NO.	ITEM OF WORK	UNIT	QUANTITY
I	EXCAVATION, FILLING & GRADING WORK		
1	Earth cut	m^3	85.98
2	Earth fill (old)	m^3	29.13
3	Earth fill (new)	m^3	40.37
4	Sand fill	m^3	11.29
5	Sand fill under foundation	m^3	8.13
II	FOUNDATION WORK		
1	Dry stone masonry	m^3	16.54
2	Stone masonry 1 : 3 : 10	m^3	28.15
3	Brick block 1 : 3 : 10	m^3	7.15
III	REINFORCEMENT CONCRETE WORK		
1	Concrete K-225	m^3	9.25
2	Steel bar	kg	717.56
3	Steel bar (D 16)	kg	1,171.82
4	Light concrete	m^3	6.78
IV	ROOFING WORK		
1	Wood truss	m^3	5.39
2	Wood Purlin	m^3	5.40
3	Timber rafter & timber batten	m^2	422.40
4	Gutter timber batten	m^2	28.11
5	Facing timber batten	m^2	17.70
6	Roof ventilation frame	m^3	0.35
7	Aluminum sheet	m	0.00
8	Plywood roof cover	m^2	422.40
9	Asphalt sheet roof cover	m^2	422.40
10	Ceramic roof tile	m^2	422.40
11	Ceramic ridge tile	m	56.45
12	Termite protection	Ls	1.00
13	Fiber cement roof tile	m^2	4.06
14	Truss beagle & bolt	kg	50.00
V	CONCRETE BLOCK WORK & BRICKWORK		
1	Brick wall 1 : 3	m^3	3.37
2	Brick wall 1 : 3 : 10	m^3	24.96
VI	PLASTER WORK		
1	Mortar plaster 1 : 3	m^2	56.11
2	Mortar plaster 1 : 3 : 10	m^2	332.86
3	Concrete plastering 1 : 2	m^2	300.24
4	Terra-cotta	m^2	41.51
VII	DOORS & WINDOWS WORK		
1	Aluminum awakening	m	34.30
2	Aluminum rolling door	m^2	50.40
3	Aluminum door frame	m	23.60
4	Aluminum sliding-window frame	m	38.90
5	Door keys for aluminum door	pc	2.00
6	Espagnolete	pr	2.00
7	Door hinges (125 mm)	pr	4.00
8	Window hinges (75 mm)	pr	4.00
9	Wood frame for ventilation	m^3	0.26
10	Door stopper	pc	4.00
VIII	GLAZING WORK		
1	Float glass 5 mm (natural color)	m^2	7.28
IX	INTERIOR FINISHING		
1	Fiber cement 6 mm + wood frame	m^2	180.00
2	Wood cornice	m	76.00
X	TILE WORK		
1	Ceramic tile 300 x 300	m^2	81.00
2	Ceramic tile 300 x 300 (textured, non-slip)	m^2	15.85
3	Wall base mortar fin w/ waterproof paint	m	34.00
4	Float glass H=100 mm, rayband (for wall base)	m	26.00

NO.	ITEM OF WORK	UNIT	QUANTITY
XI	SANITARY WORK		
1	Water supply installation (PVC pipe D=19 mm)	m	32.00
2	Waste water installation (PVC pipe D = 110 mm)	m	0.00
XII	ELECTRICAL WORK		
1	Installation & lighting 40W-1 FL	pc	6.00
2	Installation & lighting 40W-2 FL	pc	11.00
3	Installation & lighting 20W-1 FL	pc	5.00
4	Installation & lighting 15W-2 FL	pc	0.00
5	Installation & lighting 15W-1 FL	pc	0.00
6	Installation & lighting 10W-1 FL	pc	0.00
7	Installation & lighting 250W-1 H	pc	0.00
8	Lighting switch (single)	PC	1.00
9	Lighting switch (double)	pc	7.00
10	Outlet socket switch	pc	5.00
11	Outlet socket & Installation	pc	5.00
12	Fuse box	pc	1.00
13	Waterpump	pc	0.00
14	Fuse	pc	3.00
15	New installation from PLN (1,300 VA)	Unit	1.00
XIII	PAINTING WORK		
1	Wall painting	m^2	407.70
2	Wood painting	m^2	137.48
3	Wood protection painting	Ls	1.00
4	Steel protection painting	m^2	0.00
5	Ceiling painting	m^2	344.30

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	GARAGE	Page	1/3

Name of work	Height (M)	Lenth (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
EARTH FILL	0.20	9.00	4.00	-	7.20	
	0.20	9.00	14.00	-	25.20	
	0.10	3.00	16.00	-	4.80	
	0.20	3.50	2.90	-	2.03	
	0.20	3.00	1.90	-	1.14	40.37
SAND FILL	0.05	9.00	4.00	-	1.80	
	0.05	9.00	14.00	-	6.30	
	0.05	3.00	16.00	-	2.40	
	0.05	3.50	2.90	-	0.51	
	0.05	3.00	1.90	-	0.29	11.29
LIGHT CONCRETE	0.07	9.00	4.00	-	2.52	
	0.07	3.50	2.90	-	0.71	
	0.07	3.00	1.90	-	0.40	3.63

Name of work	Height (M)	Lenth (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M3)
BRICKBLOCK 1 : 3	0.60	9.00	3.00	16.20		
	0.60	4.00	5.00	12.00	28.20	
	0.06	1.20	2.00	0.14	0.14	
				0.12 X	28.06	3.37
BRICKBLOCK 1 : 3 : 10	3.60	4.00	10.00	144.00		
	3.60	9.00	3.00	97.20	241.20	
	3.60	3.00	4.00	43.20		
	1.45	1.90	2.00	5.51		
	1.45	0.65	2.00	1.89		
	2.25	1.50	1.00	3.38		
	4.00	0.40	4.00	6.40		
	9.00	0.20	8.00	14.40	74.77	
				0.12	166.43	24.96
MORTAR PLASTERING 1 : 3	0.60	9.00	6.00	32.40		
	0.60	4.00	10.00	24.00	56.40	
	0.06	1.20	4.00	0.29	0.29	
					56.11	56.11
MORTAR PLASTERING 1 : 3 : 10	3.60	4.00	10.00	144.00		
	3.60	9.00	3.00	97.20	241.20	
	3.60	3.00	4.00	43.20		
	1.45	1.90	2.00	5.51		
	1.45	0.65	2.00	1.89		
	2.25	1.50	1.00	3.38		
	4.00	0.40	4.00	6.40		
	9.00	0.20	8.00	14.40	74.77	
				2.00	166.43	332.86
CONCRETE PLASTERING 1 : 2	3.60	0.80	4.00	23.04		
	4.00	0.50	9.00	36.00		
	0.40	0.50	3.00	1.20		
	4.00	3.00	4.00	96.00		
	4.00	9.00	4.00	144.00	300.24	
					300.24	300.24

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	GARAGE	Page	2/3

Name of work	Height (M)	Lenth (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M2)
TERRACOTA	0.80	1.50	2.00	2.40		
	0.80	3.70	1.00	2.96		
	1.10	2.70	1.00	2.97		
	1.10	4.00	5.00	22.00		
	0.80	0.40	4.00	1.28		
	1.10	9.00	1.00	9.90	41.51	41.51
ALUMINIUM AWAKENING	-	2.20	4.00	8.80		
	-	2.10	2.00	4.20		
	-	1.35	4.00	5.40		
	-	0.65	4.00	2.60		
	-	1.98	4.00	7.90		
	-	1.35	4.00	5.40	34.30	34.30

Name of work	Height (M)	Lenth (M)	Each	Qty. (M)	Subtotal (M)	Total (M)
ALUMINIUM WINDOWS FRAME	-	1.35	8.00	10.80		
	-	0.55	8.00	4.40		
	-	0.63	12.00	7.50		
	-	1.35	12.00	16.20	38.90	38.90
ALUMINIUM DOOR FRAME	-	2.20	8.00	17.60		
	-	0.50	12.00	6.00	23.60	23.60

Name of work	Height (M)	Lenth (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M2)
GLASS 5 mm NATURAL	0.50	1.30	4.00	2.60		
	0.60	1.30	6.00	4.68	7.28	7.28
TEAK PLYWOOD PANEL	1.90	0.60	4.00	4.56		4.56

Name of work	Height (M)	Lenth (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
WOOD VENTILATION HOLE	0.03	0.20	0.80	24.00	0.12	
	0.03	0.20	1.00	24.00	0.14	0.26

Name of work	Height (M)	Lenth (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M2)
CEILING	9.00	4.00	1.00	36.00		
	9.00	16.00	1.00	144.00	180.00	180.00

Name of work	Height (M)	Lenth (M)	Each	Qty. (M)	Subtotal (M)	Total (M)
CEILING CORNICE	-	9.00	4.00	36.00		
	-	4.00	10.00	40.00	76.00	76.00

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	GARAGE	Page	3/3

Name of work	Height (M)	Lenth (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M2)
CERAMIC TILE	9.00	4.00	1.00	36.00		36.00
CERAMIC TILE	3.50	2.90	1.00	10.15		
30 X 30 (NON-SLIP)	3.00	1.90	1.00	5.70	15.85	15.85
WALL BASE	-	9.00	2.00	18.00	-	
RAYBAND GLASS 5 mm	-	4.00	2.00	8.00	-	26.00
WALL BASE						
WATER PROOFING MORTAR		9.00	2.00	18.00	-	
		4.00	4.00	16.00	-	34.00
WALL PAINTING	9.00	0.60	3.00	32.40		
	4.00	0.60	5.00	24.00		
	4.00	3.60	10.00	288.00		
	9.00	3.60	3.00	194.40		
	0.80	3.60	4.00	23.04		
	0.50	4.00	9.00	36.00		
	0.50	0.40	3.00	1.20		
				599.04	599.04	
	3.00	3.60	4.00	86.40		
	1.90	1.45	2.00	11.02		
	0.65	1.45	2.00	3.77		
	1.50	2.25	1.00	6.75		
	0.40	4.00	4.00	12.80		
	0.20	9.00	8.00	28.80		
	1.20	0.06	2.00	0.29		
	0.80	1.50	2.00	2.40		
	0.80	3.70	1.00	2.96		
	1.10	2.70	1.00	2.97		
	1.10	4.00	5.00	22.00		
	0.80	0.40	4.00	1.28		
	1.10	9.00	1.00	9.90		
				191.34	191.34	407.70
CEILING PAINT	9.00	4.00	1.00	36.00	-	
	9.00	16.00	1.00	144.00	-	
	2.52	21.60	2.00	108.86	-	
	2.52	11.00	2.00	55.44	-	344.30

NO.	ITEM OF WORK	UNIT	QUANTITY
I	EXCAVATION, FILLING & GRADING WORK		
1	Earth cut	m3	58.95
2	Earth fill (old)	m3	21.64
3	Earth fill (new)	m3	15.05
4	Sand fill	m3	5.02
5	Sand fill under foundation	m3	5.15
II	FOUNDATION WORK		
1	Dry stone masonry	m3	9.24
2	Stone masonry 1 : 3 : 10	m3	18.48
3	Brick block 1 : 3 : 10	m3	3.43
III	REINFORCEMENT CONCRETE WORK		
1	Concrete K-225	m3	4.27
2	Steel bar	kg	862.87
3	Light concrete	m3	3.51
IV	ROOFING WORK		
1	Wood truss	m3	1.48
2	Wood Purlin	m3	1.55
3	Timber rafter	m2	137.88
4	Gutter timber batten	m2	23.79
5	Facing timber batten	m2	18.12
6	Roof ventilation frame	m3	0.36
7	Aluminum sheet	m2	9.50
8	Plywood roof cover	m2	137.88
9	Asphalt sheet roof cover	m2	137.88
10	Ceramic roof tile	m2	137.88
11	Ceramic ridge tile	m	44.22
12	Termite protection	Ls	1.00
13	Fiber cement roof tile	m2	2.52
14	Truss beagle & bolt	kg	50.00
V	CONCRETE BLOCK WORK & BRICKWORK		
1	Brick wall 1 : 3	m3	2.32
2	Brick wall 1 : 3 : 10	m3	12.38
VI	PLASTER WORK		
1	Mortar plaster 1 : 3	m2	33.60
2	Mortar plaster 1 : 3 : 10	m2	186.68
3	Concrete plastering 1 : 2	m2	30.24
4	Terra-cotta	m2	24.48
VII	DOORS & WINDOWS WORK		
1	Aluminum awakening	m	55.55
2	Double plywood door	m2	0.00
3	Aluminum door frame	m2	31.30
4	Aluminum sliding-window frame	m2	42.81
5	Door keys for aluminum door	pc	5.00
6	Door keys for wood door	pc	0.00
7	Door keys for toilet door	m2	1.00
8	Door hinges (125 mm)	pr	6.00
9	Window hinges (75 mm)	pr	1.00
10	Double teakwood door (w/ louver)	m2	1.58
11	Wood frame for ventilation	m3	0.18
VIII	GLAZING WORK		
1	Float glass 5 mm (natural color)	m2	8.25
2	Mirror for lavatory 5 mm	m2	0.30
IX	INTERIOR FINISHING		
1	Fiber cement 6 mm + wood frame	m2	92.88
2	Wood cornice	m	118.03

