: GUARD FENCE

	CALCULATION	PER 6.00m
		RESULT
· STEEL PIPE \$75	(3.0 inch) t=3.2mm, w=5.77 kg	9t/m
n=3, L=1.	50 m/pipe	
W1 = 3 pipes x	1.50 x 5.77 = 25.650	
STEEL PIPE \$50) (2.0 inch) t = 2.3 mm, W = 2.63 kg	r/m
$n = z \times 3 = 6$, L = z.00 m/pile	
	1 - 3.002 / FINC	
W2 = 60'000 Y	z.00 x 2.63 = 3).560	
_ wz opiper ^	2.00 X 2.03 = 31.30c	
POUND PAD 4//	5 , W=1.58 +gf/m	
NOUND DAK PIE	5 , W = 1.50 0/m	
$n = 3 \times 9 = 27$, L = 1.10 m/ber	
Ws = 27 bers x	1.10 × 1.58 = 46.92	<u>'</u> 6
		100-
	707AL (ZW) = 104.136	, kgf 0.109 tf
A		
GALVANIZED COA		
A) = TO x 0.075 x 1.	$.50 \times 3$ pipes = 1.060	<u> </u>
A2 = T6 x 0.05 x.	z.00 x 6 pipes = 1.885	
A3 = TO x 0.016 x	$1.10 \times 27 \text{bers} = 1.493$	
	TOTAL = 4.438	4.438 m²

TYPE OF WORK : GUARD FENCE

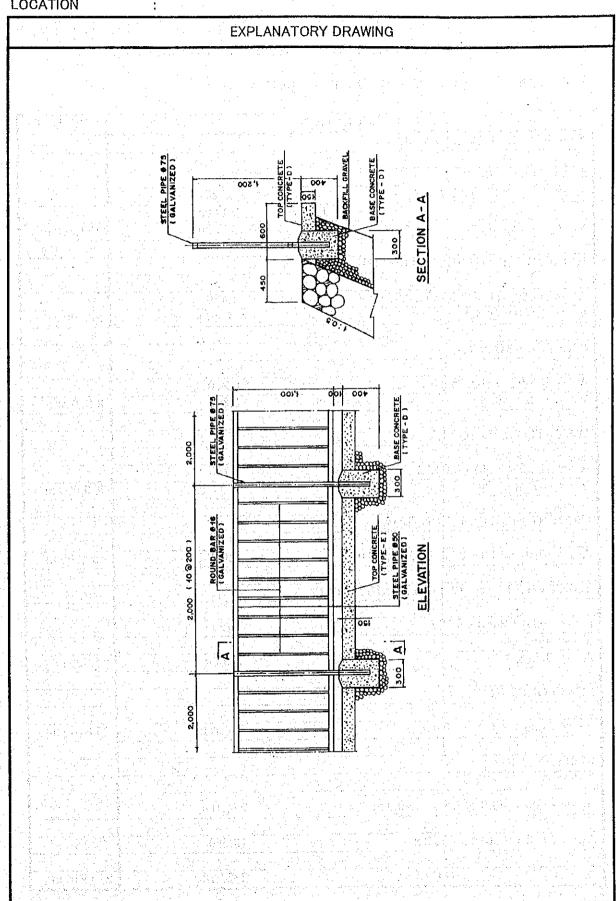
 $(\frac{7}{2})$

OCATION :		PER 6.00 K
CALCULATION		RESULT
· BASE CONCRETE (TYPE-D)		
n = 3		
	All the second of the second o	
$V = 0.30 \times 0.30 \times 0.40 - \frac{15}{4} \times 0.075^{2} \times \frac{1}{4} \times 0.075^{2} \times 0.075^{2$	0.30 = 0.035	
ZV = 0.035 x 3	= 0.105	0.105 m ³
· FORM FOR BASE CONCRETE (H<	4.0m)	
n = 3		
A = 0.30 × 0.40 × 4	= 0.480	
ZV = 0.480 × 3	= 1.440	1.440 m²
	1.建筑是1.适合透过海岭	The second of the ground of the second of th
		
		

TYPE OF WORK

: GUARD FENCE

LOCATION



2. 7 Farth Retaining Type (Wet Stone Masonry Type)
TYPE OF WORK: EARTH RETAINING WALL (WET STONE MASONRY TYPE)
H=3.0 m

