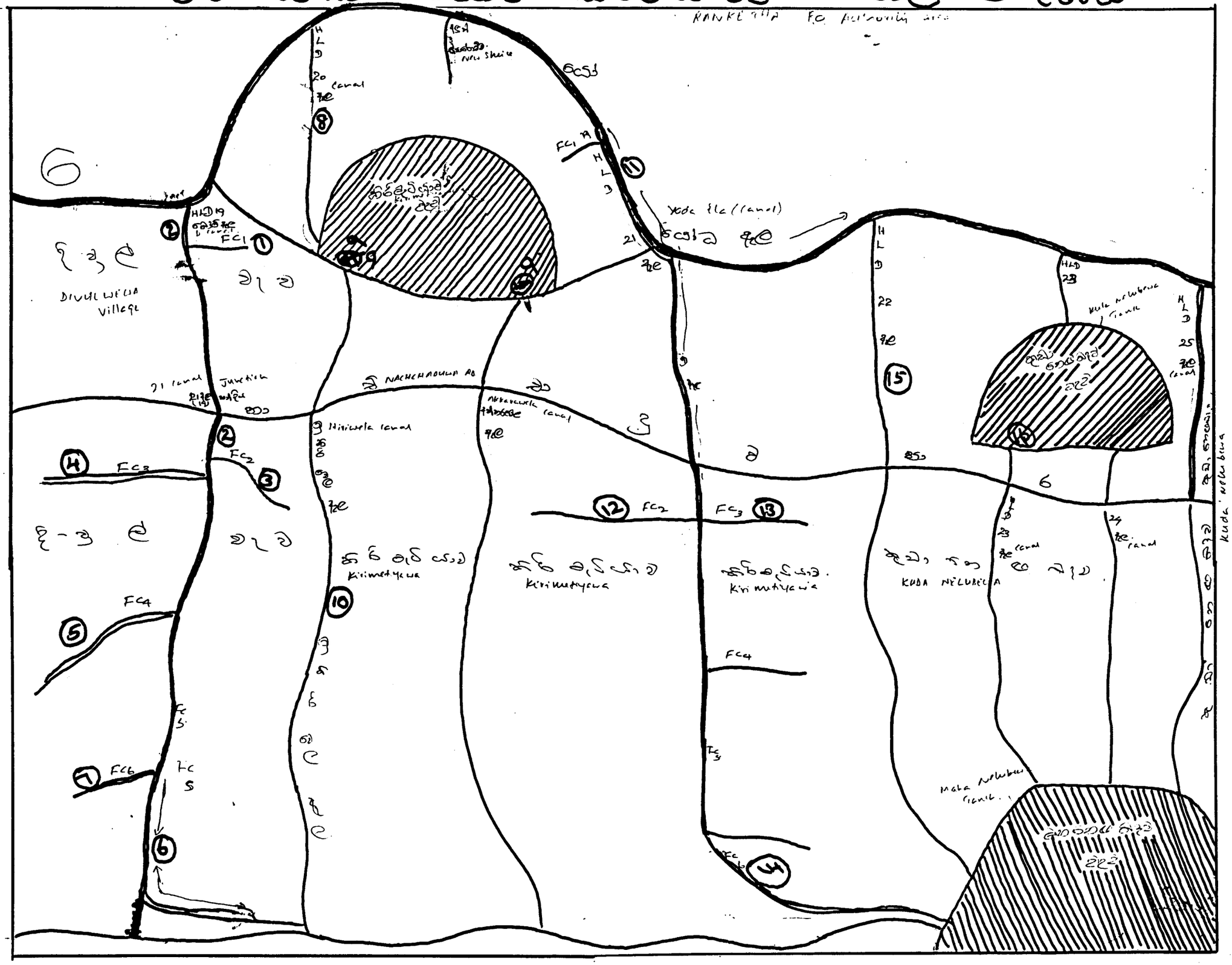
Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa

Name of FO, etc. : Samagi FO (4), HLD 13 to 17, Extent of Land 374 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participati
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	Water issuing end of sluice	Concreting the FC bottom	L 20 m, W 3 ft H 2 ft	Concrete 3 cu	24,600		Skilled 3 days	825		
							Labors 23 days	4,025	4,025	
				Earth works 10 cu			Labors 22 days	3,850	3,850	
				Metal 1 cu	2,600		Labors 2 days	350	350	
2	Construction of a small sluice to provide water to 6 acres of paddy	Construction of a small scale sluice (door) from main canal to provide water to paddy lands.		Concrete 1 cu	8,200		Skilled 1 days	275		
							Labors 8 days	1,400	1,400	
				Earth works 1 cu			Labors 2 days	350	350	
				Slide gate dia. 300 1 nos	11,500					
				HP dia.12" 20 ft	7,000					
3	Construction of a side wall	Starting from 200m from main sluice (13) construction of a side wall	L 200 m H 4 ft	RRM 55 cu	176,000		Skilled 41 days	11,275		
							Labors 275 days	48,125	48,125	
				Earth works 100 cu			Labors 222 days	38,850	38,850	
				Metal 6 cu	15,600		Labors 13 days	2,275	2,275	
4	Construction of a door to distribute water	Construction of 2 doors for dual water issue from the end of the above side wall		Concrete 2 cu	16,400		Skilled 2 days	550		
							Labors 16 days	2,800	2,800	
				Earth works 2 cu			Labors 4 days	700	700	
				Slide gate dia. 300 2 nos	23,000					
				HP dia.12" 40 ft	14,000					
5	D canal - bottom	Concreting the bottom of D canal which provides water to FC from sluice	L 50 m W 4 ft H 4 ft	Concrete 14 cu	114,800		Skilled 14 days	3,850		
							Labors 109 days	19,075	19,075	
				Earth works 25 cu			Labors 56 days	9,800	9,800	
				Metal 4 cu	10,400		Labors 9 days	1,575	1,575	
6	Field canal	Construction of side wall where FC divides into two	L 200 m H 1 1/2 ft	RRM 23 cu	73,600		Skilled 17 days	4,675		
							Labors 115 days	20,125	20,125	
				Earth works 100 cu			Labors 222 days	38,850	38,850	
				Metal 6 cu	15,600		Labors 13 days	2,275	2,275	
7	Deeping the main canal	Deeping the main canal		Desilting 100 cu			Labors 222 days	38,850	38,850	
8	Concreting the FC from end of D canal	Length 200 - 350 m	L 350 m W 2 ft H 1 1/2 ft	Concrete 41 cu	336,200		Skilled 41 days	11,275		
							Labors 318 days	55,650	55,650	
				Earth works 175 cu			Labors 389 days	68,075	68,075	
				Metal 17 cu	44,200		Labors 38 days	6,650	6,650	
9	Deeping the D canal	Deepen up to 6' ft 9" inches		Desilting 100 cu			Labors 222 days	38,850	38,850	
10	Repairs to water distribution points	Repairing each water distribution structure with concrete		Concrete 1 cu	8,200		Skilled 1 days	275		
							Labors 8 days	1,400	1,400	
				Earth works 1 cu			Labors 2 days	350	350	
				Slide gate dia. 300 1 nos	11,500					
				HP dia.12" 20 ft	7,000					
11	Repairs to bottom of main canal at water issue point to D canal	Concreting the bottom of water issuing point to prevent leakage.	L 20 m, W 3 ft H 2 ft	Concrete 3 cu	24,600		Skilled 3 days	825		
							Labors 23 days	4,025	4,025	
				Earth works 10 cu			Labors 22 days	3,850	3,850	
				Metal 1 cu	2,600		Labors 2 days	350	350	
12	Side wall	Construction of a side wall in the field canal from end of D canal to east & west 75 m length	L 150 m H 1 1/2 ft	RRM 17 cu	54,400		Skilled 13 days	3,575		
							Labors 85 days	14,875	14,875	
				Earth works 75 cu			Labors 167 days	29,225	29,225	
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925	
13	Deeping the field canal	Deeping the field canal for 30 meters closer to		Earth works 30 cu			Labors 67 days	11,725	11,725	
14	Construction of a cross canal	Construction of a cross canal with rubble masonry just below Nachchaduwa Main road		HP dia. 600mm 20 ft	14,000					
				Concrete 2 cu	16,400		Skilled 2 days	550		
							Labors 16 days	2,800	2,800	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
15	Rehabilitation of sluice wall bottom	Prevent the water leakage from issue point and concreting the bottom of sluice wall	L 20 m, W 3 ft H 2 ft	Concrete 3 cu	24,600		Skilled 3 days	825		
							Labors 23 days	4,025	4,025	
				Earth works 10 cu			Labors 22 days	3,850	3,850	
				Metal 1 cu	2,600		Labors 2 days	350	350	
16	Field canal from Tank	Concreting 300 m of field canal (both sides) up to Nachchaduwa main road	L 300 m, W 3 ft H 2 ft	Concrete 47 cu	385,400		Skilled 47 days	12,925		
							Labors 364 days	63,700	63,700	
				Earth works 150 cu			Labors 333 days	58,275	58,275	
				Metal 20 cu	52,000		Labors 44 days	7,700	7,700	
17	End of field canal	Construction of rubble masonry at the end of FC	L 300 m H 1 1/2 ft	RRM 35 cu	112,000		Skilled 26 days	7,150		
							Labors 175 days	30,625	30,625	
				Earth works 150 cu			Labors 333 days	58,275	58,275	
				Metal 10 cu	26,000		Labors 22 days	3,850	3,850	
	Sub-total				1,650,600			763,575	704,725	
	Grand-total				2,414,175					
	(US$/ha)				225					

රංකැත යොව් සංවිධාන කළඳ ප්‍රදේශය.