NO.	ITEM OF WORK	UNIT	QUANTITY
X	TILE WORK		
1	Ceramic tile 300 x 300	m2	39.25
2	Ceramic tile 300 x 300 (textured, non-slip)	m2	10.76
3	Ceramic tile 200 x 200 (for wall covered)	m2	17.36
4	Ceramic tile 200 x 200 (textured, non-slip)	m2	1.34
5	Float glass H=100 mm, rayband (for wall base)	m	35.80
XI	SANITARY WORK		
1	Water supply installation (PVC pipe D=19 mm)	m	11.00
2	Waste water installation (PVC pipe D = 110 mm)	m	8.00
3	Closet	pc	1.00
4	Washbak	pc	1.00
5	Floor drain	pc	1.00
6	Septictank	unit	0.00
7	Water cock	pc	4.00
8	Bath tub (watertank)	pc	1.00
9	Kitchen table (reinforcement concrete 100 Kg/M3)	m3	0.12
XII	ELECTRICAL WORK		
1	Installation & lighting 40W-1 FL	pc	2.00
2	Installation & lighting 40W-2 FL	pc	3.00
3	Installation & lighting 20W-1 FL	pc	0.00
4	Installation & lighting 15W-2 FL	pc	0.00
5	Installation & lighting 15W-1 FL	pc	3.00
6	Installation & lighting 10W-1 FL	pc	3.00
7	Installation & lighting 250W-1 H	pc	0.00
8	Lighting switch (single)	pc	3.00
9	Lighting switch (double)	pc	3.00
10	Outlet socket switch	pc	6.00
11	Outlet socket & Installation	pc	6.00
12	Lightning protector	pc	0.00
13	Fuse box	pc	1.00
14	Fuse	pc	2.00
15	New installation from PLN (450 VA)	pc	1.00
XIII	PAINTING WORK		
1	Wall painting	m2	387.46
2	Wood painting	m2	27.65
3	Wood polytur	m2	1.58
4	Wood protection painting	Ls	1.00
5	Steel protection painting	m2	0.00
6	Ceiling painting	m2	92.88
XIV	FURNITURE		
1	Sofa	Unit	1.00
2	Credenza	Unit	1.00
3	Dining table	Unit	1.00
4	Dining cupboard	Unit	1.00
5	Bed room set	Unit	2.00
6	Portable stove	Unit	1.00
7	Kitchen set	Unit	1.00

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	STAFF HOUSE	Page	1/5

Name of work	Height (M)	length (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
EARTH FILL	0.30	3.00	6.00	-	5.40	
	0.30	3.00	5.50	-	4.95	
	0.30	2.00	2.00	-	1.20	
	0.30	1.50	2.00	-	0.90	
	0.30	3.15	2.75	-	2.60	15.05
SAND FILL	0.10	3.00	6.00	-	1.80	
	0.10	3.00	5.50	-	1.65	
	0.10	2.00	2.00	-	0.40	
	0.10	1.50	2.00	-	0.30	
	0.10	3.15	2.75	-	0.87	5.02
LIGHT CONCRETE	0.07	3.00	6.00	-	1.26	
	0.07	3.00	5.50	-	1.16	
	0.07	2.00	2.00	-	0.28	
	0.07	1.50	2.00	-	0.21	
	0.07	3.15	2.75	-	0.61	3.51

Name of work	Height (M)	length (M)	Each	Thickness (M)	Subtotal (M2)	Total (M3)
BRICKBLOCK 1 : 3	0.60	6.00	3.00	0.12	1.30	
	0.60	3.00	3.00	0.12	0.65	
	0.60	5.50	1.00	0.12	0.40	
	0.60	2.00	3.00	0.12	0.43	
	0.60	3.50	1.00	0.12	0.25	
					3.02	
	0.60	1.00	2.00	0.12	0.14	
	0.60	0.90	3.00	0.12	0.19	
	0.60	0.80	2.00	0.12	0.12	
					0.45	2.57
BRICKBLOCK 1 : 3 : 10	3.00	6.00	3.00	0.12	6.48	
	3.00	3.00	3.00	0.12	3.24	
	3.00	5.50	1.00	0.12	1.98	
	3.00	2.00	3.00	0.12	2.16	
	3.00	3.50	1.00	0.12	1.26	
					15.12	
	1.35	1.45	2.00	0.12	0.47	
	2.25	0.90	2.00	0.12	0.49	
	1.45	1.85	2.00	0.12	0.64	
	1.00	2.25	2.00	0.12	0.54	
	2.25	0.80	1.00	0.12	0.22	
	1.45	0.65	1.00	0.12	0.11	
	1.00	2.25	1.00	0.12	0.27	
					2.74	12.38

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	STAFF HOUSE	Page	2/5

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
MORTAR PLASTERING	0.60	6.00	6.00	21.60		
1 : 3	0.60	3.00	6.00	10.80		
	0.60	5.50	2.00	6.60		
	0.60	2.00	6.00	7.20		
	0.60	3.50	2.00	4.20	50.40	
MORTAR PLASTERING	0.60	0.15	8.00	1.44		
1 : 3	0.60	0.30	10.00	3.60		
	0.60	1.00	4.00	2.40		
	0.60	0.90	6.00	3.24		
	0.60	0.80	4.00	1.92	16.80	
					33.60	33.60
MORTAR PLASTERING	3.00	6.00	6.00	108.00		
1 : 3 : 10	3.00	3.00	6.00	54.00		
	3.00	5.50	2.00	33.00		
	3.00	2.00	6.00	36.00		
	3.00	3.50	2.00	21.00	252.00	
	3.00	0.15	8.00	7.20		
	3.00	0.30	10.00	18.00		
	1.35	1.45	4.00	7.83		
	1.65	0.90	4.00	5.94		
	1.45	1.85	4.00	10.73		
	1.00	1.65	4.00	6.60		
	1.65	0.80	2.00	2.64		
	1.45	0.65	2.00	1.89		
	1.00	2.25	2.00	4.50	65.33	
					186.68	186.68

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
CONCRETE PLASTERING	3.60	0.15	8.00	-	8.64	
1 : 2	3.60	0.30	10.00	-	21.60	30.24
TERRACOTA	0.80	2.00	2.00	-	3.20	
	0.80	0.50	1.00	-	0.40	
	0.80	0.80	1.00	-	0.64	
	1.10	0.60	1.00	-	0.66	
	1.10	15.60	1.00	-	17.16	
	1.10	2.20	1.00	-	2.42	24.48

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	STAFF HOUSE	Page	3/5

Name of work	Height (M)	length (M)	Each	Qty. (M)	Subtotal (M)	Total (M)
ALUMINIUM AWAKENING	-	2.85	2.00	-	5.70	
	-	2.20	12.00	-	26.40	
	-	1.85	2.00	-	3.70	
	-	1.65	1.00	-	1.65	
	-	1.35	11.00	-	14.85	
	-	0.90	2.00	-	1.80	
	-	0.80	1.00	-	0.80	
	-	0.65	1.00	-	0.65	55.55
ALUMINIUM WINDOWS FRAME	-	0.58	12.00	-	6.96	
	-	0.62	10.00	-	6.15	
	-	1.35	12.00	-	16.20	
	-	1.35	10.00	-	13.50	42.81
ALUMINIUM DOOR FRAME	-	2.20	10.00	-	22.00	
	-	0.70	6.00	-	4.20	
	-	0.60	6.00	-	3.60	
	-	0.50	3.00	-	1.50	31.30

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
GLASS 5 mm NATURAL	0.57	1.27	6.00	-	4.34	
	0.62	1.27	5.00	-	3.91	8.25
TEAK PLYWOOD PANEL	0.74	1.90	4.00	-	5.62	
	0.64	1.90	4.00	-	4.86	
	0.52	1.90	2.00	-	1.98	12.46

Name of work	Height (M)	length (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
WOOD VENTILATION HOLE	0.03	0.20	0.80	37.00	0.18	0.18

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
CEILING	3.00	3.00	2.00	-	18.00	
	3.00	5.50	1.00	-	16.50	
	2.00	2.00	1.00	-	4.00	
	1.50	1.50	1.00	-	2.25	
	6.00	1.50	1.00	-	9.00	
	2.00	1.50	3.00	-	9.00	
	3.50	1.50	1.00	-	5.25	
	3.25	1.50	1.00	-	4.88	
	3.00	2.00	1.00	-	6.00	
	3.00	1.50	1.00	-	4.50	
	9.00	1.50	1.00	-	13.50	92.88

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	STAFF HOUSE	Page	4/5

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M)	Total (M)
CEILING CORNICE	-	2.85	10.00	-	28.50	
	-	5.35	2.00	-	10.70	
	-	0.50	2.00	-	1.00	
	-	1.35	4.00	-	5.40	
	-	1.85	4.00	-	7.40	
	-	6.15	3.00	-	18.45	
	-	0.58	2.00	-	1.15	
	-	3.65	1.00	-	3.65	
	-	1.63	1.00	-	1.63	
	-	2.08	2.00	-	4.15	
	-	9.00	3.00	-	27.00	
	-	6.40	1.00	-	6.40	
	-	0.60	1.00	-	0.60	
	-	2.00	1.00	-	2.00	118.03

Name of work	Height (M)	length (M)	Wide (M)	Qty.	Subtotal (M2)	Total (M2)
CERAMIC TILE 30 x 30	-	3.00	6.00	-	18.00	
	-	3.00	5.50	-	16.50	
	-	2.00	2.00	-	4.00	
	-	1.50	0.50	-	0.75	39.25

Name of work	Wide (M)	length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
CERAMIC TILE 30 X 30 (NON-SLIP)	3.15	1.50	1.00	-	4.73	
	3.15	1.00	1.00	-	3.15	
	1.20	1.20	2.00	-	2.88	10.76
CERAMIC TILE 20 x 20 (for wall cover)	0.60	6.00	2.00	-	7.20	
	0.60	0.60	2.00	-	0.72	
	0.10	2.00	1.00	-	0.20	
	1.60	1.35	3.00	-	6.48	
	1.60	0.55	1.00	-	0.88	
	0.80	0.60	1.00	-	0.48	
	0.70	0.60	3.00	-	1.26	
	1.40	0.10	1.00	-	0.14	17.36
CERAMIC TILE 20 x 20 (for toilet floor)	1.35	0.75	1.00		1.01	
	0.55	0.60	1.00		0.33	1.34

Name of work	Height (M)	length (M)	Each	Qty.	Subtotal (M)	Total (M)
WALL BASE RAYBAND GLASS 5 mm	-	2.85	6.00	-	17.10	
	-	2.00	5.00	-	10.00	
	-	1.50	1.00	-	1.50	
	-	1.20	1.00	-	1.20	
	-	2.40	1.00	-	2.40	
	-	0.50	3.00	-	1.50	
	-	0.70	1.00	-	0.70	
	-	1.40	1.00	-	1.40	35.80

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	STAFF HOUSE	Page	5/5

Name of work	Height (M)	length (M)	Each	Qty. (M2)	Subtotal (M2)	Total (M2)
WALL PAINTING	3.00	2.85	10.00	171.00		
	3.00	5.35	2.00	64.20		
	2.80	1.85	8.00	82.88		
	2.80	6.15	3.00	103.32		
	2.80	5.15	1.00	28.84		
	2.80	2.08	2.00	23.24	473.48	
	0.80	2.00	2.00	3.20		
	0.80	0.50	1.00	0.40		
	0.80	0.80	1.00	0.64		
	1.10	0.60	1.00	0.66		
	1.10	15.60	1.00	17.16		
	1.10	2.20	1.00	2.42		
	3.60	0.15	4.00	4.32		
	3.60	0.30	5.00	10.80		
	1.35	1.45	4.00	7.83		
	1.65	0.90	4.00	5.94		
	1.45	1.85	4.00	10.73		
	1.00	1.65	4.00	6.60		
	1.65	0.80	2.00	2.64		
	1.45	0.65	2.00	1.89		
	1.00	2.25	2.00	4.50		
	0.60	0.15	4.00	0.72		
	0.60	0.30	5.00	1.80		
	0.60	1.00	2.00	1.20		
	0.60	0.90	3.00	1.62		
	0.60	0.80	2.00	0.96	86.03	
					387.46	387.46
CEILING PAINT	3.00	3.00	2.00	-	18.00	
	3.00	5.50	1.00	-	16.50	
	2.00	2.00	1.00	-	4.00	
	1.50	1.50	1.00	-	2.25	
	6.00	1.50	1.00	-	9.00	
	2.00	1.50	3.00	-	9.00	
	3.50	1.50	1.00	-	5.25	
	3.25	1.50	1.00	-	4.88	
	3.00	2.00	1.00	-	6.00	
	3.00	1.50	1.00	-	4.50	
	9.00	1.50	1.00	-	13.50	92.88

NO.	ITEM OF WORK	UNIT	QUANTITY
I.	TEMPORARY WORK		
1	Uitzet dan Bouwplank	m^2	519.00
2	Water & electricity for work	ls	1.00
3	Administration & documentation	ls	1.00
II.	EXCAVATION, FILLING & GRADING WORK		
1	Earth cut	m^3	5.15
2	Sand fill	m^3	0.63
III.	FOUNDATION WORK		
1	Dry stone masonry	m^3	1.25
2	Stone masonry 1 : 3 : 10	m^3	5.00
3	Brick block 1 : 3 : 10	m^3	0.30
4	Mortar plaster 1 : 3 (for stair's step)	m^2	3.40
IV	FENCE WORK		
1	Fence's tie beam (RC)	m^3	5.47
2	Fence's foundation (RC)	m^3	1.10
3	Brick block 1 : 3 : 10	m^3	9.96
4	Steel fence	m	138.30
5	G a t e	m	44.00
V	SANITARY WORK		
1	New installation from PDAM	Unit	1.00
2	Water supply installation (PVC pipe D=19 mm)	m	100.00
3	Waste water installation (PVC pipe D = 110 mm)	m	8.00
4	Drainage U-300	m	143.00
5	Precast RC	m^3	0.15
6	Drainage box	pc	8.00
VI	ELECTRICAL WORK		
1	Lighting switch (double)	pc	7.00
2	Fuse	pc	3.00
3	Fuse box	pc	1.00
4	General Lighting installation	pc	12.00
5	General Lighting 40W-2	pc	12.00
XVI	LANDSCAPING		
1	Paving block	m^2	139.96
2	Paving Kansteen (paving border)	m	101.45
3	Gravel	m^2	7.93
4	Plantation	m^2	14.00