LOCATION : TOLL ROAD ~ WF.175R +16.94 m

CALCULATION		RESULT
STRUCTURAL EXCAVATION		
1 4 400 000 10		
1. $A = 4.00 \times 0.28 / 2$	= 0.560	
2. $A = (3.20 + 4.00) \times 0.70 / 2$	= 2.520	
TOTAL		
$V = 3.080 \times 40.00$	= 123.200	123.200 m ³
BACKFILL WITH SELECTED SOIL		
A		19 (1 (A) 1 (1)
$A = 3.080 - (1.60 + 2.00) \times 0.90 / 2$	= 1.460	<u> </u>
$V = 1.460 \times 40.00$	= 58.400	58.400 m ³
GRAVEL BEDDING		
$A = (2.00 + 0.10 \times 2) \times 0.1$	= 0.220	
$V = 0.22 \times 40.00$	= 8.800	8.800 m ³
WET STONE MASONRY		
WEI STONE WASONKI		
$A = (0.50 + 2.00) \times 3.00 / 2$	= 3.750	
$V = 3.75 \times 40.00$	= 150.000	150.000 m ³
	150.000	130.000 III
CEMENT MORTAR POINTING		
$A = (0.50 + 1.00 + 0.50 + 2.50) \times 40.0$	= 180.000	180.000 m ²
JOINT FILLER, t = 10.0 mm ELASTIC TYPE		
$a = (0.50 + 2.00) \times 3.00 / 2$	0.750	
n = 4 places	= 3.750 m ² /place	
$A = 3.75 \times 4$	= 15.000	15 000
	- 13.000	15.000 m ²
SCAFFOLDING		
$A = (3.00 + 3.354) \times 40.0 \text{ m}$	= 254.160	254.160
National Control of the Control of t	- 2,34:100	254.160 m ²
FORMWORK		
A (0.00 \ \[\lambda \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
$A_1 = (3.00 + \sqrt{3.0^2 + 1.5^2}) \times 40.0 \text{ m}$	= 254.164	
$A_2 = (0.50 + 2.00) \times 3.00 / 2 \times 5$	= 18.750	
The state of the s	- 10./JV	
TOTAL A	= 272.914	272 014 m²
TOTAL A	= 272.914	272.914 m ²

TYPE OF WORK : EARTH RETAINING WALL (WET STONE MASONRY TYPE)

H = 2.0 m

LOCATION : TOLL ROAD ~ WF.175R +16.94 m

CALCULATION		RESULT
STRUCTURAL EXCAVATION		
1. $A = 3.30 \times 0.20 / 2$	= 0.330	
$2. A = (3.30 + 2.70) \times 0.60 / 2$	= 1.800	e di kara
	$A = 2.130 \text{ m}^2$	
$V = 2.130 \times 25.00$	= 53.250	53.250 m ³
BACKFILL WITH SELECTED SOIL		
$A = 1.80 - (1.25 + 1.50) \times 0.60 / 2$	= 0.975	
$V = 0.975 \times 25.00$	= 24.375	24.375 m ³
GRAVEL BEDDING		
GRAVEL BEDDING		
$A = (2.00 + 0.10 \times 2) \times 0.1$	= 0.220	
$V = 0.22 \times 25.00$	= 5.500	5.500 m ³
V. 7-0.22 X 25.00	3.500	3.300 III
WET STONE MASONRY		
$A = (0.50 + 1.50) \times 2.00 / 2$	= 2.000	
$V = 2.00 \times 25.00$	= 50.000	50.000 m ³
CEMENT MORTAR POINTING		
$A = (1.50 + 0.50 + 1.60) \times 25.0$	= 90.000	90.000 m ²
JOINT FILLER, t = 10.0 mm ELASTIC TYPE		
$a = (0.50 + 1.50) \times 2.00 / 2$	= 2.000 m ² /place	
n = 3 places		6000 2
$A = 2.00 \times 3$	= 6.000	6.000 m ²
FORMWORK		* * * * * * * * * * * * * * * * * * *
FORMWORK		
	19. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
$A_1 = (2.00 + \sqrt{1.0^2 + 2.0^2}) \times 25.0 \text{ m}$	= 105.902	
$A_2 = (0.50 + 1.50) \times 2.00 / 2 \times 3$	= 6.000	
	4. 经各种证据 机基础工程	
TOTAL A	= 111.902	111.902 m ²
		er egresadur († 1