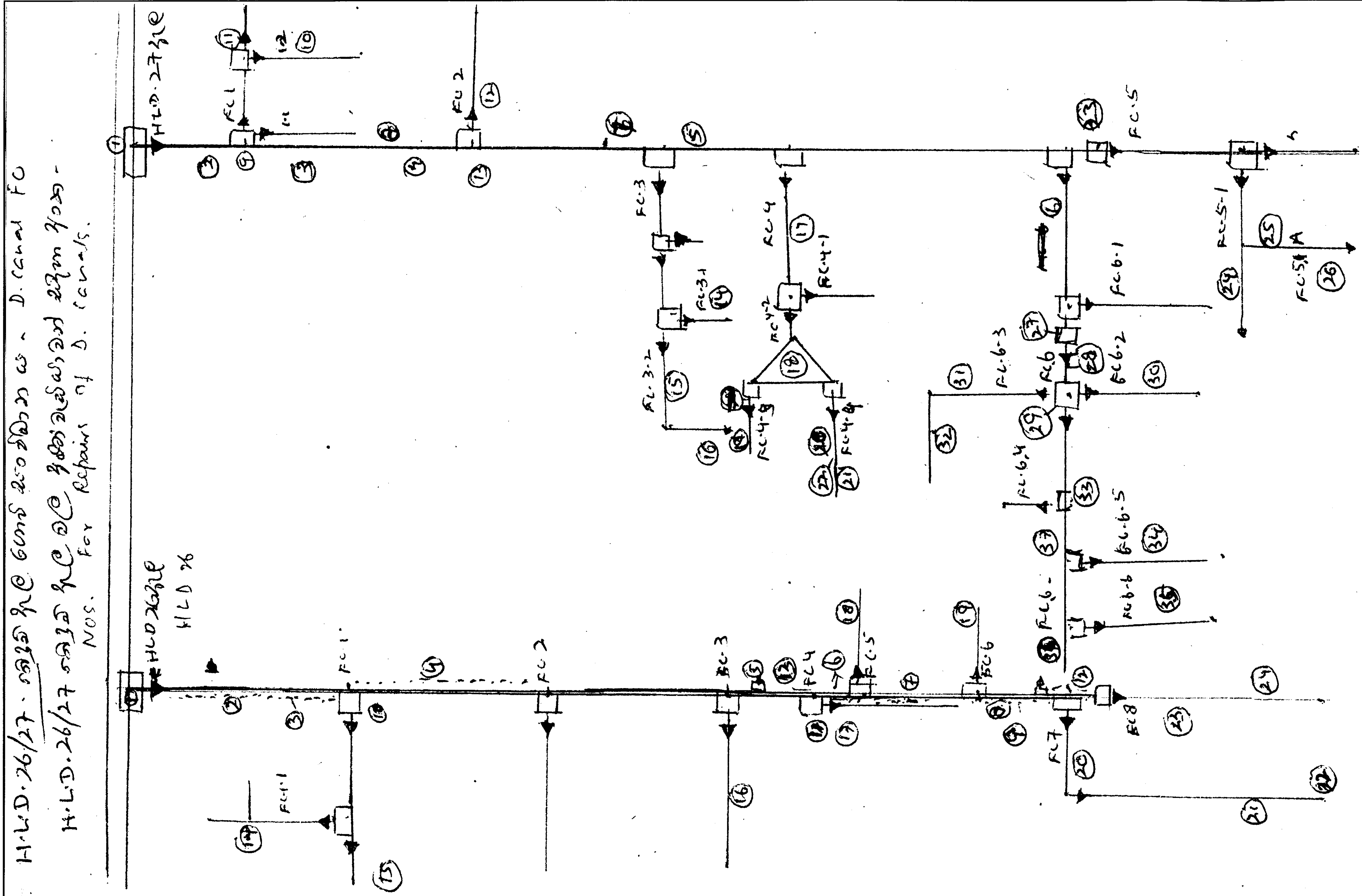
The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Ranketa DC Farmers' Organisation**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Ranketa FO (5), HLD19 to 25, Extent of Land 441 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	HLD 19 - FC1	Construction of side walls & earth filling	Length 200 m Height 2 1/2' H	RRM 36 cu	115,200		Skilled 27 days	7,425		
							Labors 180 days	31,500	31,500	
				Earth works 100 cu			Labors 222 days	38,850	38,850	
				Metal 6 cu	15,600		Labors 13 days	2,275	2,275	
2	HLD 19 - Side walls	Concrete or rubble masonry wall	Length 300 m Height 3' ft	Included in rehabilitation plan of Irrigation Department of HLD19						
3	FC2 - side wall	Concrete or rubble masonry wall	Length 256 m Height 2 1/2' ft	RRM 46 cu	147,200		Skilled 35 days	9,625		
							Labors 230 days	40,250	40,250	
				Earth works 128 cu			Labors 284 days	49,700	49,700	
				Metal 8 cu	20,800		Labors 18 days	3,150	3,150	
4	FC3 road & canal	Earth fill the road	Length 926 m Height 3m	Earth 147 cu	73,500		Labors 326 days	57,050	57,050	
				Gravel 82 cu	164,000		Labors 182 days	31,850	31,850	
		Concrete or rubble masonry wall	Length 926 m Height 2 1/2' ft	RRM 167 cu	534,400		Skilled 125 days	34,375		
							Labors 835 days	146,125	146,125	
				Earth works 463 cu			Labors 1,028 days	179,900	179,900	
				Metal 29 cu	75,400		Labors 64 days	11,200	11,200	
5	FC4 Canal & road	Earth fill the road	Length 250 m Height 3m	Earth 40 cu	20,000		Labors 89 days	15,575	15,575	
				Gravel 22 cu	44,000		Labors 49 days	8,575	8,575	
		Concrete or rubble masonry wall	Length 250 m Height 2 1/2' ft	RRM 45 cu	144,000		Skilled 34 days	9,350		
							Labors 225 days	39,375	39,375	
				Earth works 125 cu			Labors 278 days	48,650	48,650	
				Metal 8 cu	20,800		Labors 18 days	3,150	3,150	
6	FC5 Canal	Constriction of side walls of canal with concrete or rubble masonry	Length 492 m Height 2 1/2' ft	RRM 89 cu	284,800		Skilled 67 days	18,425		
							Labors 445 days	77,875	77,875	
				Earth works 246 cu			Labors 546 days	95,550	95,550	
				Metal 16 cu	41,600		Labors 36 days	6,300	6,300	
		Construction of culvert across road and causeway to drainage canal	Concreting Length 20' ft Height about - 6' feet	HP dia. 600mm 20 ft	14,000					
				Concrete 4 cu	32,800		Skilled 4 days	1,100		
							Labors 31 days	5,425	5,425	
				Earth works 4 cu			Labors 9 days	1,575	1,575	
				Metal 2 cu	5,200		Labors 4 days	700	700	
7	FC6 Canal & Road	Construction of side walls of canal	Length 300m Height 2 1/2' ft	RRM 54 cu	172,800		Skilled 41 days	11,275		
							Labors 270 days	47,250	47,250	
				Earth works 150 cu			Labors 333 days	58,275	58,275	
				Metal 10 cu	26,000		Labors 22 days	3,850	3,850	
		Construction of road	Length 300 m Height 3m	Earth works 248 cu	124,000		Labors 551 days	96,425	96,425	
				Gravel 64 cu	128,000		Labors 142 days	24,850	24,850	
		Construction of a culvert		HP dia. 600mm 20 ft	14,000					
				Concrete 2 cu	16,400		Skilled 2 days	550		
							Labors 16 days	2,800	2,800	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
8	HLD 20 Canal	Construction of side walls	Length 300m Height 2 1/2' ft	RRM 54 cu	172,800		Skilled 41 days	11,275		
							Labors 270 days	47,250	47,250	
				Earth works 150 cu			Labors 333 days	58,275	58,275	
				Metal 10 cu	26,000		Labors 22 days	3,850	3,850	
9	Sluices of Kirimetiya Wewa Tank	Lifting 2 sluices and construct a concrete slab to open and close		Concrete 4 cu	32,800		Skilled 4 days	1,100		
							Labors 31 days	5,425	5,425	
				Earth works 4 cu			Labors 9 days	1,575	1,575	
				Metal 2 nos	23,000					
				HP dia. 600mm 80 ft	56,000					
				Slide gate dia. 600 2 nos	80,000					
10	Ithiviwela Canal Road and Drainage Canal	Earth fill the road	Length 500 m Height 3m	Earth 80 cu	40,000		Labors 178 days	31,150	31,150	
				Gravel 44 cu	88,000		Labors 98 days	17,150	17,150	
		Construction of side walls of canal	Length 500 m H 2 1/2 ft	RRM 90 cu	288,000		Skilled 68 days	18,700		
							Labors 450 days	78,750	78,750	
				Earth works 250 cu			Labors 555 days	97,125	97,125	
				Metal 16 cu	41,600		Labors 36 days	6,300	6,300	
		Digging drainage canal	Length 500 m	Earth works 250 cu			Labors 555 days	97,125	97,125	
11	HLD 21 D canal	Construction of a concrete wall or a separate sluice	Length about 2070 m Height 3 1/2' ft	Included in rehabilitation plan of Irrigation Department of HLD21						
12	HLD 21 - FC 2	Construction of canal bund and canal - concrete wall for canal	Length 15 m Height 2 1/2' ft W 2 1/2 ft	Concrete 2 cu	16,400		Skilled 2 days	550		
							Labors 16 days	2,800	2,800	
				Earth works 8 cu			Labors 18 days	3,150	3,150	
				Metal 2 cu	5,200		Labors 4 days	700	700	
13	FC 3	Construction of canal bund and canal - fill the bund	Length about 10 m	Earth works 5 cu			Labors 11 days	1,925	1,925	
14	HLD 21 - FC6 Canal and road	Concrete the wall, earth fill the road and digging drainage canal Canal Length 1500m Road Length 2500m	Canal Length 1500m Height 2 1/2' ft W 2 1/2 ft	Concrete 249 cu	2,041,800		Skilled 249 days	68,475		
							Labors 1,930 days	337,750	337,750	
				Earth works 750 cu			Labors 1,665 days	291,375	291,375	
				Metal 180 cu	468,000		Labors 400 days	70,000	70,000	
			Road Length 2,500 m W 3 m	Earth 398 cu	199,000		Labors 884 days	154,700	154,700	
				Gravel 221 cu	442,000		Labors 491 days	85,925	85,925	
15	HLD 22 - Canal and drainage canal	Concrete or rubble masonry wall Drain canal wall & digging	Canal Length 350m Drainage canal wall 10 m dig 10' ft	RRM 8 cu	25,600		Skilled 6 days	1,650		
							Labors 40 days	7,000	7,000	
				Earth works 175 cu			Labors 389 days	68,075	68,075	
				Metal 1 cu	2,600		Labors 2 days	350	350	
16	Kuda Neubewa Tank	Arresting the leak of the		Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank						
17	HLD 25 Canal & Road	Construction of side walls of canal Earth fill the road with gravel 6" dia. 2 x 10 nos.	Length of canal 1000 m width 8' ft Height 2' ft	RRM 148 cu	473,600		Skilled 111 days	30,525		
							Labors 740 days	129,500	129,500	
				Earth works 500 cu			Labors 1,110 days	194,250	194,250	
				Metal 32 cu	83,200		Labors 71 days	12,425	12,425	
			Road Length 1,000 m W 3 m	Earth 159 cu	79,500		Labors 353 days	61,775	61,775	
				Gravel 88 cu	176,000		Labors 195 days	34,125	34,125	
	Sub-total				7,098,200			3,253,300	3,028,900	
	Grand-total				10,351,500					
	(US$/ha)				817					



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by 26 / 27 DC Farmers' Organisation**
Japan International Cooperation Agency (JICA)	

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization (1/2)

Name of Scheme : Nachchaduwa

Name of FO, etc. : 26/27 D-canal FO (6), HLD26 to 27, Extent of Land 492 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	D-canal Gate	Fix an operative with locking				5,000				
2	D-canal near Mr. Sunil's house	Side wall to the road side	L 30ft, w 1 ft, H 3 ft	Included in rehabilitation plan of Irrigation Department of HLD 26						
3	Reservation of canal from start to main road	Rehabilitation of road using the reservation		Included in rehabilitation plan of Irrigation Department of HLD 26						
4	D26 canal from FC1 to FC2 on Land side	Construction of a side wall	L 120m	Included in rehabilitation plan of Irrigation Department of HLD 26						
5	Mr. Fernando's Field Turnout	Rehabilitation of turnout with concrete		Included in rehabilitation plan of Irrigation Department of HLD 26						
6	FC4 cement wall	Bottom is washed off concreting and earth filling	L 200 m W 2 ft H 1 1/2 ft	Concrete	24 cu	8,200	Skilled	24 days	6,600	
							Labors	186 days	32,550	32,550
				Earth works	100 cu		Labors	222 days	38,850	38,850
				Metal	10 cu	26,000	Labors	22 days	3,850	3,850
7	Near Mr. Piyadasa's Field	Brick work and Plastering	L 45 ft, height 2 ft	RRM	2 cu	6,400	Skilled	2 days	550	
							Labors	10 days	1,750	1,750
				Earth works	7 cu		Labors	16 days	2,800	2,800
				Metal	1 cu	2,600	Labors	2 days	350	350
8	Near Mr. Gunatilake's Field	Construction of a crossing	2 ft dia. Hume pipes x 16 ft L x H 3.5 ft	Included in rehabilitation plan of Irrigation Department of HLD 26						
9										
10	FC1	Housing and locking device				5,000				
11	Start of cement wall	Fixing Rod and gate		12" dia Iron gate	1 no	11,500				
12	End of canal 26 -FC 6,7,8	Fixing all gates, housing etc.		Included in rehabilitation plan of Irrigation Department of HLD 26						
13	From 1080m to 2040m	Filling earth, gravel	L 960m W 8ft H 4 inches	Included in rehabilitation plan of Irrigation Department of HLD 26						
14	FC1 second Turnout	Structure to divide water equally to both sides	L 10 ft W 1 ft H 2 ft.	Concrete	1 cu	8,200	Skilled	1 days	275	
							Labors	8 days	1,400	1,400
				Earth works	1 cu		Labors	2 days	350	350
				Slide gate dia. 300	2 nos	23,000				

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
15	From irrigation buildings to Tank bed	Acquire the reservation and earth filling and gravelling	L 100 m W 3 m	Earth works	16 cu	8,000	Labors	36 days	6,300	6,300
				Gravel	9 cu	18,000	Labors	20 days	3,500	3,500
16	From Gunasin Rice Mill	Construction of 3 turnouts across road. Demarcate the FC reservation		Concrete	3 cu	24,600	Skilled	3 days	825	
				Earth works	3 cu		Labors	23 days	4,025	4,025
				Slide gate dia. 300	3 nos	34,500	Labors	7 days	1,225	1,225
				HP dia.12"	60 ft	21,000				
17	FC4 First turnout	Rehabilitation of destroyed turnout		Concrete	1 cu	8,200	Skilled	1 days	275	
				Earth works	1 cu		Labors	8 days	1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors	2 days	350	350
18	Near Welegedas	Earth filling the remaining section		Earth works	10 cu		Labors	22 days	3,850	3,850
19	FC6 drain water canal near Mr. Atapattu's house	Construction of a culvert of 3 ft wide and side wall to field side		HP dia. 600mm	20 ft	14,000	Skilled	2 days	550	
				RRM	2 cu	6,400	Labors	10 days	1,750	1,750
				Earth works	2 cu		Labors	4 days	700	700
				Metal	1 cu	2,600	Labors	2 days	350	350
20	FC7 from Mr. Pemadasa's house up to Karandagaha	Construction of new side walls after removing the existing wall	L 100 ft, height 2 ft	RRM	5 cu	16,000	Skilled	4 days	1,100	
							Labors	25 days	4,375	4,375
				Earth works	15 cu		Labors	33 days	5,775	5,775
				Metal	1 cu	2,600	Labors	2 days	350	350
21	FC7 near Mr. Tamaragena's field	Construction of new side walls after removing the existing wall	L 100 ft, height 2 ft	RRM	5 cu	16,000	Skilled	4 days	1,100	
							Labors	25 days	4,375	4,375
				Earth works	15 cu		Labors	33 days	5,775	5,775
				Metal	1 cu	2,600	Labors	2 days	350	350
22	From start of FC7	Earth filling with gravel	L 1,118m with W 6 ft H 4 inches	Earth works	107 cu	53,500	Labors	238 days	41,650	41,650
				Gravel	59 cu	118,000	Labors	131 days	22,925	22,925
23	FC8 from beginning field side	Construction of a side wall	L 535m Height 2 ft	RRM	79 cu	252,800	Skilled	59 days	16,225	
							Labors	395 days	69,125	69,125
				Earth works	268 cu		Labors	595 days	104,125	104,125
				Metal	18 cu	46,800	Labors	40 days	7,000	7,000
24	FC8 road pot holes	Earth filling with gravel	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization (2/2)