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	EXTERNAL WORK	Page	1/3

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal (M)	Total (M)
DRAINAGE U-300		0.50	1.00		0.50	
		0.75	2.00		1.50	
		2.50	1.00		2.50	
		3.00	1.00		3.00	
		5.50	2.00		11.00	
		6.00	2.00		12.00	
		6.50	1.00		6.50	
		7.00	1.00		7.00	
		9.00	4.00		36.00	
		10.00	2.00		20.00	
		11.50	1.00		11.50	
		12.00	1.00		12.00	
		19.50	1.00		19.50	143.00

Name of work		Each (Pc)	Each	Qty.	Subtotal (Pc)	Total (Pc)
DRAINAGE BOX		2.00	1.00		2.00	
		2.00	2.00		4.00	
		2.00	1.00		2.00	8.00

Name of work	Height (M)	Length (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
REINFORCEMENT CONCRETE PRECAST	0.07	0.70	1.00	3.00		0.15

Name of work	Height (M)	Length (M)	Each	Qty. (M)	Subtotal (M2)	Total (M2)
PAVING BLOCK		3.00	2.10		6.30	
		1.90	0.90		1.71	
		2.70	1.80		4.86	
		1.00	14.00		14.00	
		6.00	1.10		6.60	
		9.00	1.00		9.00	
		11.00	7.00		77.00	
		2.10	1.00		2.10	
		1.00	5.20		5.20	
		1.00	3.30		3.30	
		4.30	2.30		9.89	139.96

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal (M3)	Total (M3)
GRAVEL	0.10	1.20	4.00	2.00	0.96	
	0.10	0.90	6.00	1.00	0.54	
	0.10	1.20	2.50	2.00	0.60	
	0.10	1.20	3.50	1.00	0.42	
	0.10	0.30	5.00	1.00	0.15	
	0.10	0.90	16.80	1.00	1.51	
	0.10	1.60	10.00	1.00	1.60	
	0.10	0.60	20.00	1.00	1.20	
	0.10	1.60	3.60	1.00	0.58	
	0.10	0.70	5.30	1.00	0.37	7.93

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	EXTERNAL WORK	Page	2/3

Name of work	Height (M)	Length (M)	Wide (M)	Qty.	Subtotal (M3)	Total (M3)
EARTH CUT	0.80	0.50	12.50		5.00	
	0.25	0.20	3.00		0.15	5.15

Name of work	Height (M)	Length (M)	Each	Qty. (M)	Subtotal (M)	Total (M)
PAVEMENT BORDER		3.00	1.00		3.00	
		2.70	1.00		2.70	
		1.00	1.00		1.00	
		17.00	2.00		34.00	
		9.00	2.00		18.00	
		9.50	2.00		19.00	
		7.35	1.00		7.35	
		6.00	2.00		12.00	
		2.20	2.00		4.40	101.45

Name of work	Height (M)	Length (M)	Each	Qty. (M)	Subtotal (M2)	Total (M2)
PLANTATION		3.00	6.50	1.00	19.50	
		6.00	5.50	1.00	33.00	
		1.20	9.00	1.00	10.80	
		0.60	8.00	1.00	4.80	
		0.50	20.00	1.00	10.00	
		2.70	9.80	1.00	26.46	
		2.30	2.00	1.00	4.60	
		2.00	5.00	1.00	10.00	
		7.50	0.50	2.00	7.50	
		0.80	10.00	2.00	16.00	
		0.80	9.00	1.00	7.20	
		1.40	8.40	1.00	11.76	161.62

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal (M)	Total (M)
FENCE		5.00	1.00		5.00	
		14.00	1.00		14.00	
		9.00	1.00		9.00	
		5.80	1.00		5.80	
		21.50	1.00		21.50	
		1.00	1.00		1.00	
		12.00	1.00		12.00	
		70.00	1.00		70.00	138.30

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal (M)	Total (M)
GATE		3.00	1.00		3.00	
		6.00	1.00		6.00	
		20.20	1.00		20.20	
		13.80	1.00		13.80	
		1.00	1.00		1.00	44.00

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal (M3)	Total (M3)
FENCE'S TIE BEAM	0.15	0.20	5.00		0.15	
	0.15	0.20	14.00		0.42	
	0.15	0.20	9.00		0.27	
	0.15	0.20	5.80		0.17	
	0.15	0.20	21.50		0.65	
	0.15	0.20	1.00		0.03	
	0.15	0.20	12.00		0.36	
	0.15	0.20	70.00		2.10	
	0.15	0.20	3.00		0.09	
	0.15	0.20	6.00		0.18	
	0.15	0.20	20.20		0.61	
	0.15	0.20	13.80		0.41	
	0.15	0.20	1.00		0.03	5.47

Name of Structure	BARU PUMPING STATION COMPLEX	Category Calculation	EXTERNAL WORK	Page	3/3

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal (M3)	Total (M3)
FENCE'S BRICK BLOCK	0.60	0.12	5.00		0.36	
	0.60	0.12	14.00		1.01	
	0.60	0.12	9.00		0.65	
	0.60	0.12	5.80		0.42	
	0.60	0.12	21.50		1.55	
	0.60	0.12	1.00		0.07	
	0.60	0.12	12.00		0.86	
	0.60	0.12	70.00		5.04	9.96

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal (M2)	Total (M2)
PENCE'S PLASTERING 1 : 3		5.00	1.35		6.75	
		14.00	1.35		18.90	
		9.00	1.35		12.15	
		5.80	1.35		7.83	
		21.50	1.35		29.03	
		1.00	1.35		1.35	
		12.00	1.35		16.20	
		70.00	1.35		94.50	186.71

Name of work	Height (M)	Wide (M)	(M)	Qty.	Subtotal (M3)	Total (M3)
FENCE'S FOUNDATION	0.50	0.20	0.20	55.00		1.10

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal	Total (M3)
STONE MASONRY	0.80	0.50	12.50			5.00

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal	Total (M3)
BRICKBLOCK	0.25	0.40	3.00			0.30

Name of work	Height (M)	Length (M)	Each	Qty.	Subtotal	Total (M2)
MORTAR PLASTERING	1.70	0.50	4.00			3.40

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal	Total (M3)
SAND FILL	0.10	0.50	12.50			0.63

Name of work	Height (M)	Wide (M)	Length (M)	Qty.	Subtotal	Total (M3)
DRY MASONRY	0.20	0.50	12.50			1.25

Package 3: F Baru Retarding Pond

Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY	Page	1 / 15

SUMMARY OF PONDS WORK AND INSPECTION ROAD VOLUME CALCULATION

I. PONDS WORKS

1.	Dewatering	=	LS	
2.	Ponds Excavation	=	30,411	cu.m
3.	Structure Excavation	=	2,831.88	cu.m
4.	Bock Fill with Gravel	=	821.61	cu.m
5.	Back Fill with Bolder	=	605.45	cu.m
6.	Back Fill with Sandy Soil	=	241.40	cu.m
7.	Wet masonry	=	821.60	cu.m
8.	Concrete Structure (C1)	=	319.58	cu.m
9.	Leveling Concrete (E)	=	99.54	cu.m
10.	Sodding	=	667.80	sq.m
11.	Reinforcing Bar	=	12,948	Kg
12.	Pointing	=	3,215.160	sq.m
13.	Log Pile ϕ 150, L=3.00 m	=	723	m
14.	Weep Hole	=	482	nos
15.	Form work for Concrete E	=	288	m^2
16.	Form work for Concrete Type C1	=	1,540.60	sq.m

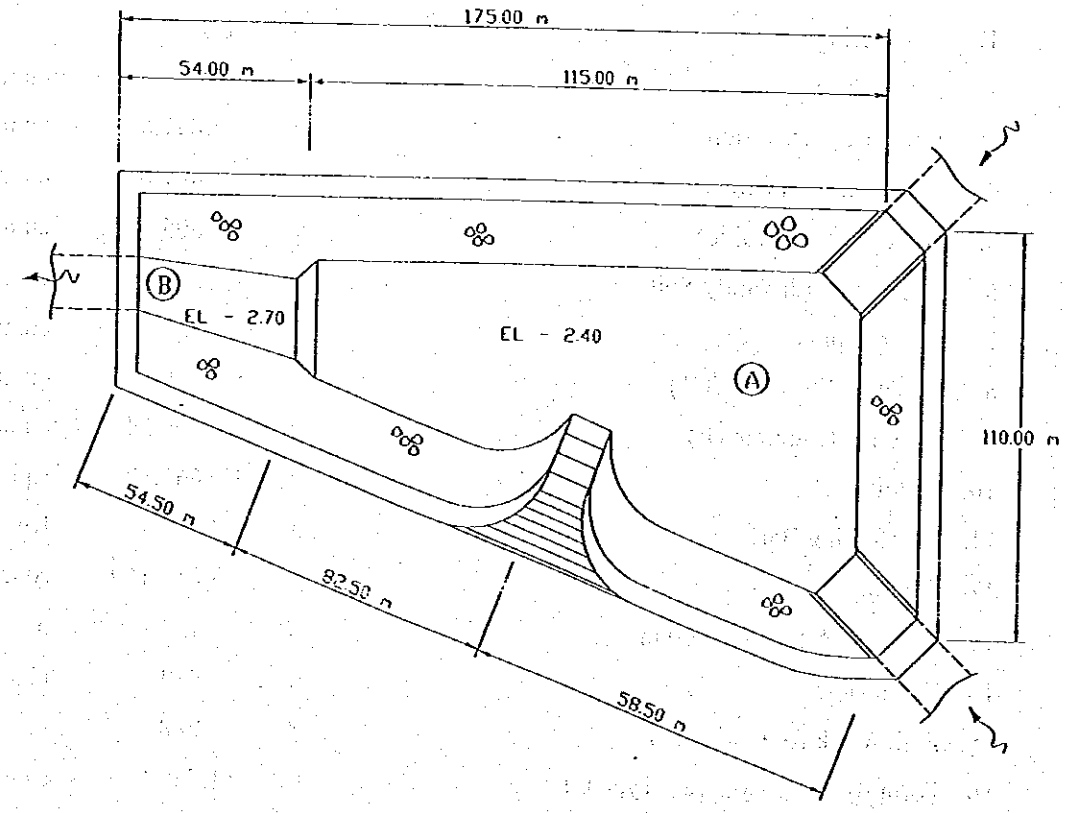
II. INSPECTION ROAD

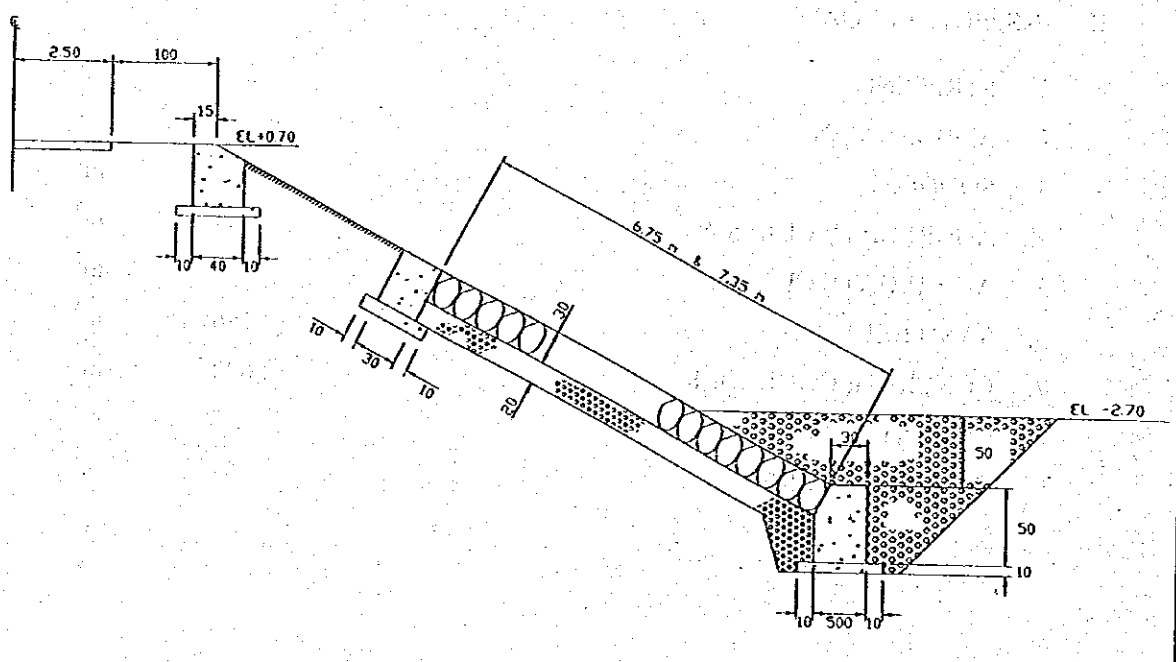
1.	STRIPPING	=	375	m^3
2.	EMBANKMENT	=	1,517	m^3
3.	SODDING	=	958	m^2
4.	AGGREGATE CLASS A	=	403	m^3
5.	AGGREGATE CLASS B	=	555	m^3
6.	SAND BEDDING	=	156	m^3
7.	CONCRETE CONBLOCK	=	2,600	m^2
8.	CEMENT MORTAR	=	7	m^3
9.	CONCRETE KERB	=	63	m^3

Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY	Page	2 / 15

I. PONDS WORKS

1. Dewatering = LS
2. Ponds Excavation





Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY	Page	3 / 15

- Depth of Fill of Ponds A = [– 1.60 – (– 2.40)] = 0.80 m
  Depth of Fill of Ponds B = [– 1.60 – (– 2.70)] = 1.10 m

- Wide :

$$\text{Ponds A} = \frac{\left[\left(\frac{92.50+28}{2}\times 115\right)+\left(\frac{95.70+31.20}{2}\times 116.60\right)\right]}{2}$$

$$= \frac{6928+7398.27}{2} = \frac{14327.02}{2}$$

$$A = 7163.51 \text{ m}^2$$

$$\text{Ponds B} = \frac{\left[\left(\frac{5+28}{2}\times 54\right)+\left(\frac{8.20+31.20}{2}\times 54.00\right)\right]}{2}$$

$$= \frac{891+1063.80}{2} = \frac{1954.80}{2}$$

$$B = 977.40 \text{ m}^2$$

- Volume :

A = (7163.51 x 0.80) = 5730.80 m^3
B = (977.40 x 1.10) = 1075.14 m^3
Total = 6805.94 m^3

- Volume of Ponds Excavation = 6805.94 m^3

POND EXCAVATION AT PRESENT

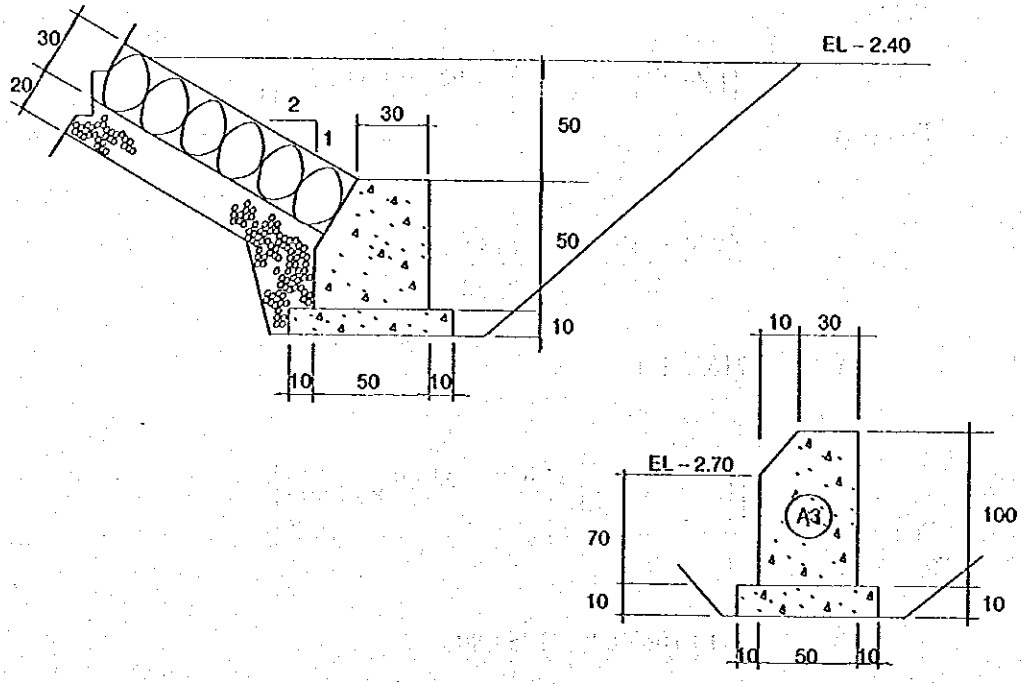
Baru Retarding Pond Area

EL. + 0.70 → A = 11,350 m^2

EL. + 2.40 → A = 8,270 m^2

$$\text{Excavation volume} = \frac{11,350+8,270}{2}\times 3.10 = 30,411 \text{ m}^3$$

3. Structure Excavation



- Bottom Base Concrete (Ponds A)

Wide : $A_1 = \left(\frac{0.30+0.50}{2} \times 0.30\right) + (0.50 \times 0.20) + (0.10 \times 0.70) +$

$(0.50 \times 0.50 \times 0.10) + (0.50 \times 0.60 \times 0.60) + (0.50 \times 0.20) +$

$(0.10 \times 0.10) + \left(\frac{1.10+1.60}{2} \times 0.50\right) + (0.50 \times 6.75)$

$= 0.12 + 0.25 + 0.07 + 0.025 + 0.18 + 0.10 + 0.01 + 0.675 + 3.375$

$A_1 = 4.805 \ m^2$

Ponds B

Wide : $A_2 = A_1 - 3.375 + (0.50 \times 7.35) = 5.105 \ m^2$

$A_3 = (0.30 \times 1.00) + \frac{(0.70+1.00)}{2} \times 0.20 + (0.10 \times 0.70) +$

$(0.50 \times 0.80 \times 0.80) + (0.50 \times 1.10 \times 1.10)$

$A_3 = 0.30 + 0.17 + 0.07 + 0.32 + 0.605 = 1.465 \ m^2$

Volume :

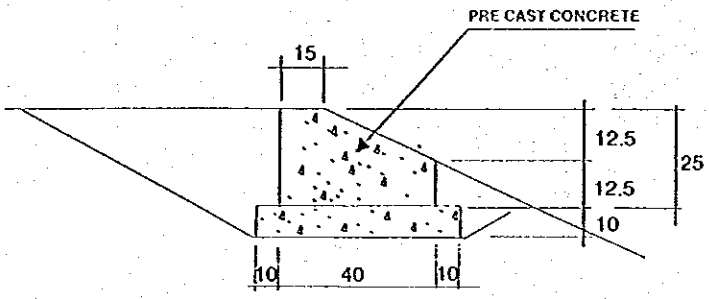
- Length Round of Ponds (A) = 367.5 m
- Length Round of Ponds (B) = 109.50 m

V_1 = (4.805 x 367.5) + (1.465 x 28) = 1806.858 m^3

V_2 = (5.105 x 109.5) = 558.998 m^3

Total = 2365.855 m^3

- Pre Cast Concrete



Length = 50 cm

Wide : A_3 = (0.50 x 0.35 x 0.35) + (0.20 x 0.35) + (0.20 x 0.225) + (0.50 x 0.125 x 0.10) + (1.0 x 0.60) – (0.10 x 0.10 x 2) + (0.15 x 0.25) + $\left(\frac{0.125 + 0.25}{2}\right)$ x 0.25

= 0.061 + 0.07 + 0.045 + 0.006 + 0.06 – 0.02 + 0.038 + 0.047

A_3 = 0.307 m^2

Volume : V = 0.307 x (367.5 + 109.50) = 146.439 m^3

- Top Concrete

Wide : A_4 = (0.50 x 60 x 1.20) + (0.20 x 0.60) + (0.30 x 0.50) + (0.10 x 0.50) – (0.10 x 0.10)

= 0.36 + 0.12 + 0.15 + 0.05 – 0.01

A_4 = 0.67 m^2

Volume = 0.67 x 477

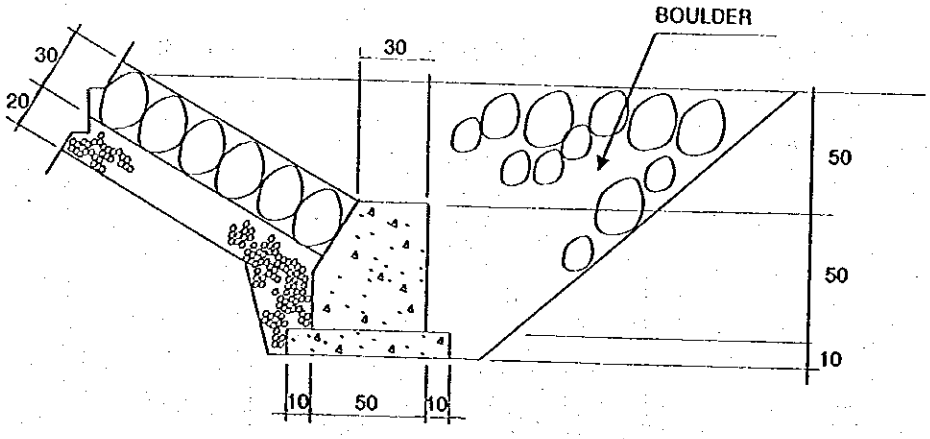
V = 319.590 m^3

Total volume of structure excavation

V = 2365.855 + 146.439 + 319.590 = 2831.884 m^3

Back Fill With Sand Soil

- Bottom Base Concrete (Ponds A)



Wide : A_1 = (0.50 x 0.50 x 1.00) + (0.50 x 1.10 x 1.10) + (0.20 x 1.10) + (0.30 x 0.50) – (0.10 x 0.10)

= 0.250 + 0.605 + 0.220 + 0.150 – 0.01

A_1 = 1.215 m^2

Ponds B → A_2 + A_1 = 1.215 m^2

A_3 = 0.32 + 0.605 = 0.925 m^2

Volume :

V = 1.215 x (367.50 + 109.50) + (0.925 x 28)

= 579.555 + 25.90

V = 605.455 m^3 → (BOLDER VOLUME)

- Pre Cast Concrete

V = $V_{BAC} - V_{Struc.}$

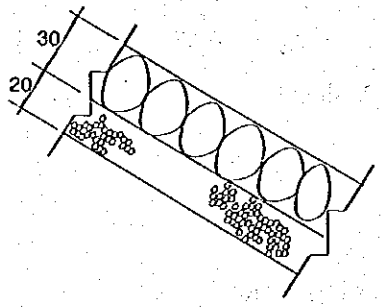
V = 146.439 – (0.144 x 477) = 77.751 m^3

- Top Concrete

V = (0.50 x 0.60 x 0.30) x 477

V = 42.930 m^3

- Revetment



Wide :

Ponds A = 0.25 x 6.75

= 1.688 m^2

Ponds B = 0.25 x 7.35

= 1.838 m^2

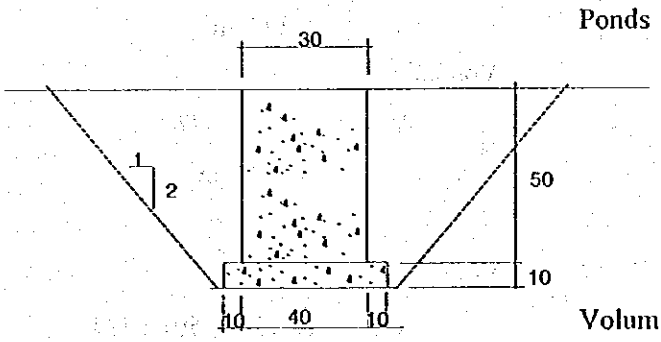
Volume :

V = (1.688 x 367.5) + (1.838 x 109.50)

V = 620.340 + 201.261

= 821.601 m^3

- Line Concrete



Wide :

Ponds A = [(0.5 x 0.60 x 0.30)+(0.20 x 0.60) – (0.10 x 0.10)] x 2

= (0.09 + 0.12 – 0.01) x 2

A = 0.20 x 2

= 0.40 m^2

Volume :

V = (0.40 x 6.75 x 26) + (0.40 x 7.35 x 8)

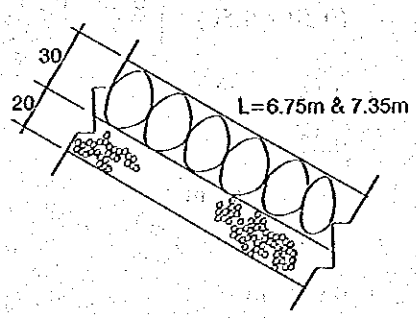
V = 70.200 + 23.520 = 93.72 m^3

Total volume of Back Fill with structure material :

V = 605.455 + 77.751 + 42.930 + 821.601 + 93.72

V = 1641.457 m^3

5a. Wet Masonry



Wide :

Ponds A = (0.25 x 6.75)

= 1.688 m^2

B = (0.25 x 7.35)

= 1.838 m^2

Volume :

V = (1.688 x 367.50) + (1.838 x 109.50)

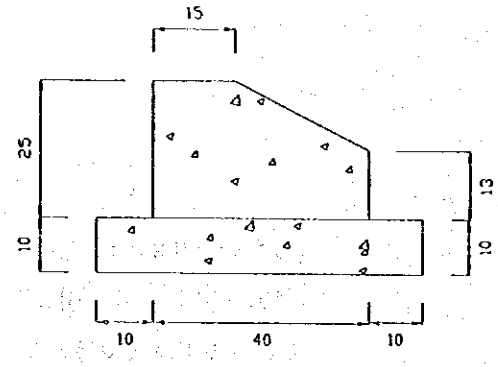
V = (620.340 + 201.261)