2.8

PILE TYPE GROIN

TYPE OF WORK

RC PILE SECTION 200 x 200

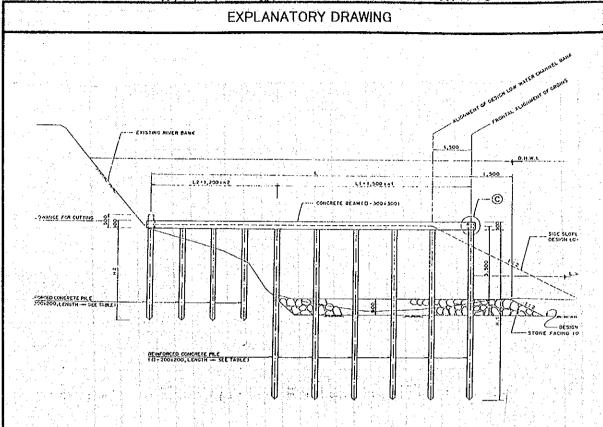
LOCATION : WF. 127L ~ WF. 132L , WF. 143L ~ WF. 146L CALCULATION **RESULT** RC PILE SECTION 200×200 TOTAL 56.00 66.00 128.00 78.00 46.00 120,00 $\widehat{\mathbb{B}}$ 6.00 5.00 6.00 6.00 5.00 5.00 5.00 5.00 5.00 5.00 LENGTH (m) NECESSARY TOTAL SPARE 1.00 1.00 1 00 8 8 1.00 100 88 1 00 1 8 E PILE LENGTH DESIGN 4.30 4.30 0.00 3.80 3.80 3.80 4.30 3.80 3.80 3.80 H2(m) NECESSARY LENGTH (m) 00.6 9.00 00.6 9.00 8.00 8.00 8.00 8.00 00.6 9.00 8.00 SPARE 1.00 8 8 1.00 8 1.00 1.00 1.00 1.00 8 1.00 9. 8 00.1 1.00 1.00 8 80. Ξ 7.30 7.30 7.30 7.30 6.80 6.30 6.80 7.30 7.30 7.30 LENGTH 6.80 6.80 6.80 H1(m) 0 NUMBER OF PILE 김 u WF.143L+25.0m WF.127L+25.0m WF.128L+25.0m WF 129L+25.0m NF.130L+25.0m WF.131L+25.0m VF.144L+25.0m VF.145L+25.0m LOCATION WF.143L WF.127L XF 131L WF 132L VF.144L WF.128L VF.129L WF.130L VF.1451 526,00 m TYPE OF WORK

PILE TYPE GROIN

RC PILE SECTION 200 x 200

LOCATION

: WF. 1271 ~ WF. 1321, WF. 1431 ~ WF. 1461



DATA ON CONCRETE PILE

	4	for a second second	and the state of the state of	and the second	11 1 2		
LOCATION	n l	n2	L1	L2	L L	H1	H2
			(m)	(m)	(m)	(m)	(m)
WF127L	3 (2	4.5	2.4	6.9	6.5	4.5
+25m	4	3	6.0	3,6	9.6	6.5	4.0
WF128L.	5	3	7.5	3,6	11.1	6.5	3.5
+25m	3	2	4.5	2.4	69	7.0	40
WF129L	19 M	2	1.5	2.4	3.9	7.0	4.0
+25 m	2	2	3,0	2.4	5.4	70	4.0
WF130L	2	2	30	2.4	5.4	70	3.5
+25m	2	3	4.5	2.4	6.9	70	3.5
WF131L	8	3 - 3	12.0	10.4	12.0	65	A
+25m	14	3	6.0	3.6	9.6	6.5	3.5
WF132L	3	3	4.5	3.6	8.1	6.5	3.5
WF143L	11.	3	1.5	3.6	5.1	60	3.5
+25m	2	3	3.0	3.6	6.6	6.5	3.5
WF144L	3	3	4.5	3.6	8.1	7.0	3.5
+25m	5	3	7.5	3.6	11.1	7.0	3.5
WF145L	- 8	3	120	3,6	15,6	7.0	3,5
+25m	5	1 3	7.5	3.6	41.1	7.0	3,5
WF146L	1	2	1.5	2,4	3.9	6.5	3.5