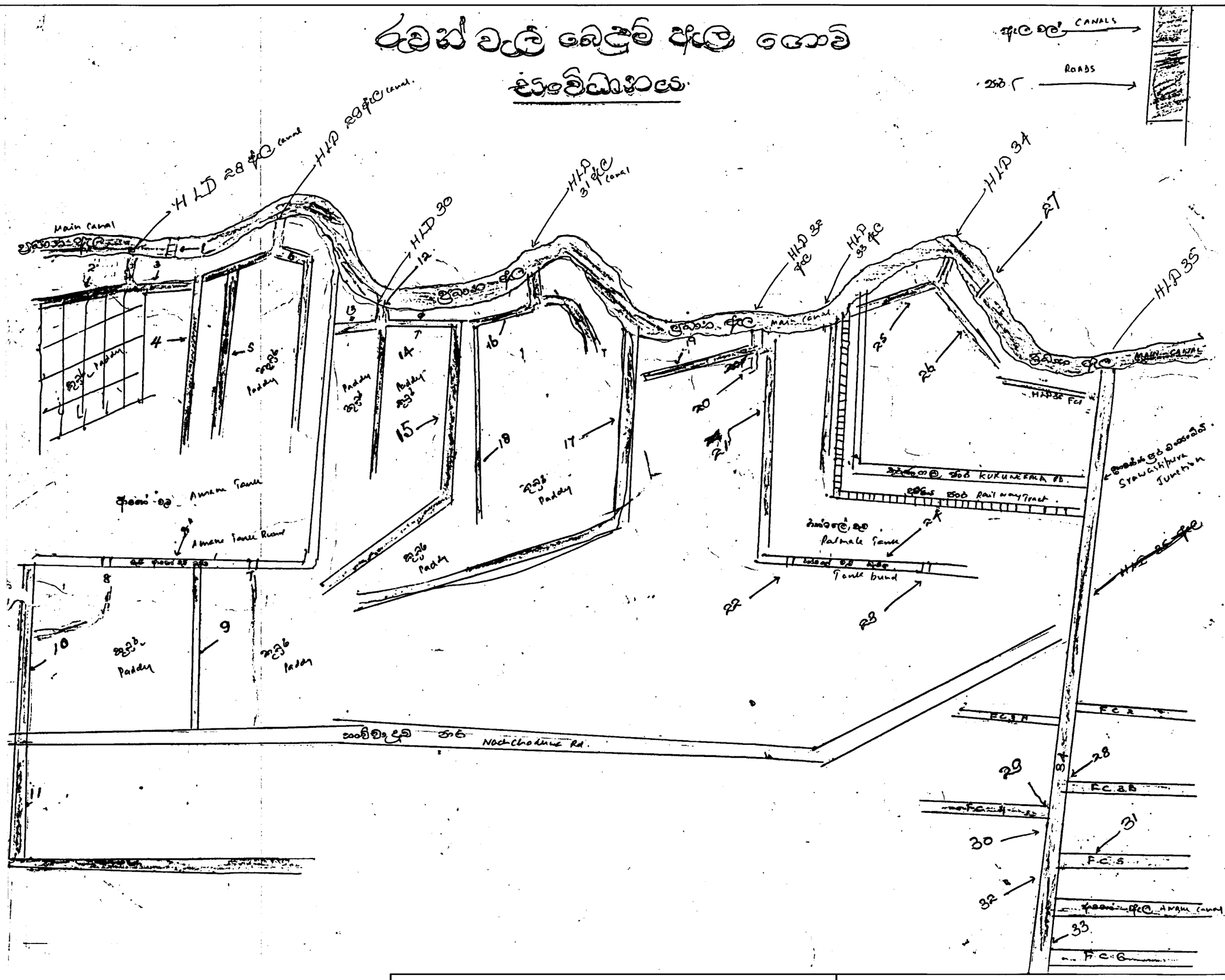
Name of Scheme : Nachchaduwa

Name of FO, etc. : 26/27 D-canal FO (6), HLD26 to 27, Extent of Land 492 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	D canal gate	Fixing gate with locking		24" dia Iron gate	1 nos	40,000				
2	From main sluice to FC1	Construction of a side wall	L 15 m, height 2 ft	Included in rehabilitation plan of Irrigation Department of HLD 27						
3	From Mr. Samarasinghe's house to Mr. Jinadasa's house	Construction of a side wall to prevent spilling	L 50 m, height 2 ft	Included in rehabilitation plan of Irrigation Department of HLD 27						
4	From Mr. Marasinghe's house up to FC2 Land side	Construction of a side wall to prevent spilling	L 50 m, height 2 ft	Included in rehabilitation plan of Irrigation Department of HLD 27						
5	Near Mr. John's house	Line of steps to bathing step		Included in rehabilitation plan of Irrigation Department of HLD 27						
6	D canal below FC turnout	Construction of a culvert across road		Included in rehabilitation plan of Irrigation Department of HLD 27						
7	From Tar Road	Earth filling with gravel	L 500 m W 2 m	Included in rehabilitation plan of Irrigation Department of HLD 27						
8	Near Awane Tank Spill	Construction of a canal to obtain spill water to canal D27	L 100 m, height 2 ft	RRM	15 cu	48,000	Skilled	11 days	3,025	
							Labors	75 days	13,125	13,125
				Earth works	50 cu		Labors	111 days	19,425	19,425
				Metal	4 cu	10,400	Labors	9 days	1,575	1,575
9	Fc1 Gate	Fixing rod and gate		12" dia Iron gate	1 nos	11,500				
10	FC 1.2	Rehabilitation of road with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
11	FC 1.2	Rehabilitation of 2nd turnout with pipes		Concrete	1 cu	8,200	Skilled	1 days	275	
				Earth works	1 cu		Labors	8 days	1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors	2 days	350	350
				HP dia.12"	20 ft	7,000				
12	Mr. Edirisinghe's land	Rehabilitation of FC2 road with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
13	FC2 gate	Fixing the gate		Slide gate dia. 300	1 nos	11,500				
14	FC3 canal road	Earth filling FC3 road with gravel	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
15	Canal in front of ASC	Construction of an over crossing		HP dia. 600mm	20 ft	14,000	Skilled	2 days	550	
				RRM	2 cu	6,400	Labors	10 days	1,750	1,750
				Earth works	2 cu		Labors	4 days	700	700
				Metal	1 cu	2,600	Labors	2 days	350	350
16	From Mr. Jinadasa's land	Rehabilitation of FC3-2 road with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
17	FC4 near turnout	Construction of a 1 ft wide canal, Earth filling, side wall to the bund	L 100 m, height 2 ft	RRM	15 cu	48,000	Skilled	11 days	3,025	
							Labors	75 days	13,125	13,125
				Earth works	50 cu		Labors	111 days	19,425	19,425
				Metal	4 cu	10,400	Labors	9 days	1,575	1,575
18	Egodagama Tank	De-silting		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank						
19	Tank High Level Sluice	Rehabilitation by earth filling FC road	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
20	Tank Low level sluice	Rehabilitation of first turnout & pipe		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank						
21	Tank low level sluice - canal end	Culvert between atapattu - Nandapala Fields		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank						
22	FC4-4 L.L. canal road	Earth filling - gravel	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
23	FC5 turnout	Fixing the gate		Included in rehabilitation plan of Irrigation Department of HLD 27						
24	FC5.1 Canal Road	Rehabilitation with earth filling		Earth works 50 cu		25,000	Labors 111		19,425	19,425
				Gravel -50 cu		10,000	Labors	11 days	1,925	1,925
25	FC5.1A Canal Road	Rehabilitation with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
26	FC5.1A Canal Road	Construction of farm crossing (culvert)		HP dia. 600mm	20 ft	14,000	Skilled	2 days	550	
				RRM	2 cu	6,400	Labors	10 days	1,750	1,750
				Earth works	2 cu		Labors	4 days	700	700
				Metal	1 cu	2,600	Labors	2 days	350	350
27	FC6 Turnout	Rehabilitation of hume pipe		HP dia.18"	20 ft	10,800				
28	Canal between FC6.1 & 6.2	Construction of a side wall	L 40 m W 1 ft H 3 ft	RRM	8 cu	25,600	Skilled	6 days	1,650	
							Labors	40 days	7,000	7,000
				Earth works	20 cu		Labors	44 days	7,700	7,700
				Metal	2 cu	5,200	Labors	4 days	700	700
29	FC6, 6.2, 6.3	Systematic Rehabilitation	L 1,340 m W 1 ft H 1 1/2 ft	RRM	156 cu	499,200	Skilled	117 days	32,175	
							Labors	780 days	136,500	136,500
				Earth works	670 cu		Labors	1487 days	260,225	260,225
				Metal	43 cu	111,800	Labors	95 days	16,625	16,625
30	FC6-2 canal road	Rehabilitation with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
31	FC6.3 canal road	Rehabilitation with earth filling	L 500 m W 2 m	Earth works	53 cu	26,500	Labors	118 days	20,650	20,650
				Gravel	27 cu	54,000	Labors	60 days	10,500	10,500
	Sub-total					2,498,100			1,277,125	1,208,375
	Grand-total					3,775,225				
	(US$/ha)					267				

රුවන්වැලි බෙදුම් ඇල ජාලය

සංවිධානාත්මය



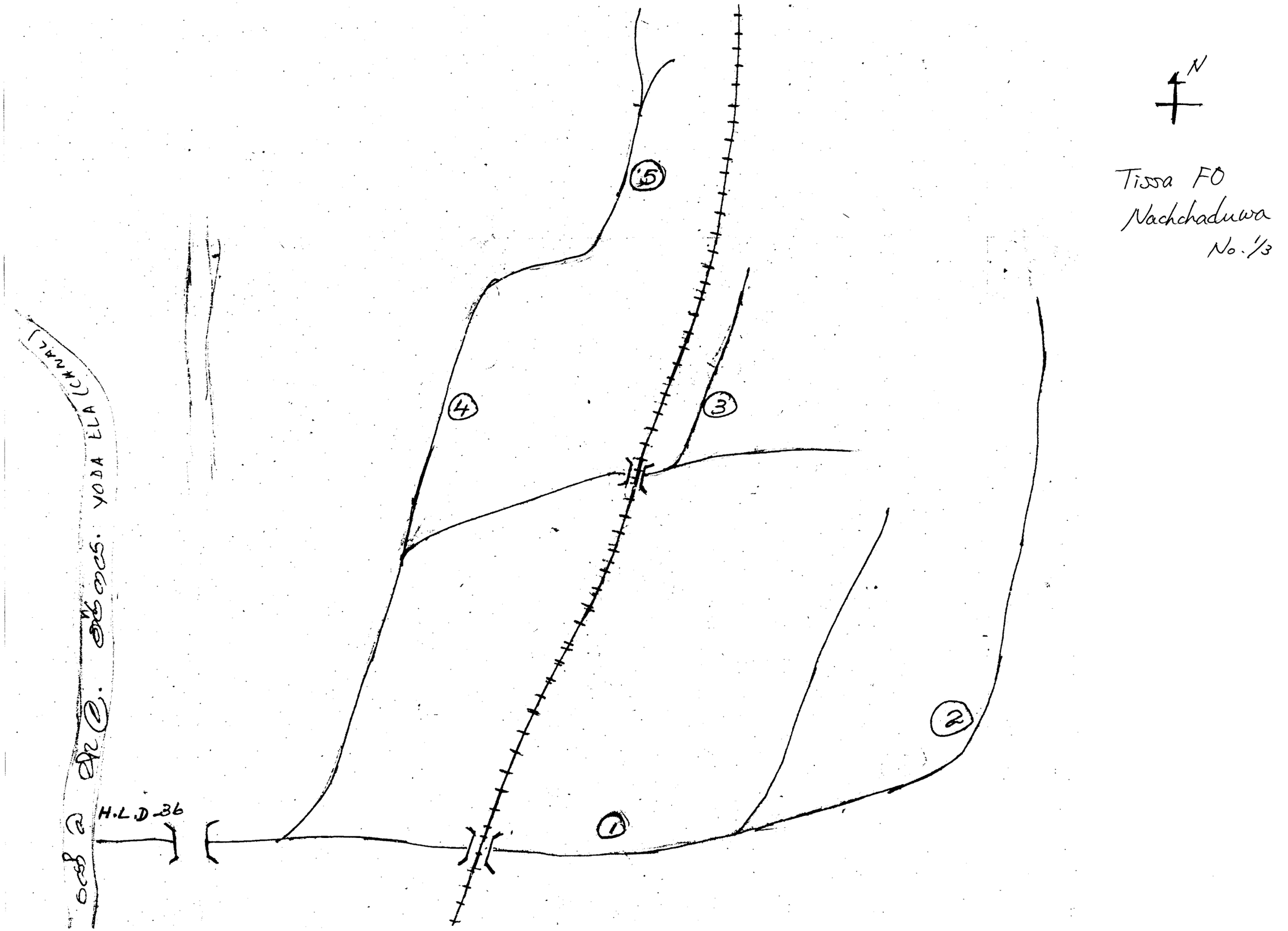
The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Ruwanweli DC Farmers' Organisation**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa

Name of FO, etc. : Ruwanmweli FO (7), HLD28 to 35, Extent of Land 491 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	Regulator	Lifting the bottom of regulator with concrete to provide water to canal 28	Length 20' ft Height 9" inches	Concrete 4 cu	32,800		Skilled 4 days	1,100	
							Labors 31 days	5,425	5,425
				Earth works 3 cu			Labors 7 days	1,225	1,225
				Metal 2 cu	5,200		Labors 4 days	700	700
2	Field canal	Side wall - rubble masonry	Length 100' ft, W 9" inches, H 1 1/2' ft	RRM 4 cu	12,800		Skilled 3 days	825	
							Labors 20 days	3,500	3,500
				Earth works 15 cu			Labors 33 days	5,775	5,775
				Metal 1 cu	2,600		Labors 2 days	350	350
3	Field canal	Side wall - rubble masonry	Length 100' ft, W 9" inches, H 1 1/2' ft	RRM 4 cu	12,800		Skilled 3 days	825	
							Labors 20 days	3,500	3,500
				Earth works 15 cu			Labors 33 days	5,775	5,775
				Metal 1 cu	2,600		Labors 2 days	350	350
4	Agricultural road	Filling earth	Length 750 m, W 12' ft	Earth works 143 cu	71,500		Labors 317 days	55,475	55,475
				Gravel 80 cu	160,000		Labors 178 days	31,150	31,150
5	HLD 29 Agricultural road	Filling earth	Length 800m, W 12' ft	Earth works 153 cu	76,500		Labors 340 days	59,500	59,500
				Gravel 85 cu	170,000		Labors 189 days	33,075	33,075
6	HLD 29 Field canal	Side wall with rubble masonry	Length 150m, W 9" inches, H 3' ft	RRM 32 cu	102,400		Skilled 24 days	6,600	
							Labors 160 days	28,000	28,000
				Earth works 75 cu			Labors 167 days	29,225	29,225
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925
7	Amane Tank Sluice	Replace doors		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
8	Amane Tank Sluice	Replace doors - provide a rip-rap		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
9	Amane Tank Agricultural road	Filling earth, culverts for required places	Length 1500m, W 12' ft	Earth works 286 cu	143,000		Labors 635 days	111,125	111,125
				Gravel 159 cu	318,000		Labors 353 days	61,775	61,775
				HP dia. 600mm 60 ft	42,000				
				RRM 6 cu	19,200		Skilled 5 days	1,375	
							Labors 30 days	5,250	5,250
				Earth works 6 cu			Labors 13 days	2,275	2,275
				Metal 3 cu	7,800		Labors 7 days	1,225	1,225
10	Amane Tank Spill canal	Side wall for the spill canal	Length 1500m, H 4' ft	Earth works 1,500 cu			Labors ### days	582,750	582,750
11	Amane Tank Agricultural road	Fill earth	Length 1400m, W 12' ft	Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
12	HLD 32 Sluice	Repair sluice of main canal to HLD		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
13	HLD 32 Field canal	Side wall - rubble masonry	Length 100m, W 9" inches, H 3' ft	RRM 21 cu	67,200		Skilled 16 days	4,400	
							Labors 105 days	18,375	18,375
				Earth works 50 cu			Labors 111 days	19,425	19,425
				Metal 3 cu	7,800		Labors 7 days	1,225	1,225
14	HLD 32 Field canal	Side wall - rubble masonry	Length 150m, W 9" inches, H 3' ft	RRM 32 cu	102,400		Skilled 24 days	6,600	
							Labors 160 days	28,000	28,000
				Earth works 75 cu			Labors 167 days	29,225	29,225
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925
15	HLD 32 Agricultural road	Filling earth	Length 1400m, W 12' ft	Earth works 267 cu	133,500		Labors 593 days	103,775	103,775
				Gravel 148 cu	296,000		Labors 329 days	57,575	57,575
16	HLD 31 Field canal	Side wall - rubble masonry	Length 500m, W 9" inches, H 4' ft	RRM 138 cu	441,600		Skilled 104 days	28,600	
							Labors 690 days	120,750	120,750
				Earth works 250 cu			Labors 555 days	97,125	97,125
				Metal 16 cu	41,600		Labors 36 days	6,300	6,300
17	HLD 31 Agricultural road	Filling earth	Length 1500m, W 12' ft	Earth works 286 cu	143,000		Labors 635 days	111,125	111,125
				Gravel 159 cu	318,000		Labors 353 days	61,775	61,775
18	HLD 31 Drain road	Digging the drain canal	Length 500m	Earth works 500 cu			Labors ### days	194,250	194,250
19	HLD 32 Field canal	Side wall - rubble masonry	Length 20m, W 9"inches, H 2 1/2' ft	RRM 4 cu	12,800		Skilled 3 days	825	
							Labors 20 days	3,500	3,500
				Earth works 10 cu			Labors 22 days	3,850	3,850
				Metal 1 cu	2,600		Labors 2 days	350	350
20	HLD 32 Field canal	Side wall - rubble masonry	Length 20m, W 9"inches, H 2 1/2' ft	RRM 4 cu	12,800		Skilled 3 days	825	
							Labors 20 days	3,500	3,500
				Earth works 10 cu			Labors 22 days	3,850	3,850
				Metal 1 cu	2,600		Labors 2 days	350	350
21	HLD 32 Field canal	Side wall - rubble masonry	Length 150m, W 9"inches, H 2' ft	RRM 22 cu	70,400		Skilled 17 days	4,675	
							Labors 110 days	19,250	19,250
				Earth works 75 cu			Labors 167 days	29,225	29,225
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925
22	Ratmale Tank Sluice	Repair the sluice and replace doors		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
23	Ratmale Tank Sluice	Repair the sluice and replace doors		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
24	Ratmale Tank Tank bund	Construction of a rip-rap	Length 1200m	Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
25	HLD 34 Field canal	Side wall - rubble masonry	Length 150m, W 9"inches, H 31/2' ft	RRM 37 cu	118,400		Skilled 28 days	7,700	
							Labors 185 days	32,375	32,375
				Earth works 75 cu			Labors 167 days	29,225	29,225
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925
26	HLD 34 Field canal	Side wall - rubble masonry	Length 150m, W 9"inches, H 31/2' ft	RRM 37 cu	118,400		Skilled 28 days	7,700	
							Labors 185 days	32,375	32,375
				Earth works 75 cu			Labors 167 days	29,225	29,225
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925
27	HLD 34 Sluice	Construction of a sluice to provide water for 20		Included in rehabilitation plan of Irrigation Department of 11 nos of service tank					
28	HLD 35 Field canal	Turnout with gates		Concrete 1 cu	8,200		Skilled 1 days	275	
							Labors 8 days	1,400	1,400
				Earth works 1 cu			Labors 2 days	350	350
				Slide gate dia. 300 1 nos	11,500				
				HP dia.12" 20 ft	7,000				
29	HLD 35 Field canal	Turnout with gates		Concrete 1 cu	8,200		Skilled 1 days	275	
							Labors 8 days	1,400	1,400
				Earth works 1 cu			Labors 2 days	350	350
				Slide gate dia. 300 1 nos	11,500				
				HP dia.12" 20 ft	7,000				
30	HLD 35 Canal bund	Side wall - rubble masonry	Length 500m, W 9"inches, H 4' ft	Included in rehabilitation plan of Irrigation Department of HLD 35					
31	HLD 35 Canal bund	Side wall - rubble masonry	Length 150m, W 9"inches, H 4' ft	Included in rehabilitation plan of Irrigation Department of HLD 35					
32	HLD 35 Canal bund	Side wall - rubble masonry	Length 70m, W 9"inches, H 3' ft	Included in rehabilitation plan of Irrigation Department of HLD 35					
33	HLD 35 Field canal	Side wall - rubble masonry	Length 800m, W 9"inches, H 3' ft	RRM 170 cu	544,000		Skilled 128 days	35,200	
							Labors 850 days	148,750	148,750
				Earth works 400 cu			Labors 888 days	155,400	155,400
				Metal 25 cu	65,000		Labors 56 days	9,800	9,800
34	HLD 35 Canal road	Earth filling - gravel	Length 1500m, W 12' ft	Included in rehabilitation plan of Irrigation Department of HLD 35					
	Sub-total				3,795,700			2,498,300	2,390,500
	Grand-total				6,294,000				
	(US$/ha)				446				



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Tissa DC Farmers' Organisation (1/2)**

TISSA FIO
Hachchadawa
No 3/3

N

TISSA FIO
HACHCHADAWA.
No 2/3

YODA ELA (CANAL)

6

7

8

H.L.D-38

H.L.D-39

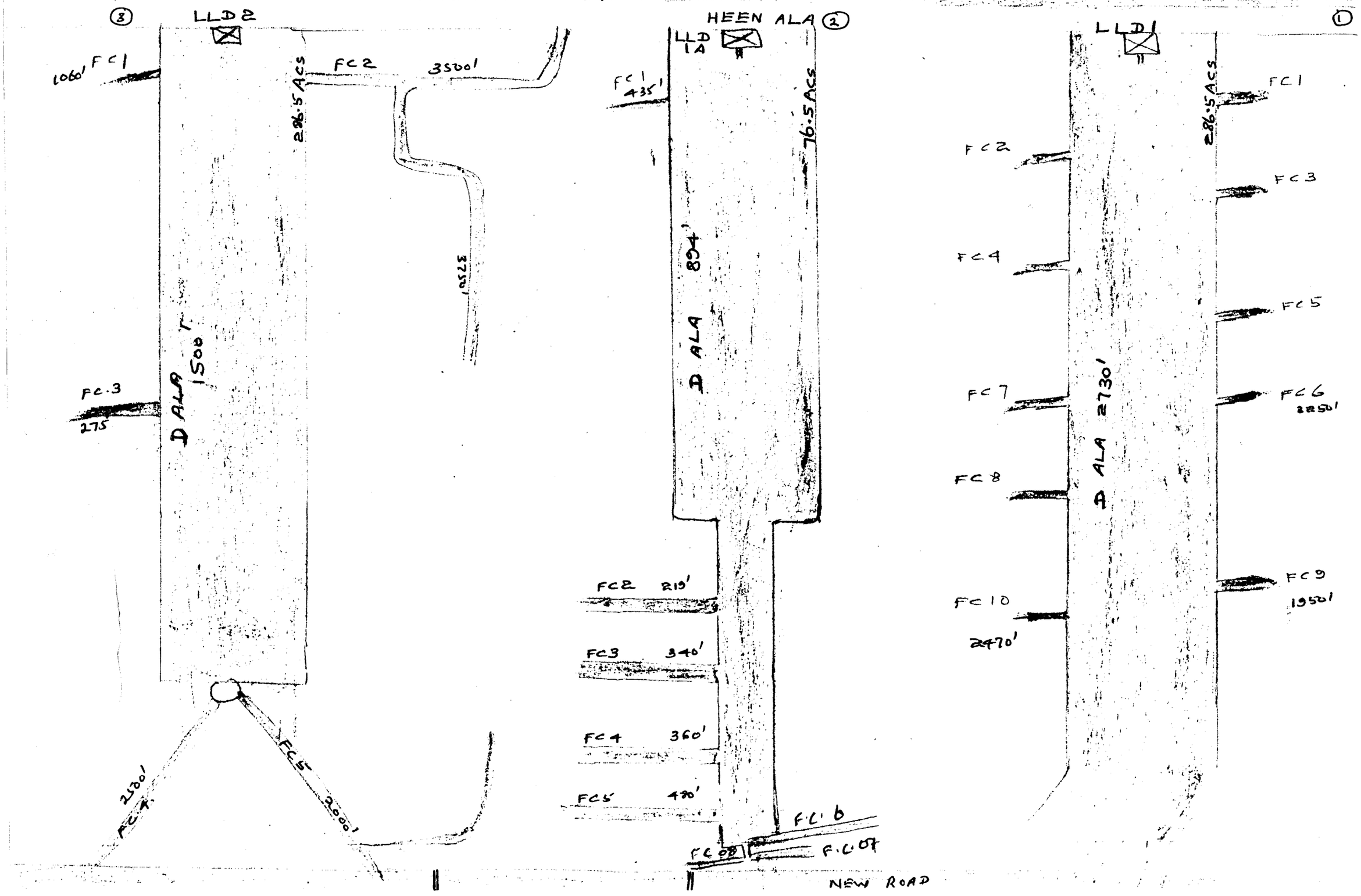
The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Tissa DC Farmers' Organisation (2/2)**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

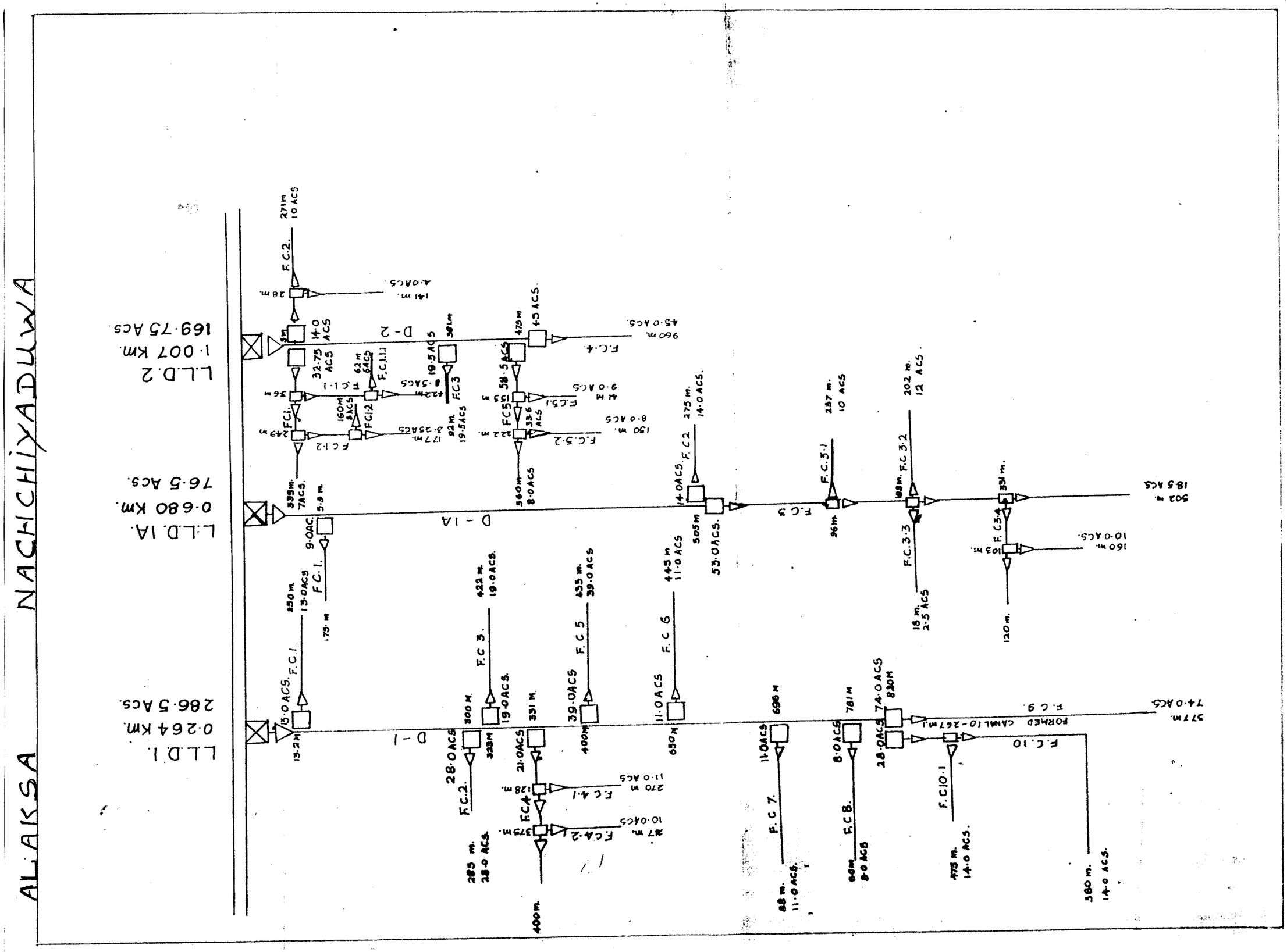
Name of Scheme : Nachchaduwa

Name of FO, etc. : Tissa FO (8), HLD36 to 39, Extent of Land 526 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	HLD 36 - both side walls	This is a dual canal . One canal is 1 1/2' wide and 1 1/2' deep and the other is 2 1/2' wide and 1 1/2' deep. Length of the dual canal is about 800 m. This canal should be changed to a single canal with a width of 4 ft and depth of 3 ft must place outlets as per nos. of fields.	Length of 800 m, with 3 ft. height on both sides and 4 ft. width.	Included in rehabilitation plan of Irrigation Department of HLD 36						
2	Side walls of canal	Side walls of canal consists of one side by road and other side by earth bund. Canal prevents leakage or over flowing by this bund must construct. 200m long 2 1/2' ft wide 2' ft high concrete side walls (6" inch thick).	Must construct 2 concrete side walls L 200 m W 2 1/2' ft H 2' ft Widen the canal up to 2 1/2' ft.	Included in rehabilitation plan of Irrigation Department of HLD 36						
3	Side walls of canal	Side walls of canal consists of one side by road and other side by ridges of paddy field must construct two concrete walls of 100 m length 2 1/2' ft wide 1 1/2' ft height (6" inches thick) balance 100 m of the paddy field side an earth bund should be constructed.	Concrete bund - both side of canal L 100m W 2 1/2' ft H 1 1/2' ft Earth bund L 100m W 2' H 1 1/2' ft must width the canal up to 2 feet	Concrete 13 cu Earth works 50 cu Metal 6 cu		106,600 15,600	Skilled 13 days Labors 101 days Labors 111 days Labors 13 days		3,575 17,675 19,425 2,275	 17,675 19,425 2,275
4	Side walls of D canal	Consists of 2 canals of length of 800m with 1 1/2' wide & 1 1/2' height and 2 1/2' wide & 1 1/2' height canals must construct 800m long.	Construction of 800m long 4' ft wide 3' ft high (9" thick) two walls. Provision of sufficient number of outlets for paddy fields.	Included in rehabilitation plan of Irrigation Department of HLD 36						
5	Side walls of canal	Consists of two earth bunds of 150m long must repair with two concrete walls	Construction of side walls 150m long 2 ft wide 1 1/2' ft high (6" thick)	Concrete 18 cu Earth works 75 cu Metal 7 cu		147,600 18,200	Skilled 18 days Labors 140 days Labors 167 days Labors 16 days		4,950 24,500 29,225 2,800	 24,500 29,225 2,800
6	HLD 38 side walls of canal	Earth bunds or both sides and the length of 200m this total length should be concreted	Construction of 200m long (both sides) 2' ft wide 1/1/2' ft high 6" inch thick concrete walls	Included in rehabilitation plan of Irrigation Department of HLD 36						
7	Side walls of canal	Since the canal bunds are made out of earth, water leakage could not be prevented.	As mentioned above the canal should be concreted about 300m. Height 5 ft	Concrete 45 cu Earth works 150 cu Metal 13 cu		369,000 33,800	Skilled 45 days Labors 349 days Labors 333 days Labors 29 days		12,375 61,075 58,275 5,075	 61,075 58,275 5,075
8	HLD 39 - Side walls of canal	Since the canal bunds are made out of earth water leaks could not be prevented.	Construction of a 500m long 1 1/2' ft wide 1 1/2' ft high concrete wall on both sides of the canal (bottom concrete)	Included in rehabilitation plan of Irrigation Department of HLD 36						
	Sub-total					690,800			241,225	220,325
	Grand-total					932,025				
	(US$/ha)					62				