Volume of wet masonry = 821.601

Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY	Page	8 / 15

5b. Concrete Structure

- Pre Cast Concrete



Wide :

Ponds A = $(0.15 \times 0.25) + \left(\frac{0.125 + 0.25}{2} \times 0.25\right)$

A = 0.125 + 0.047

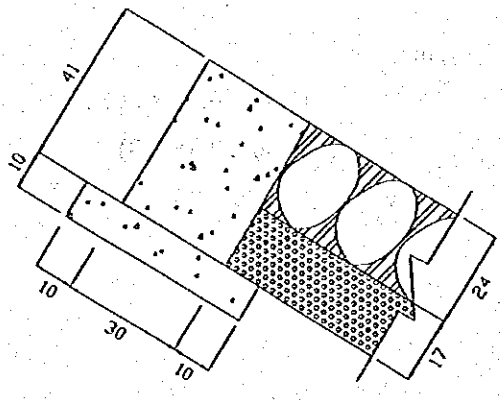
= 0.172 m^2

Volume :

V = 0.172 x 477

= 82.044 m^3

- Top Concrete

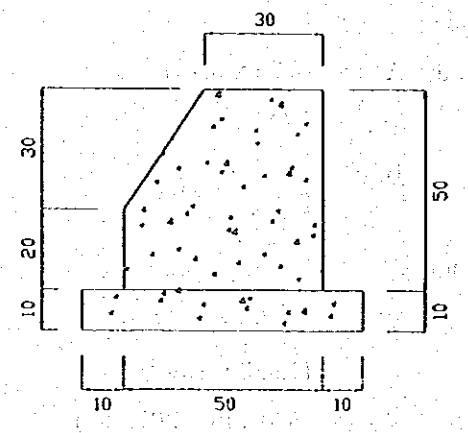


Volume :

V = (0.30 + 0.50) x 477

V = 71.555 m^3

- Base Concrete



Wide :

A_1 = $(0.30 \times 0.50) + \left(\frac{0.20 + 0.50}{2} \times 0.20\right)$

A_1 = 0.15 + 0.07

= 0.22 m^2

A_2 = A_1 = 0.22 m^2

A_3 = 0.32 + 0.605

= 0.925 m^2

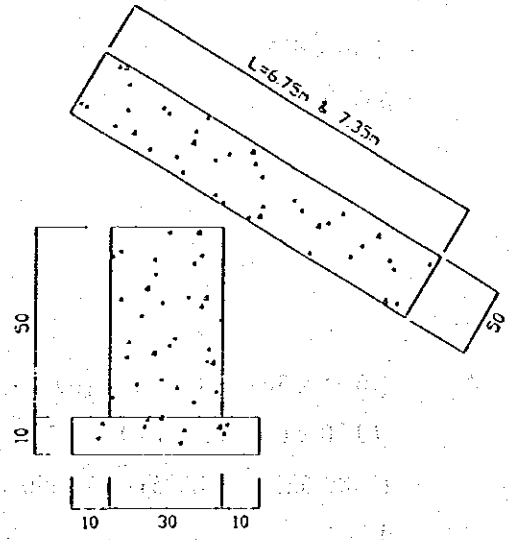
Volume :

V = (0.22 x 477) + (0.925 x 28)

V = 104.940 + 25.900

= 130.840 m^3

- Line Concrete



- length of between each 15 m
- length of pomade of

  Ponds A = 367.50 m

  Ponds B = 109.50 m

$$\text{Number} = \left(\frac{367.5}{15}\times 1\right) + \left(\frac{109.5}{15} + 1\right)$$

$$= 26 + 8$$

Number = 34 pitch

Volume per line :

Ponds A → V_1 = (0.30 x 0.50 x 6.75) = 1.012 m^3

Ponds B → V_2 = (0.30 x 0.50 x 7.35) = 1.103 m^3

Total Volume :

V = (1.012 x 26) + (1.103 x 8)

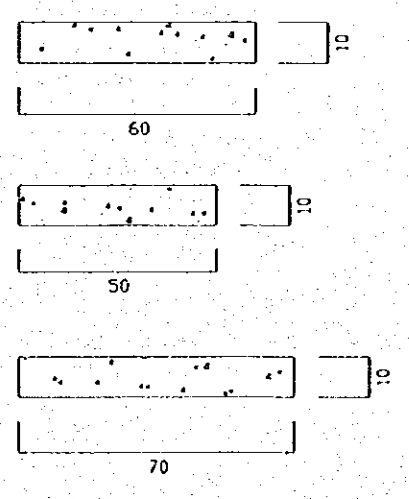
V = 26.312 + 8.824 = 35.136 m^3

Total Volume of concrete structure :

V = 82.044 + 71.555 + 130.840 + 35.136

V = 319.575 m^3

5c. Leveling Concrete



Wide :

A = (0.60 x 0.60) + (0.50 x 0.10) + (0.70 x 0.10)

A = 0.06 + 0.05 + 0.07

= 0.18 m^2

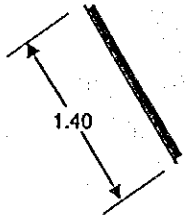
Volume :

V = (0.18 x 477) + (0.50 x 0.10) x 6.75 x 26 + (0.50x0.10) x 7.35 x 8 + (0.70x0.10) x 28

= 85.86+8.775 + 2.94+1.96 = 99.535 m^3

Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY	Page	10 / 15

5d. Sodding

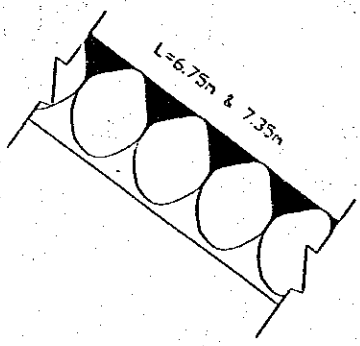


Wide :

A = 1.40 x 477

= 667.80 m^2

6. Pointing



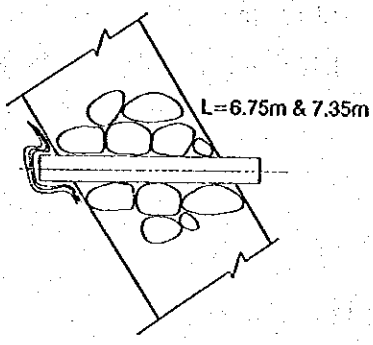
Wide :

A = [(6.75 x 367.5) + (7.35 x 109.5)] –
[(0.30 x 6.75 x 26) + (0.30 x 7.35) x 8)]

= (2480.625 + 804.825) – (52.650 + 17.64)

A = 3215.160 m^2

7. Weep Hole



Number = $\left(\frac{480.5}{2}+1\right)$ x 2 = 482 pitch

8. Log Pile = $\left(\frac{480.5}{2}+1\right)\times 3.0$ = 723 m

9. Form Work Type E = 6 x 0.1 x 480.5 = 288.3 m^3

REINF NO.	DIA	TYPE	BENDING DIMENSION (Cm)					TOTAL LENGTH (m)	WEIGHT (Kg/m)	NUMBER	NO OF BEAM	TOTAL WEIGHT (kg)	REMARK
			a	b	c	d/e	Hole						
* BASE CONCRETE													
D 13	13		47729	-	-	-	-	477.42	1.04	7 x 1		3476	
D 10	10		40	40	12.5	31/22.5	4.5	1.55	0.617	1591		1522	
* TOP CONCRETE													
D 13	13		47729	-	-	-	-	477.42	1.04	6 x 1		2979	
D 10	10		20	40	4.5	-	-	1.29	0.617	1591		1266	
* LINE CONCRETE													
D 13	13		704	-	-	-	-	7.17	1.04	6 x 33		1476	
			764	-	-	-	-	7.77	1.04	6 x 33		1599	
D10	10		1.29	-	-	-	-	1.29	0.617	24 x 33		630	
TOTAL												12948	

Name of Structure: BARU RETARDING PONDS

Category of calculation: SUMMARY

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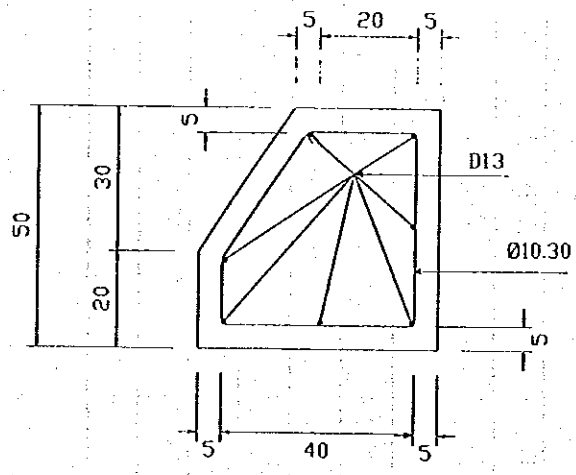
- BASE CONCRETE



Length of round :

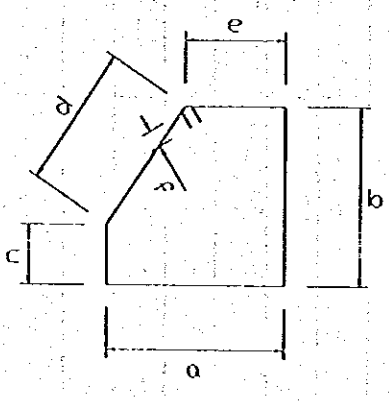
Ponds A = 367.50 m'

Ponds B = 109.50 m'

- D 13

  - Length = (36750 + 10950) – 10 + 30 ϕ = 47729 cm
  - Total length = 47729 + 13 = 47742 cm
    = 477.42 m

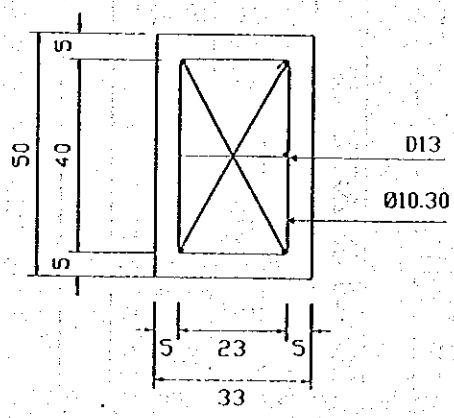
- D 10



a = 50 – 10 = 40 cm
b = 50 – 10 = 40 cm
c = 20 – 7.5 = 12.5 cm
d = 36 – 5 = 31 cm
e = 30 – 7.5 = 22.5 cm
f = 4.5 x 1.0 = 4.5 cm

  - Total length = 40 + 40 + 12.5 + 31 + 22.5 + 2 x 4.5
    = 155 cm = 1.55 m

- TOP CONCRETE

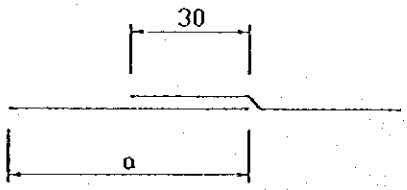


Length :

Ponds A = 367.50 m'

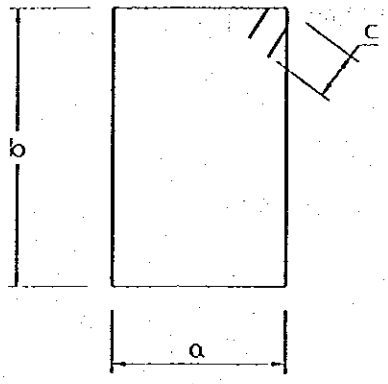
Ponds B = 109.50 m'

- D 13



- Length = (36750 + 10950) – 10 + 30 ϕ = 47729 cm
- Total length = 47729 + 13 = 47742 cm
  = 477.42 m

- D 10



a = 30 – 10 = 20 cm
b = 50 – 10 = 40 cm
c = 4.5 x 1.0 = 4.5 cm

- Total length = 2 x 20 + 2 x 40 + 2 x 4.5
  = 129 cm = 1.29 m

- <u>LINE CONCRETE</u>

D 13

- Length = 675 – 10 + 30 ϕ = 704 cm
- Total length = 704 + 13 = 717 cm
  = 7.17 m

D 10

a = 20cm, b = 40 cm, c = 4.5 cm
Total Length = 129 cm = 1.29 m

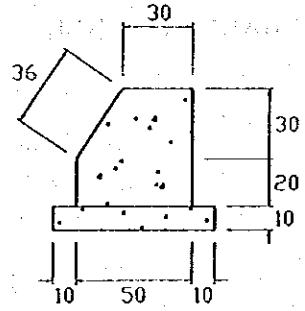
Name of Structure	BARU RETARDING PONDS	Category of calculation	SUMMARY WORK VOLUME	Page	14 / L5

SUMMARY OF FORM WORK

• Bottom Base Concrete	=	687.04	sq.m
• Top Concrete	=	572.40	sq.m
• Line Concrete	=	281.16	sq.m
Total	=	1540.60	sq.m

Name of Structure	BARU RETARDING PONDS	Category of calculation	FORM WORK VOLUME	Page	15 / 15

- <u>BOTTOM BASE CONCRETE</u>



Length of ponds A = 367.50 m
Length of ponds B = 109.50 m

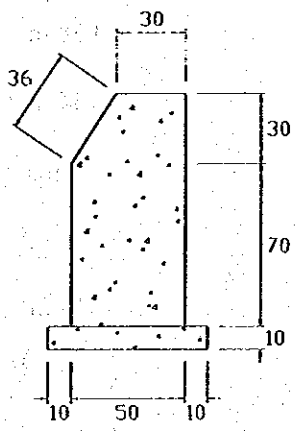
Total length = 477.0 m

Length of Cross Base = 28.0 m
Thick of Rate Form = 3 cm

- Base Concrete :