PILE TYPE GROIN

TYPE OF WORK

LOCATION

: PRIVING RC PILE

WF. 1431 ~ WF. 1461 LOCATION RESULT CALCULATION 70.40 19.10 36.30 28.50 37.50 48.50 19.80 32.90 48.00 39.90 CENGTH 28.60 26.60 TOTAL (E) 2.40 2.25 2.65 3.05 2.70 2.60 3.45 3.20 3.65 2.25 DEPTH OF TOTAL DRIVING PILE (m) 1.25 0.80 0.85 0.45 0.80 0.75 0.75 0.90 1.05 1.25 080 0.35 0.35 0.35 GROUND 1.05 OF PILE ABOVE HEIGHT LEVEL DRIVING RC PILE 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 4.00 3.50 0.00 LENGTH 4.50 4.00 3.50 4.00 4.00 DESIGN H2(m) 3:95 3.00 3.50 3.50 3.50 3.00 3.00 3.00 3.50 3.50 3.00 3.50 DEPTH OF DRIVING PILE (m) 3.50 3.50 3.50 2.35 3.50 3.50 2.05 3.50 3.50 3.50 OF PILE ABOVE 3.50 3.50 3.50 3.50 3.50 3.50 3.50 GROUND HEIGHT LEVEL Œ 6.50 7.00 7.00 6.00 6.50 7.00 7.00 78 7.00 7.00 6.50 6.50 6.50 6.50 LENGTH DESIGN H1(m) NUMBER OF PILE 김 n VF.145L+25.0m NF.143L+25.0m NF.144L+25.0m WF.129L+25.0m WF.130L+25.0m WF.131L+25.0m WF.127L+25.0m WF.128L+25.0m

£ ()

2 - 187

WF.132L WF.143L

WF.129L

WF.128L

VF.130L

WF.131L

VF.144L

WF.145L

661.20 m

PILE TYPE GROIN

TYPE OF WORK

CUTTING PILE HEAD

LOCATION : WF. 127L ~ WF. 1321, WF. 143L ~ WF. 1461

				rv i			С	AL.	.CL	JL.A	TI	NC		• :		<u>4.</u>	<u></u>			<i>p</i> .		<u> </u>	RESULT
			-																				
		TOTAL VOLUME (m)	0.600	0960	0.960	0.800	0.480	0.640	0.560	0.680	0.960	0.840	0.720	0.520	0.600	0.840	1.160	1.640	1.160	0.360	14.480		
		VOLUME OF CUTTING PILE HEAD (m³)	0.060	080'0	0.060	0.080	0.080	0.080	090'0	090'0		090.0	090'0	090'0	090.0	090.0	090'0	090.0	090.0	090'0	TOTAL		
	A	DESIGN LENGTH H2(m)	4.50	4.00	3.50	4.00	4.00	4.00	3.50	3.50	0.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50			
	CUTTING PILE HEAD	NECESSARY LENGTH (m)	9.00	00.9	5.00	9.00	00.9	00.9	5.00	5.00		5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00			
	CULT	VOLUME OF CUTTING PILE HEAD (m³)	090.0	090.0	090.0	0.080	0.080	0.080	0.080	0.080	090.0	090.0	090:0	0.080	090.0	0.080	0.080	0.080	0.080	090.0			
		DESIGN LENGTH H1(m)	6.50	6.50	6.50	7.00	7.00	7.00	7.00	7.00	6.50	6.50	6.50	6.00	6.50	7.00	7.00	7.00	7.00	6.50			
		NECESSARY LENGTH (m)	8.00	8.00	8.00	00.6	00.6	00.6	00.6	00.6	8.00	8.00	8.00	8.00	8.00	00.6	00.6	00.6	00.6	8.00			
	NUMBER OF PILE	n2	2	3	3	7	2	7	2	m	0	3	8	3	3	3	<u>e</u>	m	3	2			
	NUMBER	n	3	4	5	3		2	2	2	∞	4	· ·		2	m '	5	∞	5	7			
		LOCATION	WF.127L	WF.127L+25.0m	WF.128L	WF 128L+25.0m	WF.129L	W.F.129L+25.0m	WF 130L	WF.130L+25.0m	WF.131L	WF.131L+25.0m	WF.132L	43L	WF 143L+25.0m	44L	Wr. 144L+25.0m	45L	! I '	WF.146L			/4.480 m ³
))) , ti	55.6				-107												

TYPE OF WORK

PILE TYPE GROIN

: CONCRETE (TYPE - CI)