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Al - Aksa DC Farmers' Organisation (1/2)**

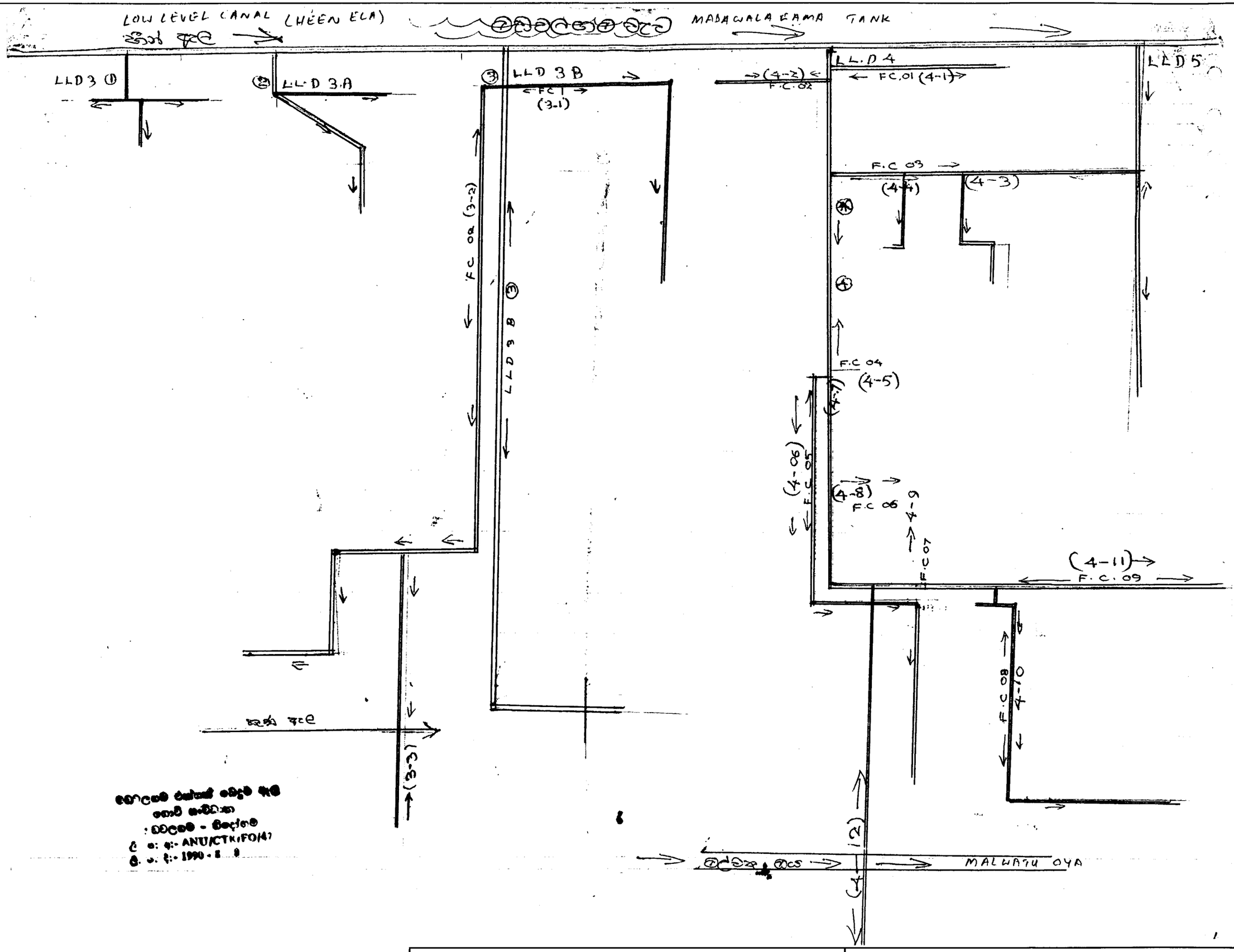


The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Al - Aksa DC Farmers' Organisation (2/2)**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Al-Aksa FO (9), LLD 1 to 2, Extent of Land 510 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participatio
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	LLD1 all of canal	Rehabilitation of side walls of all field canals with rubble masonry and concrete	L 4300m H 1 1/2 ft	Included in rehabilitation plan of Irrigation Department of LLD1						
2	FC1, FC2	LLD1 - FC1 Iron Rod LLD1 - FC2 Iron Rod		Iron Rod	2 nos	10,000				
3	LLD1 Canal	Remove the existing masonry wall of main D canal (2730 ft) and rehabilitate the side walls	L 832m H 3 ft	Included in rehabilitation plan of Irrigation Department of LLD1						
4	LLD1 FC3, FC4	LLD1 - FC3 Iron Rod LLD1 - FC4 Iron Rod and door		Iron Rod 24" dia Iron gate	1 nos 1 nos	5,000 40,000				
5	LLD1 canal road	Filling earth and rehabilitation of D canal Road	L 832 m W 12 ft	Included in rehabilitation plan of Irrigation Department of LLD1						
6	LLD1A all of F canal	Rehabilitation of side walls of all field canals with rubble masonry and concrete	L 1800 m H 1 1/2 ft	RRM Earth works Metal	210 cu 900 cu 57 cu	672,000 148,200	Skilled 158 days Labors 1,050 days Labors 1,998 days Labors 127 days		43,450 183,750 349,650 22,225	 183,750 349,650 22,225
7	LLD1A	Augment - The D canal bund by 1/2' ft	L 500 m	Included in rehabilitation plan of Irrigation Department of LLD1A						
8	LLD1A Canal Road	Filling earth and rehabilitation of D canal	L 500 m W 12 ft	Included in rehabilitation plan of Irrigation Department of LLD1A						
9	LLD1A F canal	FC 01 to FC 07 replacing doors		12" dia Iron gate	7 nos	80,500				
10	LLD 2 FC1 to FC5	Rehabilitation of side walls of all field canals with rubble masonry and earth	L 3600m H 1 1/2 ft	RRM Earth works Metal	420 cu 1,800 cu 114 cu	1,344,000 296,400	Skilled 315 days Labors 2,100 days Labors 3,996 days Labors 253 days		86,625 367,500 699,300 44,275	 367,500 699,300 44,275
11	LLD2	Remove the existing masonry wall of D-canal	L 457 m H 3 ft	Included in rehabilitation plan of Irrigation Department of LLD2						
12	LLD2 FC 1 to 5	FC1 to FC 5 Replace Iron rod		Iron Rod	5 nos	25,000				
13	LLD2 canal road	Filling earth and rehabilitation of D canal Road	L 457 m W 12 ft	Included in rehabilitation plan of Irrigation Department of LLD2						
	Sub-total					2,621,100			1,796,775	1,666,700
	Grand-total					4,417,875				
	(US$/ha)					301				



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Eksath DC Farmers' Organisation**

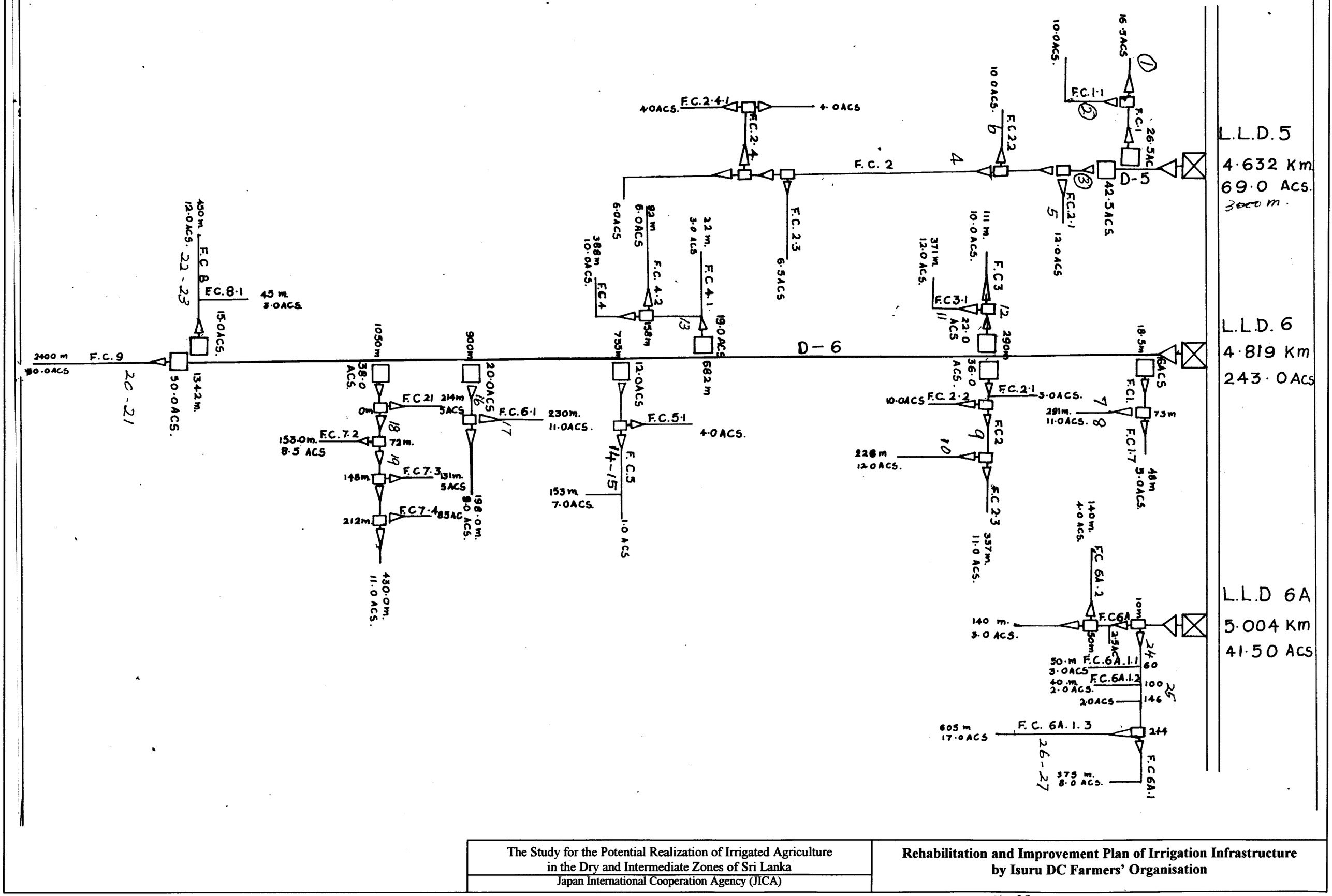
Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa

Name of FO, etc. : Ekasth FO (10), LLD 3 to 4, Extent of Land 342 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participatio
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	LLD 3 - FC 2	Construction of concrete bund	L 75 m, W 0.75 m H 0.75 m	Concrete	15 cu	123,000	Skilled 15 days		4,125	
							Labors 116 days		20,300	20,300
				Earth works	38 cu		Labors 84 days		14,700	14,700
				Metal	6 cu	15,600	Labors 13 days		2,275	2,275
2	LLD 3 - FC 2	Rehabilitation of earth bund	L 300 m, W 1 1/2 H 2 1/2	Earth works	32 cu	8,000	Labors 71 days		12,425	12,425
3	LLD 3A	Construction of a regulator across LLC		Concrete	1 cu	8,200	Skilled 1 days		275	
				Earth works	1 cu		Labors 8 days		1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors 2 days		350	350
				HP dia.12"	20 ft	7,000				
4	LLD 3A	Rehabilitation of earth bund	L 800 m W 0.75 m H 0.75 m	Earth works	85 cu		Labors 189 days		33,075	33,075
5	LLD 3A	Construction of concrete bund	L 75 m, W 0.75 m H 0.75 m	Concrete	15 cu	123,000	Skilled 15 days		4,125	
							Labors 116 days		20,300	20,300
				Earth works	38 cu		Labors 84 days		14,700	14,700
				Metal	6 cu	15,600	Labors 13 days		2,275	2,275
6	LLD 3B	Remove existing rubble masonry and construct a new concrete bund	L 750 m W 0.75 m H 0.75m	Concrete	146 cu	1,197,200	Skilled 146 days		40,150	
							Labors 1132 days		198,100	198,100
				Earth works	375 cu		Labors 833 days		145,775	145,775
				Metal	1 cu	2,600	Labors 2 days		350	350
				Removing	375 m		Labors 375 days		65,625	65,625
7	LLD 3B	Construction of earth bund	L 300m W 0.5 m H 0.75m	Earth works	102 cu	25,500	Labors 226 days		39,550	39,550
8	LLD 3B	Rehabilitation of main agri road	L 1240m W 2.5m	Earth works	164 cu	82,000	Labors 364 days		63,700	63,700
				Gravel	88 cu	176,000	Labors 195 days		34,125	34,125
9	LLD 3B FC1	Construction of a concrete bund	L 75 m W 0.55m H 0.75m	Concrete	13 cu	106,600	Skilled 13 days		3,575	
							Labors 101 days		17,675	17,675
				Earth works	38 cu		Labors 84 days		14,700	14,700
				Metal	4 cu	10,400	Labors 9 days		1,575	1,575
10	LLD 3B FC1	Rehabilitation of earth bund	L 75 m W 0.55m H 0.75m	Earth works	8 cu	4,000	Labors 18 days		3,150	3,150
11	LLD 3B FC2	Construction of a concrete bund	L 640m W 0.5m, H 0.75m	Concrete	112 cu	918,400	Skilled 112 days		30,800	
							Labors 868 days		151,900	151,900
				Earth works	320 cu		Labors 710 days		124,250	124,250
				Metal	32 cu	83,200	Labors 71 days		12,425	12,425
12	LLD 3B FC2 sub canal	To provide water to new area which could be cultivated with FC2, construct a concrete bund across drain canal	L 10m W 0.5 H 0.5m	Concrete	1 cu	8,200	Skilled 1 days		275	
							Labors 8 days		1,400	1,400
				Earth works	5 cu		Labors 11 days		1,925	1,925
				Metal	1 cu	2,600	Labors 2 days		350	350
13	LLD 3B FC2 sub canal	Extend above concrete bund with a earth bund	L 950m, W 0.5m H 0.75m	Concrete	167 cu	1,369,400	Skilled 167 days		45,925	
							Labors 1294 days		226,450	226,450
				Earth works	475 cu		Labors 1055 days		184,625	184,625
				Metal	47 cu	122,200	Labors 104 days		18,200	18,200
14	LLD 3B FC2 sub canal	Agri road	L 600m W 2.5m	Earth works	433 cu	216,500	Labors 961 days		168,175	168,175
				Gravel	106 cu	212,000	Labors 235 days		41,125	41,125
15	LLD 3B FC2 sub canal	Construction of a causeway across drain canal	L 12 ft W 8 ft	HP dia. 600mm	20 ft	14,000	Skilled 2 days		550	
				RRM	2 cu	6,400	Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
16	LLD 3B FC2 sub canal	Construction of earth wall	L 150m W 2 ft H 2,ft	Earth works	16 cu	4,000	Labors 36 days		6,300	6,300
17	LLD 4 canal	Lifting the bottom of main canal from FC3 by 1 1/2 ft, compacting earth with machine. Removing the existing rubble masonry side wall and construct a rubble masonry wall	L 1600m W 2 ft H 2 ft	Included in rehabilitation plan of Irrigation Department of LLD4						
18	LLD 4 canal	Construction of a rubble masonry wall and earth bund from FC1 to Fc3	L 200 ft W 1 ft H 2 ft	Included in rehabilitation plan of Irrigation Department of LLD4						
19	LLD 4 FC1	Construction of a concrete wall on lower side	L 180 ft W 0.5' ft H 3 ft	Concrete	5 cu	41,000	Skilled 5 days		1,375	
							Labors 39 days		6,825	6,825
				Earth works	27 cu		Labors 60 days		10,500	10,500
				Metal	2 cu	5,200	Labors 4 days		700	700

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
20	LLD 4 FC1	Rehabilitation of earth bund	L 450 ft, W 1' ft H 2' ft	Earth works	15 cu	3,750	Labors 33 days		5,775	5,775
21	LLD 4 FC 2	Construction of concrete bund	L 100m W 6" inches, H 3' ft	Concrete	25 cu	205,000	Skilled 25 days		6,875	
							Labors 194 days		33,950	33,950
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	12 cu	31,200	Labors 27 days		4,725	4,725
22	LLD 4 FC 2	Rehabilitation of earth bund	L 375m, W 1' ft, H 3' ft	Earth works	127 cu	31,750	Labors 282 days		49,350	
23	LLD 4 FC3	Construction of a agri-road on FC3 from LLD4 to LLD5	L 800m W 8' ft	Earth works	560 cu	280,000	Labors 1243 days		217,525	217,525
				Gravel	136 cu	272,000	Labors 302 days		52,850	52,850
24	FC3	Construction of a regulator and a concrete bund on FC3 distribution point	Regulator	Concrete	1 cu	8,200	Skilled 1 days		275	
				Earth works	1 cu		Labors 8 days		1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors 2 days		350	350
				HP dia.12"	20 ft	7,000				
			RC Canal L 50 m W 6" inches H 3' ft	Concrete	13 cu	106,600	Skilled 13 days		3,575	
							Labors 101 days		17,675	17,675
				Earth works	25 cu		Labors 56 days		9,800	9,800
				Metal	6 cu	15,600	Labors 13 days		2,275	2,275
25	FC3	Rehabilitation of earth bund	L 210m W 1' ft, H 3' ft	Earth works	22 cu	5,500	Labors 49 days		8,575	8,575
26	FC 4	Construction of a concrete side wall	L 15m, W 6" inches H 2 1/2' ft	Concrete	3 cu	24,600	Skilled 3 days		825	
							Labors 23 days		4,025	4,025
				Earth works	8 cu		Labors 18 days		3,150	3,150
27	FC 5	Construction of a concrete side wall after removing the rubble masonry wall	L 160m, W 1 1/2' ft H 2' ft	Concrete	20 cu	164,000	Skilled 20 days		5,500	
							Labors 155 days		27,125	27,125
				Earth works	80 cu		Labors 178 days		31,150	31,150
				Metal	7 cu	18,200	Labors 16 days		2,800	2,800
				Removing	80 m		Labors 80 days		14,000	14,000
28	FC5	Rehabilitation of earth canal bund	L 375m, W 1' ft H 3' ft	Earth works	127 cu	31,750	Labors 282 days		49,350	49,350
29	LLD 4	Construction of a regulator across LLD 4 canal	Regulator	Included in rehabilitation plan of Irrigation Department of LLD4						
30	FC6	Construction of a structure to issue water to paddy field		Concrete	1 cu	8,200	Skilled 1 days		275	
				Earth works	1 cu		Labors 8 days		1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors 2 days		350	350
				HP dia.12"	20 ft	7,000				
31	FC7	Rehabilitation of earth bund	L 100m, W 1' ft H 3' ft	Earth works	11 cu	2,750	Labors 24 days		4,200	4,200
32	FC8	Invalidate the present canal system and construct a new concrete canal	L 150m,W 1 1/2' ft H 1 1/2' ft	Concrete	16 cu	131,200	Skilled 16 days		4,400	
							Labors 124 days		21,700	21,700
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	7 cu	18,200	Labors 16 days		2,800	2,800
				Removing	75 m		Labors 75 days		13,125	13,125
33	FC8	Construction of earth canal bund	L 350m, W 2' ft H 3' ft	Earth works	37 cu	9,250	Labors 82 days		14,350	14,350
34	FC9	Construction of structures in suitable places to obtain water		Concrete	1 cu	8,200	Skilled 1 days		275	
				Earth works	1 cu		Labors 8 days		1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors 2 days		350	350
				HP dia.12"	20 ft	7,000				
35	FC9	Rehabilitation of earth canal with structures to issue water to lands not cultivated at present	Structure	Concrete	1 cu	8,200	Skilled 1 days		275	
				Earth works	1 cu		Labors 8 days		1,400	1,400
				Slide gate dia. 300	1 nos	11,500	Labors 2 days		350	350
				HP dia.12"	20 ft	7,000				
			L 550m , W 2' ft, H 2'	Earth works	58 cu	14,500	Labors 129 days		22,575	22,575
36	FC9	Construction of an agri-road to connect Madawalagama and Yahalegama from LLD4	L 200 m, W 8' ft	Earth works	119 cu	59,500	Labors 264 days		46,200	46,200
				Gravel	34 cu	68,000	Labors 75 days		13,125	13,125
	Sub-total					6,522,050			2,545,350	2,342,550
	Grand-total					9,067,400				
	(US$/ha)					923				



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Isuru DC Farmers' Organisation**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Isuru FO (11), LLD 5 to 6A, Extent of Land 313 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	LLD5 FC1	Construction of 5 water inlets for fields		Concrete	5 cu	41,000	Skilled 5 days		1,375	
							Labors 39 days		6,825	6,825
				Earth works	5 cu		Labors 11 days		1,925	1,925
				Slide gate dia. 300	5 nos	57,500				
				HP dia.12"	100 ft	35,000				
2	LLD5 FC1-1	Construction of 300m canal road	L 300m W 12 ft	Earth works	286 cu	143,000	Labors 635 days		111,125	111,125
				Gravel	76 cu	152,000	Labors 169 days		29,575	29,575
3	LLD5 FC2	Concreting the bottom of canal	L 60' ft H 1 1/2 ft W 1 1/2 ft	Concrete	2 cu	16,400	Skilled 2 days		550	
							Labors 16 days		2,800	2,800
				Earth works	9 cu		Labors 20 days		3,500	3,500
				Metal	1 cu	2,600	Labors 2 days		350	350
4	LLD5 FC2	Rehabilitation of canal road 300m fill earth and surface gravel	L 300m W 12 ft	Earth works	57 cu	28,500	Labors 127 days		22,225	22,225
				Gravel	32 cu	64,000	Labors 71 days		12,425	12,425
		Culvert		HP dia. 600mm	20 ft	14,000				
				RRM	2 cu	6,400	Skilled 2 days		550	
							Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
5	LLD5 FC2-1	Construction of 5 water inlets for fields		Earth works	5 cu		Labors 11 days		1,925	1,925
				HP dia.6"	50 ft	10,500				
				Others		10,000				
6	LLD5 FC2-2	Construction of a tractor entrance		Earth works	1 cu	500	Labors 2 days		350	350
				HP dia.12"	12 ft	4,200				
7	LLD6 FC 1	Construction of an Entrance way for tractor		Earth works	1 cu	500	Labors 2 days		350	350
				HP dia.12"	12 ft	4,200				
8	LLD6 FC 1	Concreting the bottom of canal Concreting 100m	L 100 m H 1 1/2 ft W 1 1/2 ft	Concrete	11 cu	90,200	Skilled 11 days		3,025	
							Labors 85 days		14,875	14,875
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	5 cu	13,000	Labors 11 days		1,925	1,925
9	LLD6 FC 2	Cross control	Filling earth to washed out cross control H 4 ft	RRM	1 cu	3,200	Skilled 1 days		275	
							Labors 5 days		875	875
				Earth works	3 cu		Labors 7 days		1,225	1,225
				Metal	1 cu	2,600	Labors 2 days		350	350
10	LLD6 FC 2	Canal road filling earth & surface gravel	L 200m W 12 ft	Earth works	38 cu	19,000	Labors 84 days		14,700	14,700
				Gravel	21 cu	42,000	Labors 47 days		8,225	8,225
11	LLD6 FC 3-1	Raising the bottom of canal	L 200m H 9 inch	Earth works	19 cu	9,500	Labors 42 days		7,350	7,350
12	LLD6 FC 3	Rehabilitation of turnout	Provide a door to the turnout	Concrete	1 cu	8,200	Skilled 1 days		275	
							Labors 8 days		1,400	1,400
				Earth works	1 cu		Labors 2 days		350	350
				Slide gate dia. 300	1 nos	11,500				
				HP dia.12"	20 ft	7,000				
13	LLD6 FC 4	Concreting the canal	L 150 m H 1 1/2 ft W 1 1/2 ft	Concrete	16 cu	131,200	Skilled 16 days		4,400	
							Labors 124 days		21,700	21,700
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	7 cu	18,200	Labors 16 days		2,800	2,800
14	LLD6 FC 5	Construction of a turnout		Concrete	1 cu	8,200	Skilled 1 days		275	
							Labors 8 days		1,400	1,400
				Earth works	1 cu		Labors 2 days		350	350
				Slide gate dia. 300	1 nos	11,500				
				HP dia.12"	20 ft	7,000				
15	LLD6 FC 5	Earth filling L 100m Filling the canal bund	L 100m H 1 1/2 ft	Earth works	22 cu	11,000	Labors 49 days		8,575	8,575
16	LLD6 FC 6	Concreting the canal	L 150 m H 1 1/2 ft W 1 1/2 ft	Concrete	16 cu	131,200	Skilled 16 days		4,400	
							Labors 124 days		21,700	21,700
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	7 cu	18,200	Labors 16 days		2,800	2,800
17	LLD6 FC 6	Filling the canal road Earth filling & gravelling canal road 230 m	L 230m W 12 ft	Earth works	44 cu	22,000	Labors 98 days		17,150	17,150
				Gravel	24 cu	48,000	Labors 53 days		9,275	9,275
18	LLD6 FC 7	Concreting the canal	L 100 m H 1 1/2 ft W 1 1/2 ft	Concrete	11 cu	90,200	Skilled 11 days		3,025	
							Labors 85 days		14,875	14,875
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	5 cu	13,000	Labors 11 days		1,925	1,925
19	LLD6 FC 7	Filling the canal road Earth filling & surface gravel 198 m	L 198m W 12 ft	Earth works	38 cu	19,000	Labors 84 days		14,700	14,700
				Gravel	21 cu	42,000	Labors 47 days		8,225	8,225
20	LLD6 FC 8	Concreting the canal	L 1058 m H 1 1/2 ft W 1 1/2 ft	Concrete	115 cu	943,000	Skilled 115 days		31,625	
							Labors 891 days		155,925	155,925
				Earth works	529 cu		Labors 1174 days		205,450	205,450
				Metal	45 cu	117,000	Labors 100 days		17,500	17,500
21	LLD6 FC 8	Canal road filling earth & surface	L 1058m W 12 ft	Earth works	202 cu	101,000	Labors 448 days		78,400	78,400
				Gravel	112 cu	224,000	Labors 249 days		43,575	43,575
22	LLD6 FC 9	Concreting the canal	L 50 m H 1 1/2 ft W 1 1/2 ft	Concrete	5 cu	41,000	Skilled 5 days		1,375	
							Labors 39 days		6,825	6,825
				Earth works	25 cu		Labors 56 days		9,800	9,800
				Metal	3 cu	7,800	Labors 7 days		1,225	1,225
23	LLD6 FC 9	Canal road filling earth & surface gravel	L 50 m W 12 ft	Earth works	10 cu	5,000	Labors 22 days		3,850	3,850
				Gravel	5 cu	10,000	Labors 11 days		1,925	1,925
24	LLD6A 1	Construction of two nos. of tractor entrance		Earth works	2 cu	1,000	Labors 4 days		700	700
				HP dia.12"	24 ft	8,400				
25	LLD6A 1.3	Earth filling	L 400 m W 12 ft	Earth works	76 cu	38,000	Labors 169 days		29,575	29,575
				Gravel	42 cu	84,000	Labors 93 days		16,275	16,275
26	LLD6A 1.3	Surface gravelling	L 400 m W 12 ft	Gravel	42 cu	84,000	Labors 93 days		16,275	16,275
	Sub-total					3,034,000			1,108,675	1,057,525
	Grand-total					4,142,675				
	(US$/ha)					461				

රණමයුර වෙඩිමිදුම ගොවි සංවිධානය
RANAMAYURA D. CANAL F.O

FROM SRAWASTIPURA
← ශ්‍රාවස්තිපුර හරහා

367 පාවක්කුලම කණ්ඩාය.
PAWAKKULAMA DIV.