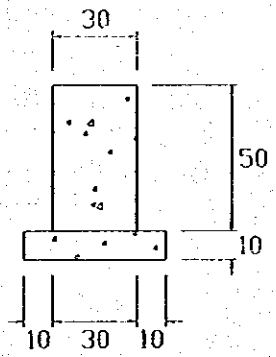
Wide = [(0.10 x 2) + (0.50 + 0.215 + 0.39)] x 477
A = (0.20 + 1.105) x 477 = 622.50 m^2

- Cross Base Concrete :



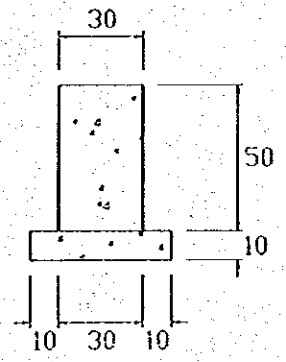
Wide = [(0.10 x 2) + (1.00 + 0.715 + 0.39)] x 28
A = (0.20 + 2.105) x 28 = 64.54 m^2

- Top Concrete



Wide = [(0.10 x 2) + (0.50 + 2)] x 477
A = (0.20 + 1.0) x 477 = 572.40 m^2

- Line Concrete :



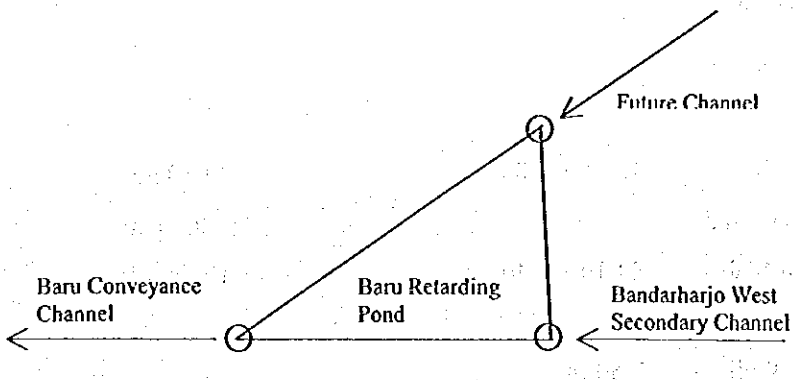
Length = Ponds A = 6.75 m, 26 pitch
Ponds B = 7.35 m, 8 pitch
Wide = [(0.10 x 2) + (0.50 + 2)] x 6.75 x 26 +
[(0.10 x 2) + (0.50 x 2)] x 7.35 x 8
A = 1.20 x (175.50 + 58.80) = 281.16 m^2

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	VOLUME CALCULATION	Page	1 / 14

OUTLET OF BANDARHARJO SECONDARY CHANNEL

1.	CONCRETE TYPE C1	=	36.332 m^3
2.	LEVELING CONCRETE TYPE E	=	4.77 m^3
3.	REINFORCING BAR	=	2,292 Kg
4.	WET STONE MASONRY	=	258.23 m^3
5.	BACK FILLING GRAVEL	=	30.85 m^3
6.	STRUCTURE EXCAVATION	=	1,119.6 m^3
7.	BACK FILLING	=	270.58 m^3
8.	LOG PILE Ø 15 cm, L=2.0 m	=	144 m^1
9.	WEEP HOLE PVC Ø 15 cm	=	48 nos.
10.	FORM WORK FOR TYPE C1	=	93.225 m^2
11.	FORM WORK FOR TYPE E	=	18 m^2
12.	COBBLE STONE	=	12 m^3
13.	POINTING	=	140.29 m^2

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	VOLUME CALCULATION	Page	2 / 14



Name of Structure	BARU RETARDING POND INLET STRUCTURE 1	Category Calculation	CONCRETE VOLUME	Page	3 / 14

BARU RETARDING POND INLET NO. 1

1. CONCRETE VOLUME

- Concrete K 225

Slab

- Area of Slab = 15.75 x 2.80 = 44.10 m²
- Thickness of Slab = 0.40 m
- Volume of Slab = 44.10 x 0.40 = 17.64 m³

Parapet / Wall

- Length of Wall = 2.80 m
- Height of Wall = 0.80 m
- Thickness of Wall = 0.40 m
- Volume of Wall = 2.8 x 0.8 x 0.40 x 2 = 1.792 m³

Stop Lock

(0.6 x 0.40 – 0.2 x 0.2) x 2.70 = 0.54 m³

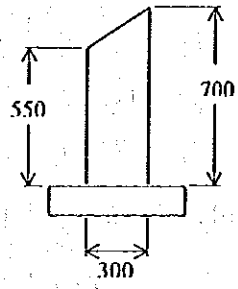
Total Concrete K 225 for Slab and Stop Lock

17.64 + 1.792 + 0.54 = 19.972 m³

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	VOLUME CACULATION	Page	4 / 14

CONCRETE K 225 FOR REVETMENT

- Top Concrete

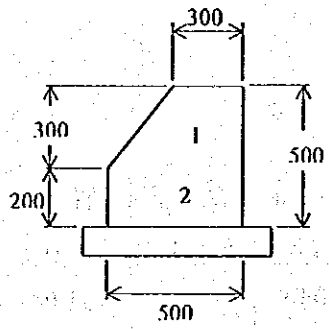


A = $\frac{0.55 + 0.70}{2} \times 0.30$ = 0.188 m²

L = 24 x 2 = 48 m

Volume = 0.188 x 48 = 9.024 m³

- Base Concrete



A1 = $\frac{0.50 + 0.30}{2} \times 0.30$ = 0.12 m²

A2 = 0.2 x 0.50 = 0.10 m²

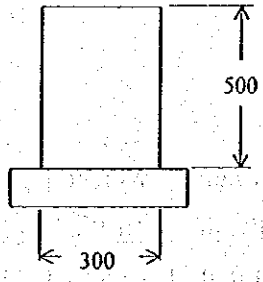
Total = 0.12 + 0.10 = 0.22 m²

L = 10.5 x 2 = 21 m

Volume = 0.22 x 21 = 4.62 m³

Form work = 2 x 0.1 x (48 + 21 +18) = 17.4 m²

- Partition Wall



A = 0.50 x 0.30 = 0.15 m²

L = 4.5 x 4 = 18 m

Volume = 0.15 x 18 = 2.7 m³

Total Concrete K 225 for Revetment

9.024 + 4.62 + 2.70 = 16.36 m³

Total Concrete K 225

19.972 + 16.36 = 36.332 m³

Leveling Concrete

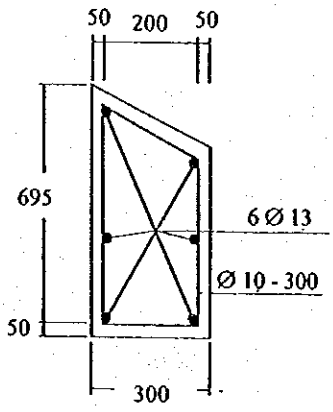
0.1 x 0.50 x 87 = 4.35 m³

0.1 x 0.7 x 0.5 x 66 = 4.77 m³

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	REINFORCING BAR VOLUME	Page	5 / 14

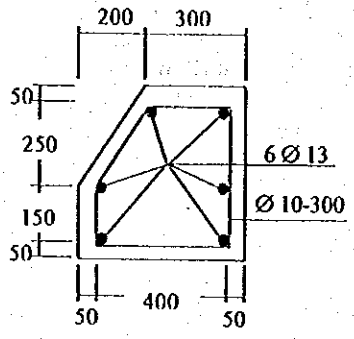
CONCRETE FOR REVETMENT BARU RETARDING POND

1. Top Concrete



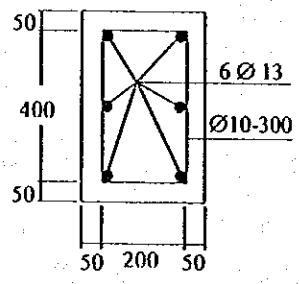
Type	Dia (mm)	Length (m)	No.	Weight Per m	Weight Per Bar	Total (kg)
1	13	24	6 x 2	1.040	24.96	299.52
2	10	1.56	81x2	0.617	0.96	155.52
					Total	455.04

2. Base Concrete



Type	Dia (mm)	Length (m)	No.	Weight Per m	Weight Per Bar	Total (kg)
1	13	10.5	6 x 2	1.040	10.92	131.04
2	10	1.51	36x2	0.617	0.932	67.104
					Total	198.144

3. Partition Wall



Type	Dia (mm)	Length (m)	No.	Weight Per m	Weight Per Bar	Total (kg)
1	13	4.5	6 x 4	1.040	4.68	112.32
2	10	1.26	16x4	0.617	0.777	49.73
					Total	162.05

Total 1 + 2 + 3

455.04 + 198.144 + 162.05 = 815.232 kg

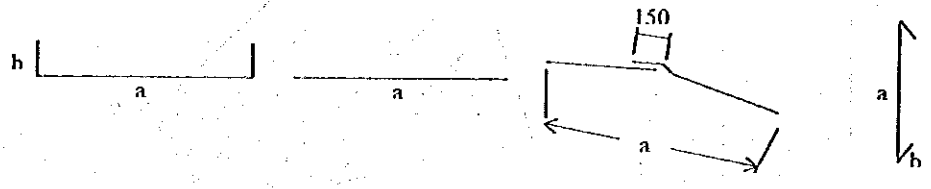
Total Reinforcing Bar

1,476.72 + 815.232 = 2,291.95 kg

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	REINFORCING BAR VOLUME	Page	6 / 14

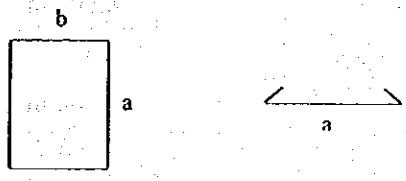
REINFORCING BAR

SLAB



S1B S1T S2 S3

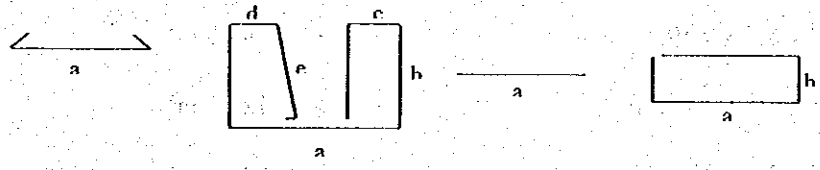
Type	Dia	Length (mm)	Number	Weight/m kg/m	Weight/bar (kg)	Weight (kg)	Shape
S1B	13	2,804	80	1.040	2.916	233	
S1T	13	2,740	80	1.040	2.849	226	
S2	13	17,190	30	1.040	17.877	537	
S3	13	398	75	1.040	0.414	31	
						TOTAL = 1,029 kg	



T1 T2

Type	Dia	Length (mm)	Number	Weight/m kg/m	Weight/bar (kg)	Weight (kg)	Shape
T1	10	1,240	94	0.617	0.765	72	
T2	13	14,000	4	1.040	14.560	87.36	
						TOTAL = 159.36 x 2 = 318.72 kg	

STOP LOCK GROOVE



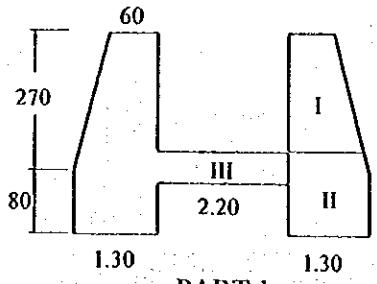
L1 L2 L3 L4

Type	Dia	Length (mm)	Number	Weight/m kg/m	Weight/bar (kg)	Weight (kg)	Shape
L1	13	2,840	24	1.040	2.953	71	
L2	13	1,230	30	1.040	1.279	38	
L3	13	520	30	1.040	0.541	16	
L4	13	860	4	1.040	0.894	4	
						TOTAL = 129 kg	

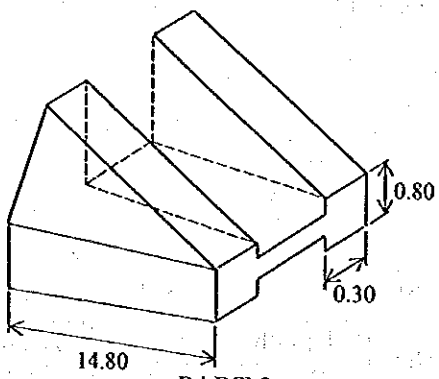
Total Reinforcing Bar = 1,029 + 318.72 + 129 = 1,476.72 kg

Name of Structure	OUTLET OF BANDARIHARJO WEST SECONDARY CHANNEL	Category Calculation	STONE MASONRY VOLUME	Page	7 / 14-

STONE MASONRY



PART 1



PART 2

- Part 1

Area I	= (0.65 + 1.30) / 2 x 2.70 x 2	=	5.265 m²
Area II	= 0.80 x 1.30 x 2	=	2.080 m²
Area III	= 0.30 x 2.20	=	0.66 m²
Total Area		=	8.005 m²
Length of Part 1	= 15.75 m		
Volume in Part 1	= 15.75 x 8.005	=	126.08 m³

- Part 2

Area of End	= 0.80 x 0.3 x 2 + 0.3 x 2.20	=	1.14 m²
Volume Part 2	= $\frac{1.14 + 8.005}{2} \times 14.80$	=	67.500 m³

Sub Total Volume Part 1 & Part 2 = 193.58 m³

- REVETMENT:

1.	$\frac{1.51 + 0.5}{2} \times 3 \times 2 \times 0.3$	=	1.81 m³
2.	1.51 x 4.5 x 2 x 0.30	=	4.08 m³
3.	$\frac{1.51 + 4.6}{2} \times 7 \times 2 \times 0.30$	=	12.83 m³
4.	4.6 x 10 x 2 x 0.30	=	27.60 m³
5.	$\frac{2.20 + 10}{2} \times 10 \times 0.30$	=	18.30 m³
Sub Total		=	64.62 m³
Total	= 193.61 + 64.62	=	258.23 m³

- BACK FILL GRAVEL:

1.	$\frac{1.51 + 0.5}{2} \times 3 \times 2 \times 0.25$	=	1.51 m³

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	STONE MASONRY VOLUME	Page	8 / 14

2. $1.51 \times 4.5 \times 2 \times 0.25$ = 3.40 m³

3. $\frac{1.51 + 4.6}{2} \times 7 \times 2 \times 0.25$ = 10.69 m³

4. $4.6 \times 10 \times 2 \times 0.25$ = 15.25 m³

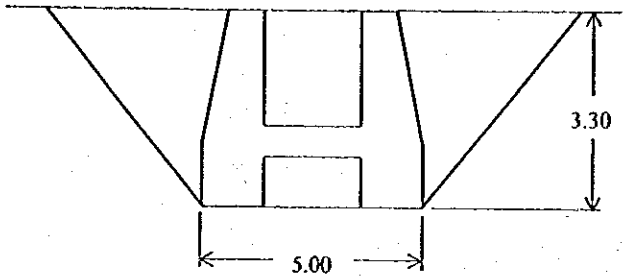
Total = 30.85 m³

- WEEP HOLE:

$$2 \times 2 \times \left(\frac{15.75}{2.0} + 1\right) + \frac{2 \times 2}{2} \times \left(\frac{14.8}{2.0} + 1\right) = 48 \text{ nos.}$$

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	EXCAVATION VOLUME	Page	9 / 14

- EXCAVATION



Area = (5.0 + 2 x 3.3 + 5) / 2 x 3.30 = 27.39 m²

Length of Excavation Part 1 = 15.75 m

Volume = 15.75 x 27.39 = 431.4 m³

Excavation for Part 2 (transition)

Area 1 = 27.39 m²

Area 2 = (5 + 3.7 x 2 x 2 + 5) / 2 x 3.70 = 45.88 m²

Length of Excavation = 15 m

Volume Exc. = 15 x 45.88 = 688.20 m³

Total Volume = 431.4 + 688.20 = 1,119.6 m³

- BACK FILLING

1,119.6 m³ - 4.8 x 3.3 x 15.75 = 870.12 m³

$V = 2 \times \frac{0.5 + 4.0}{2} \times 3.5 \times 15.75 = 248.06\ m^3$

$\frac{0.7 + 2.7}{2} \times 15.75 = 14.88\ m^3$

$2 \times \frac{0.5 \times 0.5}{2} \times (15.75 + 14.80) = 7.64\ m^3$

Total V = 270.58 m³

- Log Pile $= 2 \times 2 \times 3.0 \times \left(\frac{15.75}{2} + 1\right) + 2 \times 3.0 \times \left(\frac{14.8}{2} + 1\right) = 144$ m

- COBBLE STONE

2 x (13.0 + 2.75) x 1.5 x 0.15 = 7.09 m³

$2 \times 14.8 \times \frac{1.5 + 0.55}{2} \times 0.15 = 4.551\ m^3$

Total = 11.641 m³

Name of Structure	OUTLET OF BANDARHARJO WEST SECONDARY CHANNEL	Category Calculation	EXCAVATION VOLUME	Page	10 / 14

- POINTING

Part 1

$2 \times 2.3 \times 15.75 = 72.45 \text{ m}^2$

Part 2

$$\frac{\sqrt{2.05^2 + 4.1^2} \times 2 \times 14.8}{2} = 67.84 \text{ m}^2$$

Total = 140.29 m²

Name of Structure	OUTLET OF BANDARIIARJO WEST SECONDARY CHANNEL	Category Calculation	FORM WORK VOLUME	Page	11 / 14

- FORM WORK

- Slab	=	15.75 m x 2.80 m	=	44.10 m²
- Concrete For Revetment:				
Top Concrete	=	(0.55 + 0.70) x 24 x 2	=	60 m²
		0.10 x 2 x 24 x 2	=	9.60 m²
Sub Total			=	69.60 m²
Base Concrete	=	0.55 x 10.5 + 0.5 x 10.5	=	11.025 m²
		0.10 x 2 x 10.5	=	2.10 m²
		0.50 x 2 x 10.5	=	10.50 m²
Sub Total			=	23.625 m²
Total	=	69.60 + 23.625	=	93.225 m²

SUMMARY OF SCAFOLDING AND FORM SUPPORT VOLUME, FOR BANDARHARJO DRAINAGE SYSTEM

No.	VOLUME / STRUCTURE	SCAFOLDING (m^2)	FORM SUPPORT (m^3)
1	BARU PUMPING STATION	1,049	549
2	BARU PUMPING STATION GATE	350	120
3	BARU CONVEYANCE CHANNEL	6,574	2,768
4	BARU CONVEYANCE CHANNEL INLET STRUCTURE	150	35
5	BARU CONVEYANCE CHANNEL OUTLET STRUCTURE	106	20
6	BANDARHARJO EAST SECONDARY CHANNEL	1,166	491
7	BANDARHARJO EAST SECONDARY CHANNEL OUTLET STRUCTURE	90	31
8	BARU RETARDING POND INLET STRUCTURE No. 1	-	77
9	BARU RETARDING POND INLET STRUCTURE No. 2	-	42
10	FUEL TANK BOX FOR BARU PUMPING STATION	133	62
TOTAL		9,618	4,195

Name of Structure	BARU RETARDING POND INLET STRUCTURE NO.1 FOR SCAFFOLDING AND FORM SUPPORT	Category Calculation	FORM WORK VOLUME	Page	13 / 14

1. SCAFFOLDING AREA

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2. FORM SUPPORT AREA

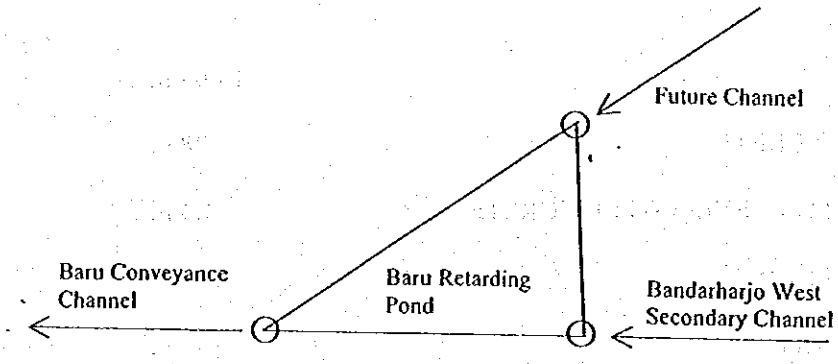
15.20 x 2.20 x 2.30 = 76.91 m³

Name of Structure		Category Calculation	CONCRETE VOLUME	Page	1/9

OUTLET WORK OF FUTURE SECONDARY CHANNEL

1.	CONCRETE K 225	=	15.07 m^3	✓
2.	LEVELING CONCRETE	=	1.28 m^3	✓
	FORM WORK FOR LEVELING CONCRETE	=	4.4 m^2	
3.	REINFORCING BAR	=	837 Kg	✓
4.	STONE MASONRY	=	137 m^3	✓
5.	BACK FILL GRAVEL	=	17.5 m^3	✓
6.	STRUCTURE EXCAVATION	=	378 m^3	✓
7.	BACK FILLING	=		
8.	LOG PILE Ø 15 cm, L=3.0 m	=	156 m'	
9.	WEEP HOLE PVC Ø 50 cm	=		
11.	FORM WORK	=	95.91 m^2	✓
12.	COBBLE STONE	=	5.57 m^3	✓

Name of Structure		Category Calculation	CONCRETE VOLUME	Page	2/9



Name of Structure		Category Calculation	CONCRETE VOLUME	Page	3/9

CONCRETE K 225

Slab

- Area of Slab = 2.60 x 9.0 = 23.40 m²
- Thickness of Slab = 0.40 m
- Volume of Slab = 23.40 x 0.40 = 9.40 m³

Parapet Wall

- Area of Parapet = 0.8 x 2 x 2.60 = 4.16 m²
- Thickness of Parapet = 0.30 m
- Volume of Parapet = 0.3 x 4.16 = 1.25 m³

Concrete K 225 for Revetment

- Top Concrete:

A = $\frac{0.55 + 0.70}{2} \times 0.30$ = 0.188 m²

L = 6.50 x 2 = 13.00 m

Volume = 13.00 x 0.188 = 2.44 m³

- Base Concrete:

A = $\frac{0.50 + 0.30}{2} \times 0.30$ = 0.12 m²

0.20 x 0.50 = 0.10 m²

Total A = 0.12 + 0.10 = 0.22 m²

L = 4.50 x 2 = 9.00 m

Volume = 9.00 x 0.22 = 1.98 m³

Total Volume = 2.44 + 1.98 = 4.42 m³

Total Volume Concrete K 225

= 9.4 + 1.25 + 4.42 = 15.07 m³

Form work for Leveling Concrete

= 0.1 x 2 x (13 + 9) = 4.4 m²

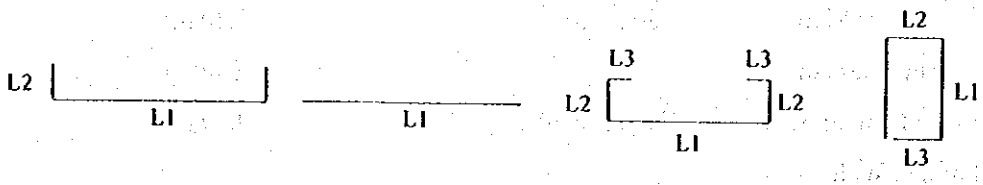
2. PLAIN CONCRETE

0.1 x 0.5 x 13 + 0.1 x 0.7 x 9 = 1.28 m³

Name of Structure		Category Calculation	REINFORCING BAR VOLUME	Page	4/9

3. REINFORCING BAR

Slab Reinforcing

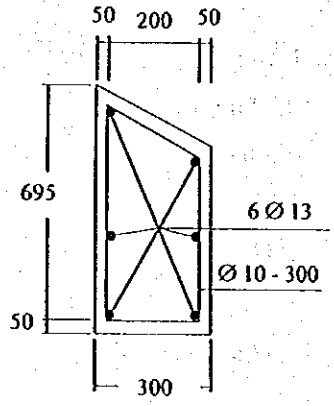


Shape 1 Shape 2 Shape 3 Shape 4

Type	Dia	Length (mm)	Number	Weight/m kg/m	Weight/bar (kg)	Weight (kg)	Shape
S1	13	3,060	71	1.040	3.182	225.95	1
S2	13	2,620	37	1.040	2.725	100.817	2
S3	13	8,820	20	1.040	9.173	183.46	2
S4	13	400	12	1.040	0.416	4.99	3
S5	13	2,040	20	1.040	2.121	42.432	4
						TOTAL = 557.65 kg	

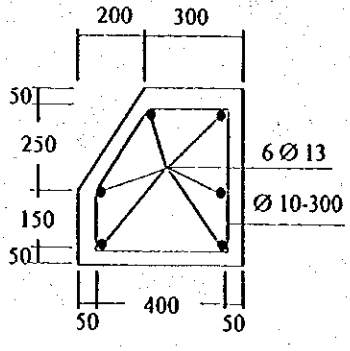
C. Concrete for Revetment Baru Retarding Pond

1. Top Concrete



Type	Dia (mm)	Length (m)	No.	Weight Per m	Weight Per Bar	Total (kg)
1	13	13	6 x 2	1.040	13.52	27.04
2	10	1.56	44x2	0.617	0.963	83.5
					Total =	110.54

2. Base Concrete



Type	Dia (mm)	Length (m)	No.	Weight Per m	Weight Per Bar	Total (kg)
1	13	9	6 x 2	1.040	9.36	112.32
2	10	1.56	31x2	0.617	0.932	55.92
					Total =	168.24