L.L.D 8A

L.L.D 8B

L.L.D 8C

L.L.D 8D

L.L.D. 8

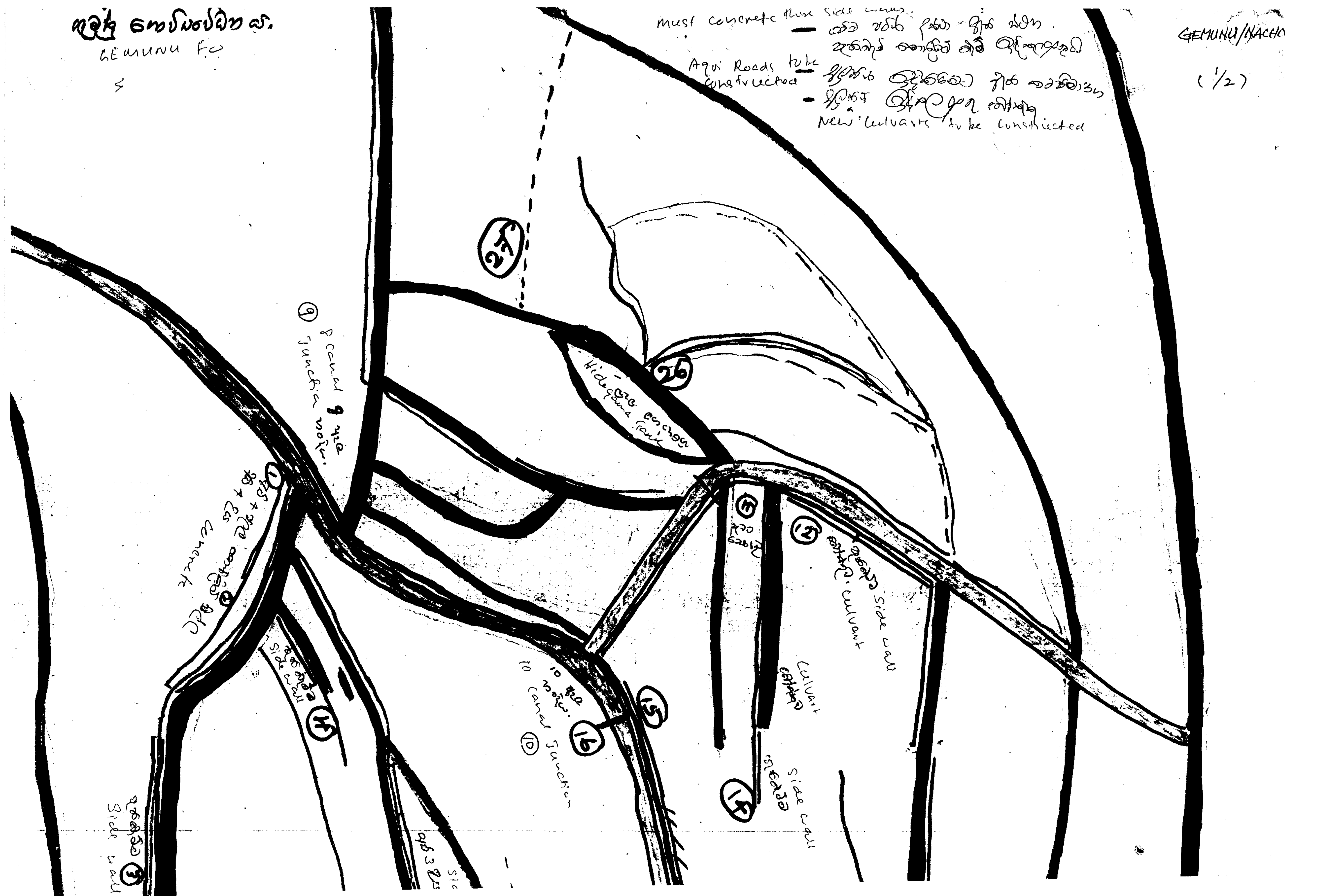
KALUWILA TANA
← කිරිබත්ගොඩ

කළු ඇළුබැඳුම
TO
KALA WELUBEDDA

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Rana Mayura FO (12), LLD 6B to 8D, Extent of Land 338 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	LLD 8 - First Left Canal	Construction of a retaining wall on both sides of branch canal of 500m	L 500m W 9" H 3"	RRM 106 cu	339,200		Skilled 80 days	22,000		
							Labors 530 days	92,750	92,750	
				Earth works 250 cu			Labors 555 days	97,125	97,125	
				Metal 16 cu	41,600		Labors 36 days	6,300	6,300	
2	LLD 8 Left canal Pond in the second pond	Concreting the pond and earth filing both sides	L 3 m, W 4' ft H 4' feet	Concrete 4 cu	32,800		Skilled 4 days	1,100	1,100	
							Labors 31 days	5,425	5,425	
				Earth works 8 cu			Labors 18 days	3,150	3,150	
				Metal 1 cu	2,600		Labors 2 days	350	350	
3	LLD 8 Construction of a culvert on above branch canal at a 10 m distance	Since there is no culvert to drain the upper field 1/2 feet culvert is necessary	L 4 m	HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
4	LLD 8 Canal	Filling the FC road with gravel and rehabilitation	L 1 km W 3m	Earth works 159 cu	79,500		Labors 353 days	61,775	61,775	
				Gravel 88 cu	176,000		Labors 195 days	34,125	34,125	
5	LLD 8C	To get water from 8C culvert, it is necessary to construct a structure across Heen Ela (Low level Canal)	L 5 m W 1 ft H 2 ft	HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
6	LLD 8C First water pond	Provide sand bags for branch canal from first water pond	L 50 m	Earth works 5 cu	2,500		Labors 11 days	1,925		
7	LLD 8C Water supply to Maha wela (field)	Lower the culvert by 1/2' feet	L 12m W 1m H 2 ft	HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
8	LLD 8C Branch canal which supplies water to Dangaha Kumbura / fields	Concreting the water supplying culvert opening and earth filling and closing the expected hume pipe with earth	L 500m W 1m H 1m	Concrete 107 cu	877,400		Skilled 107 days	29,425		
							Labors 829 days	145,075	145,075	
				Earth works 250 cu			Labors 555 days	97,125	97,125	
				Metal 41 cu	106,600		Labors 91 days	15,925	15,925	
9	LLD 8C First field	Provide a water supply pipe, concreting and earth filling closing the expected pipe with earth	L 12m W1m H 1m	HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
10	Near LD 8B Regulator	Construction of a bund (1 1/2' ft H) near the regulator	L 12 ft W 1 1/2ft H 1 1/2 ft	Concrete 1 cu	8,200		Skilled 1 days	275		
							Labors 8 days	1,400	1,400	
				Earth works 1 cu			Labors 2 days	350	350	
				Metal 1 cu	2,600		Labors 2 days	350	350	
11	LLD 8B	Lining both sides with rubble in canal located behind community hall	L 15 ft W 3 ft H 3 1/2 inches	RRM 1 cu	3,200		Skilled 1 days	275		
							Labors 5 days	875	875	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
12	LLD 8B	Construction of side walls on both sides of road in first branch canal	L 1600 ft H 1 1/2 ft	RRM 57 cu	182,400		Skilled 43 days	11,825		
							Labors 285 days	49,875	49,875	
				Earth works 244 cu			Labors 542 days	94,850	94,850	
				Metal 16 cu	41,600		Labors 36 days	6,300	6,300	
13	LLD 8B	Construction of water supplying culverts to paddy fields		HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
14	LLD 8B	Construction of lower branch	L 500 m, H 1 1/2 ft	Earth works 111 cu	27,750		Labors 246 days	43,050	43,050	
		Construction of lower branch road	L 500 m, W 10 ft	Earth works 413 cu	206,500		Labors 917 days	160,475	160,475	
				Gravel 297 cu	594,000		Labors 659 days	115,325	115,325	
15		Rehabilitation of first culvert from water pond and using the reservation		HP dia. 300mm 20 ft	7,000					
				RRM 2 cu	6,400		Skilled 2 days	550		
							Labors 10 days	1,750	1,750	
				Earth works 2 cu			Labors 4 days	700	700	
				Metal 1 cu	2,600		Labors 2 days	350	350	
16	LLD 8	Rehabilitation of right canal	L 2000' ft H 1 1/2' ft	RRM 12 cu	38,400		Skilled 9 days	2,475		
							Labors 60 days	10,500	10,500	
				Earth works 50 cu			Labors 111 days	19,425	19,425	
				Metal 3 cu	7,800		Labors 7 days	1,225	1,225	
		Rehabilitation of road	L 2000' ft W 8' ft	Earth works 78 cu	39,000		Labors 173 days	30,275	30,275	
				Gravel 43 cu	86,000		Labors 95 days	16,625	16,625	
17	LLD 8	De-silting main canal	L 400' ft W 3' ft H 1'	Desilting 12 cu	400		Labors 27 days	4,725	4,725	
18	LLD 8	Construction of structure			100,000					
19	LLD 8	Rehabilitation of field canals roads	L 100' ft W 8' ft	Earth works 4 cu	2,000		Labors 9 days	1,575	1,575	
				Gravel 2 cu	4,000		Labors 4 days	700	700	
20	LLD 8	Rehabilitation of whole road with earth filling (gravel)	L 1 km W 3m	Earth works 159 cu	79,500		Labors 353 days	61,775	61,775	
				Gravel 88 cu	176,000		Labors 195 days	34,125	34,125	
21	LLD 6B sluice	Repair the leakage on both sides of sluice	L 10m W 30" inches H 6" inches	Concrete 1 cu	8,200		Skilled 1 days	275		
							Labors 8 days	1,400	1,400	
				Earth works 1 cu			Labors 2 days	350	350	
				Slide gate dia. 300 2 nos	23,000					
				HP dia.12" 40 ft	14,000					
22	LLD 6C field canal	Construction of side wall	L 800 m H 2 ft	RRM 119 cu	380,800		Skilled 89 days	24,475		
							Labors 595 days	104,125	104,125	
				Earth works 400 cu			Labors 888 days	155,400	155,400	
				Metal 25 cu	65,000		Labors 56 days	9,800	9,800	
23	LLD 7 canal	Rehabilitation of canal road clearing and earth filling	L 1 km W 3m	Earth works 159 cu	79,500		Labors 353 days	61,775	61,775	
				Gravel 88 cu	176,000		Labors 195 days	34,125	34,125	
24	LLD 7 FC2	Rehabilitation of side walls in FC 2	L 150 m H 2 ft	RRM 22 cu	70,400		Skilled 17 days	4,675		
							Labors 110 days	19,250	19,250	
				Earth works 75 cu			Labors 167 days	29,225	29,225	
				Metal 5 cu	13,000		Labors 11 days	1,925	1,925	
25	Alkaluvila Tank main Sluice	Widering the bridge on sluice and construction of a safety fence Alkaluvila Tank main Sluice	L 10 m & 7 m		10,000					
26	LLD 6C, LLD 7 FC 1	Repairs to LLD 6C, LLD 7 FC 1 & 2 Sluice doors		Concrete 2 cu	16,400		Skilled 2 days	550		
							Labors 16 days	2,800	2,800	
				Earth works 2 cu			Labors 4 days	700	700	
				Slide gate dia. 300 2 nos	23,000					
				HP dia.12" 40 ft	14,000					
	Sub-total				4,249,450			1,754,225	1,652,750	
	Grand-total				6,003,675					
	(US$/ha)				618					



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Gemunu DC Farmers' Organisation (1/2)**
Japan International Cooperation Agency (JICA)	

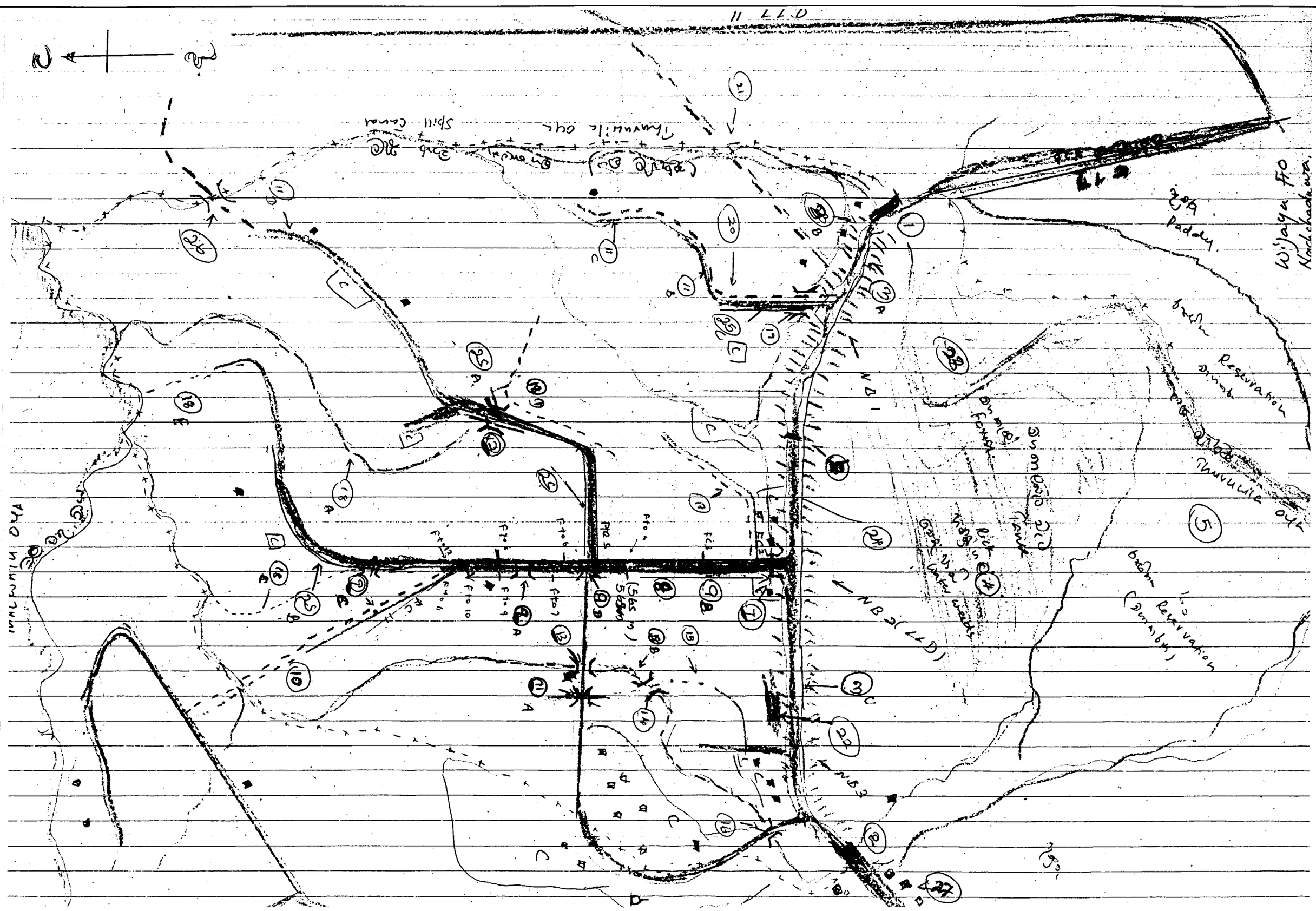
The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Gemunu DC Farmers' Organisation (2/2)**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa
Name of FO, etc. : Gemunu FO (13), LLD 9 to 10E, Extent of Land 426 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
1	LLD 9	Repair beginning section of the main canal with concrete walls & basin	L 12' W 4' H 4'	Included in rehabilitation plan of Irrigation Department of LLD9						
2	LLD 9	Concreting main canal	L 800m W 1m H 1m	Included in rehabilitation plan of Irrigation Department of LLD9						
3	LLD 9	Side walls (both side)	L 500m W 1m H 1m	Included in rehabilitation plan of Irrigation Department of LLD9						
4	LLD 9 FC2	Side walls	L 200m W 3/4m H 1/2m	RRM	30 cu	96,000	Skilled 23 days		6,325	
							Labors 150 days		26,250	26,250
				Earth works	100 cu		Labors 222 days		38,850	38,850
				Metal	6 cu	15,600	Labors 13 days		2,275	2,275
5	LLD 9 FC1	Side walls	L 600m W 3/4m H 1/2m	RRM	89 cu	284,800	Skilled 67 days		18,425	
							Labors 445 days		77,875	77,875
				Earth works	300 cu		Labors 666 days		116,550	116,550
				Metal	19 cu	49,400	Labors 42 days		7,350	7,350
6	LLD9 FC12	Side walls	L 100m W 3/4m H 1/2m	RRM	15 cu	48,000	Skilled 11 days		3,025	
							Labors 75 days		13,125	13,125
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	3 cu	7,800	Labors 7 days		1,225	1,225
7	LLD9 FC13-1	Side walls	L 50m W 3/4m H 1/2m	RRM	7 cu	22,400	Skilled 5 days		1,375	
							Labors 35 days		6,125	6,125
				Earth works	25 cu		Labors 56 days		9,800	9,800
				Metal	2 cu	5,200	Labors 4 days		700	700
8	LLD9 FC13-2	Side walls	L 150m W 3/4m H 1/2m	RRM	22 cu	70,400	Skilled 17 days		4,675	
							Labors 110 days		19,250	19,250
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	5 cu	13,000	Labors 11 days		1,925	1,925
9	LLD9 FC14	Side walls	L 400m W 3/4m H 1/2m	RRM	59 cu	188,800	Skilled 44 days		12,100	
							Labors 295 days		51,625	51,625
				Earth works	200 cu		Labors 444 days		77,700	77,700
				Metal	13 cu	33,800	Labors 29 days		5,075	5,075
10	LLD9 FC15	Side walls	L 150m W 3/4m H 1/2m	RRM	22 cu	70,400	Skilled 17 days		4,675	
							Labors 110 days		19,250	19,250
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	5 cu	13,000	Labors 11 days		1,925	1,925
11	LLD 10	Sluice to Hidagama Tank, Construction of culvert and gate to canal to store water		Culvert: Included in rehabilitation plan of Irrigation Department of 11 nos of service tanks						
12	LLD 10 FC4	Side wall both sides	L 400m W 1m H 1m Both sides	RRM	110 cu	352,000	Skilled 83 days		22,825	
							Labors 550 days		96,250	96,250
				Earth works	200 cu		Labors 444 days		77,700	77,700
				Metal	13 cu	33,800	Labors 29 days		5,075	5,075
13	LLD 10 FC4	Side walls	L 100m W 3/4m H 1/2m	RRM	15 cu	48,000	Skilled 11 days		3,025	
							Labors 75 days		13,125	13,125
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	3 cu	7,800	Labors 7 days		1,225	1,225
14	LLD 10 FC3	Side walls	L 100m W 3/4m H 1/2m	RRM	15 cu	48,000	Skilled 11 days		3,025	
							Labors 75 days		13,125	13,125
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	3 cu	7,800	Labors 7 days		1,225	1,225
		Culvert		HP dia. 600mm	20 ft	14,000				
				RRM	2 cu	6,400	Skilled 2 days		550	
							Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
15	LLD 10	Side wall	L 300m H 1 1/2m	RRM	102 cu	326,400	Skilled 77 days		21,175	
							Labors 510 days		89,250	89,250
				Earth works	150 cu		Labors 333 days		58,275	58,275
				Metal	10 cu	26,000	Labors 22 days		3,850	3,850

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participation
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
16	LLD 10	Culvert		HP dia. 600mm	20 ft	14,000				
				RRM	2 cu	6,400	Skilled 2 days		550	
							Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
17	LLD 10 FC8	Culvert for distribution		HP dia. 600mm	20 ft	14,000				
				RRM	2 cu	6,400	Skilled 2 days		550	
							Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
		Side walls	L 100m H 1m	RRM	24 cu	76,800	Skilled 18 days		4,950	
							Labors 120 days		21,000	21,000
				Earth works	50 cu		Labors 111 days		19,425	19,425
				Metal	3 cu	7,800	Labors 7 days		1,225	1,225
18	LLD 11	Side walls	L 200m H 1 1/2m	Included in rehabilitation plan of Irrigation Department of LLD11						
19	LLD 11 FC1	Side walls	L 500m H 1m	RRM	122 cu	390,400	Skilled 92 days		25,300	
							Labors 610 days		106,750	106,750
				Earth works	250 cu		Labors 555 days		97,125	97,125
				Metal	16 cu	41,600	Labors 36 days		6,300	6,300
20	LLD 11 FC1	Side walls	L 150m H 1/2m	RRM	22 cu	70,400	Skilled 17 days		4,675	
							Labors 110 days		19,250	19,250
				Earth works	75 cu		Labors 167 days		29,225	29,225
				Metal	5 cu	13,000	Labors 11 days		1,925	1,925
21	LLD 11 FC7	Side walls	L 600m H 1 1/2m	RRM	204 cu	652,800	Skilled 153 days		42,075	
							Labors 1020 days		178,500	178,500
				Earth works	300 cu		Labors 666 days		116,550	116,550
				Metal	19 cu	49,400	Labors 42 days		7,350	7,350
22	LLD 11 to LLD 9	Road construction - Earth fill	L 1000m W 10 ft	Earth works	827 cu	413,500	Labors 1836 days		321,300	321,300
				Gravel	212 cu	424,000	Labors 471 days		82,425	82,425
23	Canal from LLD 11 to Hembawa Tank	Side walls (Both sides)	L 1000m H 1 1/2m	RRM	339 cu	1,084,800	Skilled 254 days		69,850	
							Labors 1695 days		296,625	296,625
				Earth works	500 cu		Labors 1110 days		194,250	194,250
				Metal	32 cu	83,200	Labors 71 days		12,425	12,425
24	LLD 9	Culvert		Included in rehabilitation plan of Irrigation Department of LLD11						
25	LLD 11 FC1	Culvert		HP dia. 600mm	20 ft	14,000				
				RRM	2 cu	6,400	Skilled 2 days		550	
							Labors 10 days		1,750	1,750
				Earth works	2 cu		Labors 4 days		700	700
				Metal	1 cu	2,600	Labors 2 days		350	350
26	Hidagama Tank	Complete rehabilitation including 2 sluices		Included in rehabilitation plan of Irrigation Department of 11 nos of service tanks						
27	Hidogama Tank Drain canal	Rehabilitation of drain canals	L 3000 m	Included in rehabilitation plan of Irrigation Department of 11 nos of service tanks						
28	All FCs	Widen all FCs to standard size and bunds filling with earth Remove all the trees planted on canal bunds and earth filling	L 5,200 m	Earth works	551 cu	137,750	Labors 1223 days		214,025	214,025
29	All agricultural roads	Rehabilitation of all agricultural roads with earth filling	L 5,200 m W 3 m	Earth works	827 cu	413,500	Labors 1836 days		321,300	321,300
				Gravel	551 cu	1,102,000	Labors 1223 days		214,025	214,025
	Sub-total					6,821,350			3,474,600	3,224,900
	Grand-total					10,295,950				
	(US$/ha)					841				



The Study for the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka Japan International Cooperation Agency (JICA)	**Rehabilitation and Improvement Plan of Irrigation Infrastructure by Wijaya DC Farmers' Organisation**

Rehabilitation Plan & Cost Estimation for
Nachchaduwa Scheme Proposed by Farmers' Organization

Name of Scheme : Nachchaduwa

Name of FO, etc. : Wiyaya FO (14), LLD11 to 11A, Extent of Land 348 acres

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others		Labour required for the work		Farmers' participa-tion
				Requirement	Expected Cost (Rs.)	Requirement	Expected Cost (Rs.)	Expected Cost (Rs.)
1	Low level spill	Width is not enough and old (100yrs.). Therefore not functioning well and cannot store water in the tank. To widen the spill and fix doors should be recommendable.	Length 100 ft. Augment 3 ft. with 6 emergency doors	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
2	High level spill	Spill and road shall be rehabilitated.	Length 100 ft. Width 20 ft.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
3	Tank bund	Bathing step should be rehabilitated (A & B).	Width 30 ft.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
4	Tank bund	Bathing step should be rehabilitated (C).	Length 150 ft. Height 8 ft.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
5	Tank bed	Tank is full of vegetation heavily silted.	5 acres up to 1.5 ft.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
6	Tank catchment	Since catchment area is cultivated, silting is remarkable. It is necessary to ensure reservation and re-forestation area.	Survey on catchment area Re-foresting 500 acres	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
7	Tank Bund	Widen top width of the bund for traffic	Length 1.5km Width 20 ft. Height 3 ft.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
8	Canal and road system	Construct culverts, where drain canal interfering with the canal system	Five culverts with 2' dia.	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
9	D-Canal bund	Concrete side wall construction against leakage	Length 565 m Height 3 ft. Width 4 ft	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank				
10	D & F-Canal	Installation of bridges and culverts to across for vehicle	3 bridges over D-Canal 5 culverts over F-Canal	HP dia. 600mm 160 ft RRM 16 cu Earth works 16 cu Metal 8 cu	112,000 51,200 20,800	Skilled 12 days Labors 80 days Labors 36 days Labors 18 days	3,300 14,000 6,300 3,150	 14,000 6,300 3,150

No.	Place to be repaired	Existing Condition / How to repair	Description	Materials/Others			Labour required for the work			Farmers' participa-tion
				Requirement		Expected Cost (Rs.)	Requirement		Expected Cost (Rs.)	Expected Cost (Rs.)
11	Connection Canal	Construction of a connection canal from HLD26 up to FC7 with across road	Canal Length 900m Height 3 ft.	RRM 191 cu		611,200	Skilled 143 days Labors 955 days		39,325 167,125	 167,125
				Earth works 450 cu Metal 29 cu		 75,400	Labors 999 days Labors 64 days		174,825 11,200	174,825 11,200
			Road Length 900m Width of road 8 ft.	Earth works 572 cu Gravel 153 cu		286,000 306,000	Labors 1270 days Labors 340 days		222,250 59,500	222,250 59,500
12	F-Canal	Since F-Canal is not existing, a new canal should be constructed	Length 650m	Earth works 69 cu		17,250	Labors 153 days		26,775	26,775
13	New Road	New construction of agricultural road	Length 300 m Width 2.5 m Height 0.6 m	Earth works 191 cu Gravel 53 cu		95,500 106,000	Labors 424 days Labors 118 days		74,200 20,650	74,200 20,650
14	Drainage canal	Drainage canal shall be rehabilitated.	Length 4,000 m	Earth works 2,000 cu			Labors 4440 days		777,000	777,000
15	New canal & road	Construction of a new canal to provide water to the end of D-Canal from the tank	D-canal length 900m Height 3 ft. Width 4 ft	Concrete 192 cu Earth works 450 cu Metal 73 cu		1,574,400 189,800	Skilled 192 days Labors 1488 days Labors 999 days Labors 162 days		52,800 260,400 174,825 28,350	 260,400 174,825 28,350
			Width of road 8 ft. Road length 900m	Earth works 572 cu Gravel 153 cu		286,000 306,000	Labors 1270 days Labors 340 days		222,250 59,500	222,250 59,500
16	Tank bund	Rip rap protection	Length 800 m Width 3 m	Included in rehabilitation plan of Irrigation Department of 11 nos. of service tank						
17	Canal	Canals running through low area which shall be rehabilitated as concrete lining.	25 - L 200 m x 0.6 m 25A - L 100m x 0.6 m 25B - L 250 m x 0.6 m 25C - L 150 m x 0.6 m	Concrete 96 cu Earth works 350 cu Metal 35 cu		787,200 91,000	Skilled 96 days Labors 744 days Labors 777 days Labors 78 days		26,400 130,200 135,975 13,650	 130,200 135,975 13,650
18	All F-canal	All F-canal shall be rehabilitated as a cross section with 3-4 ft. width	Length 3.5 km	Earth works 2,205 cu		551,250	Labors 4895 days		856,625	856,625
	Sub-total					5,467,000			3,560,575	3,438,750
	Grand-total					9,027,575				
	(US$/ha)					903				