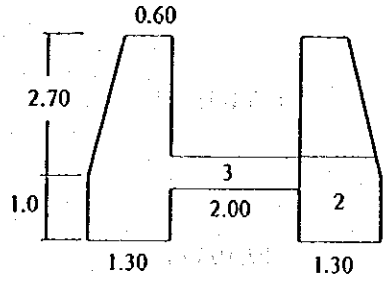
Total Reinforcing Bar

557.65 + 110.54 + 168.24 = 836.43 kg

Name of Structure		Category Calculation	STONE MASONRY VOLUME	Page	5/9

4. STONE MASONRY

- For Culvert



Area 1 = $\frac{0.60 + 1.30}{2} \times 2.70$ = 2.565 m²

Area 2 = 1.00 x 1.3 = 1.30m²

A1.2 = 2 x (2.565 + 1.30) = 7.73 m²

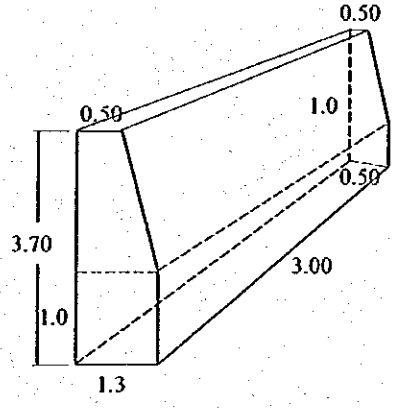
Area 3 = 0.3 x 2 = 0.60 m²

Total A = 7.73 + 0.60 = 8.33 m²

Length of Structure = 9.00 m

Volume = 9 x 8.33 = 74.97 m³

- For Wing Wall



Area 1 = $\frac{0.50 + 1.30}{2} \times 2.70$ = 2.43 m²

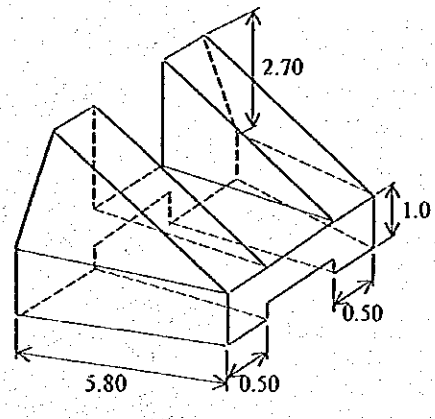
1 x 1.30 = 1.30 m²

Total Area 1 = 3.73 m²

Area 2 = 0.5 x 1.0 = 0.50 m²

Volume = $\frac{3.73 + 0.50}{2} \times 3.00 \times 2$ = 12.690 m³

Transition Outlet



Area 1 = 8.06 m²

Area 2 = 0.5 x 1 x 2 = 1.00 m²

0.3 x 2.00 = 0.60 m²

Total Area 2 = 1.60 m²

Volume = $\frac{8.06 + 1.60}{2} \times 5.80$ = 28.01 m³

- Revetment:

1. $\frac{3 + 6.5}{2} \times 2 \times 0.3$ = 5.85 m³

2. $\frac{2.46 + 7.17}{2} \times 2.5 \times 2 \times 0.30$ = 7.221 m³

Name of Structure		Category Calculation	STONE MASONRY VOLUME	Page	6/9

3. $\frac{2.8 + 4.2}{2} \times 5.04 \times 0.3 \times 2$ = 7.56 m³

Sub Total = 20.631 m³

Total Volume Stone Masonry

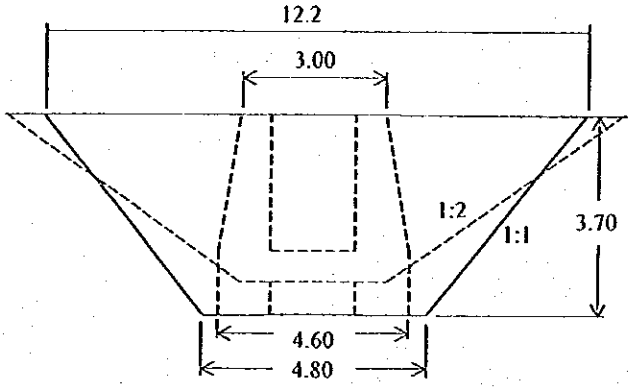
= 74.97 + 12.69 + 28.8 + 20.631 = 137.091 m³

5. BACK FILLING GRAVEL:

$\frac{20.631}{2} \times 0.25$ = 17.193 m³

Name of Structure		Category Calculation	EXCAVATION VOLUME	Page	7/9

6. EXCAVATION



Area = (4.8 + 12.2) / 2 x 3.70 = 31.45 m²

Length of Excavation = 12.00 m

Volume = 15.75 x 27.39 = 377.40 m³

7. BACK FILLING

Area Structure = $\frac{3+4.6}{2} \times 3.70$ = 14.06

Length = 12 m

Vol. of Structure = 14.06 x 9 = 126.54 m³

Vol. Back Filling = 31.45 x 12 – 168.70 = 208.63 m³

PVC WEEP HOLE, Ø 50 mm, n = 6 x 7 = 42 holes

. LOG PILE Ø 150, L = 3,000

2 x 2 x (9 / 1.0 + 1) x 3.0 = 120 m

2 x (5.5 x 1.0 + 1) x 0.3 = 36 m

Total = 120 + 36 = 156 m

COBBLE STONE

- Length of Str. = 9 + 5.5 = 14.5 m
- Cobble Stone = 2 x 1.5 x 9 x 0.15 = 4.05 m³

Name of Structure		Category Calculation	EXCAVATION VOLUME	Page	8/9

$$2 \times \left(\frac{1.5 + 0.35}{2}\right) \times 5.5 \times 0.15 = 1.53 \text{ m}^3$$

Total = 4.05 + 1.53 = 5.57 m³

Name of Structure		Category Calculation	FORM WORK VOLUME	Page	9/9

Slab Concrete

2.00 m x 9.00 m	=	18.00 m²
1.20 m x 2.60 x 2	=	6.24 m²
0.30 m x 2.60 x 2	=	4.16 m²
Sub Total	=	28.40 m²

Concrete for Revetment

- Top Concrete

(0.695 + 0.95) x 13 x 2	=	32.37 m²
0.10 x 2 x 13 x 2	=	5.20 m²
Sub Total	=	37.57 m²

- Base Concrete

(0.55 + 0.5) x 13 x 2	=	27.3 m²
0.10 x 2 x 6.6 x 2	=	2.64 m²
Sub Total	=	29.94 m²

Total Form Work

28.40 + 37.57 + 29.94	=	95.91 m²

Name of Structure	SCAFOLDING AND FORM SUPPORT, FOR BANDARHARJO DRAINAGE SYSTEM	Category Calculation	WORK VOLUME	Page	1/1

SUMMARY OF SCAFOLDING AND FORM SUPPORT VOLUME, FOR BANDARHARJO DRAINAGE SYSTEM

No.	VOLUME STRUCTURE	SCAFFOLDING (m^2)	FORM SUPPORT (m^3)
1	BARU PUMPING STATION	1049	549
2	BARU PUMPING STA. GATE	350	120
3	BARU CONVEYANCE CHANNEL	6574	2768
4	BARU CONVEYANCE CHANNEL INLET STRUCTURE	150	35
5	BARU CONVEYANCE CHANNEL OUTLET STRUCTURE	106	20
6	BANDARHARJO EAST SECONDARY CHANNEL	1166	491
7	BANDARHARJO EAST SECON-DARY CHANNEL OUTLET STR.	90	31
8	BARU RETARDING POND INLET STRUCTURE N0. 1	-	77
9	BARU RETARDING POND INLET STRUCTURE N0. 2	-	42
10	FUEL TANK BOX FOR BARU PUMPING STATION	133	62
TOTAL		9618	4195

Name of Structure	BARU RETARDING POND INLET STRUCTURE NO.2 FOR SCAFFOLDING AND FORM SUPPORT	Category Calculation	WORK VOLUME	Page	1/1

1. SCAFFOLDING AREA

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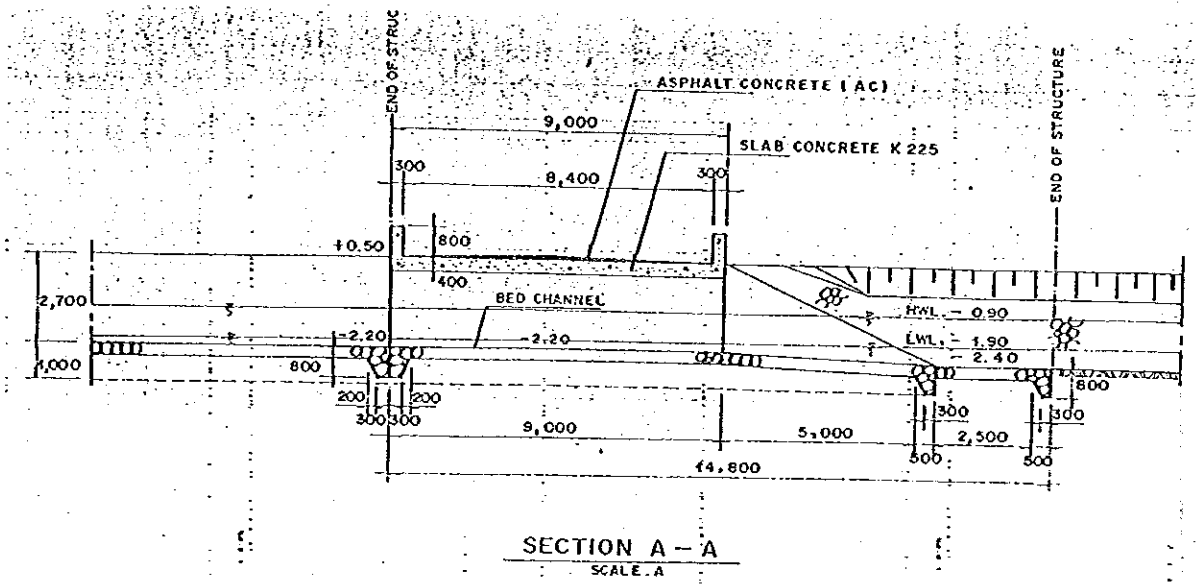
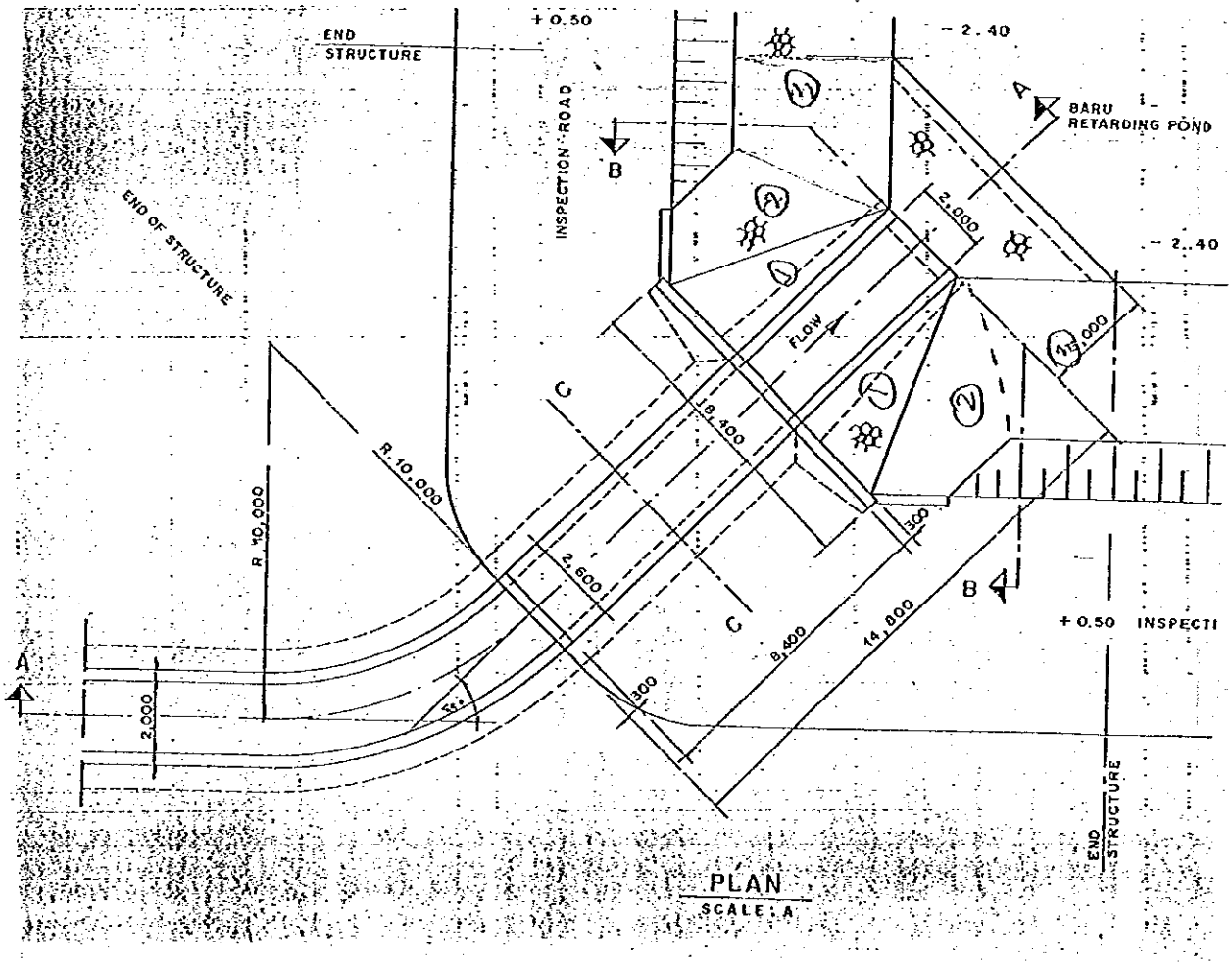
2. FORM SUPPORT AREA

9.0 x 2.0 x 2.30 = 41.40 m³

Name of Structure		Category of calculation	Volume Calculation	Page	2/7



SECTION A – A
SCALE . A



PLAN
SCALE : A