LOCATION

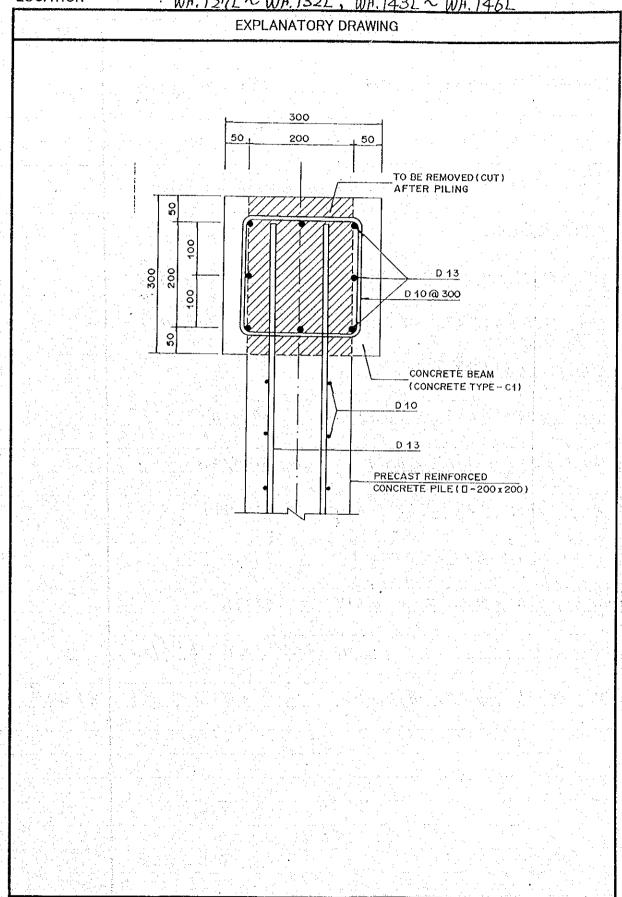
: WF. 127L ~ WF. 132L , WF. 143L ~ WF. 146L

GALCULATION CALCULATION	RESULT
· CONCRETE (TYPE - CI)	
LENGTH OF CONCRETE BEAM : L' = 8.48 m (AVERAGE)	
$L_{2} = 1.50 \text{ m}$	
$V_1 = \{(0.30 \times 0.30) \times 8.48 \times 2\} \times 18 \text{ places} = 27.475$	
$V_2 = \{(0.30 \times 0.30) \times 1.50 \times 2\} \times 18 \text{ places} = 4.860$	
70TA) = 32,335	32. 335 m³
• FORM (H<40m)	
$A_1 = \{0.30 \times 8.48 \times 3 \times 2\} \times 18 \text{ places} = 274.752$	
$A_2 = \{0.30 \times 1.50 \times 3 \times 2\} \times 18 \text{ places} = 48.600$	
70TAL = 323.352	323, 352 m²
도 마시스 사용을 하고 있다. 그 사람이 있다는 모든 기술에는 경험하다. 이번 경험을 받고 한글을 받는 사람들이 되고 있습니다. 그들은 사람들이 되었다. 	
- SUPPORTING	
CONCRETE BEAM Ly = 5.17 m (AVERAGE)	
L ₂ = 3,3) m (")	
<u>도 보고 있는 것이 되었다. 하는 사람들은 마음을 받는 것은 사람들은 사람들은 하는 사람들이 되었다. 되었다. 함께 되었다. 함께 되었다. 함께 함께 되었다. 함께 </u>	
$V_1 = (5.17 \times 3.21 \times 1.00) \times 2 \times 18 $ places = 597, 445	
Vos. (2.2)	
V2 = (3.3) × 0.66 × 1.00) × 2 × 18 places = 78.646	
Vestina visitation vis	
V3 = (1.50 × 3.2) × 1.00) × 18 places = 86.670	
V4 = (1.50 × 0.66 × 1.00) × 18 places = 17.820	
V4 = (1.50 × 0.66 × 1.00) × 18 places = 17.820	
TOTAL - 70A (Q)	#00 GO 3
70TAL = 780.581	780.58/ m ³

PILE TYPE GROIN

TYPE OF WORK : CONCRETE (TYPE-CI)

LOCATION : WF. 1271 ~ WF. 1321, WF. 1431 ~ WF. 1461



_ PILE TYPE GROIN

TYPE OF WORK

LOCATION

: REINFORCING BAR

: WF. 1271 ~ WF. 1321, WF. 1431 ~ WF. 1461 CALCULATION RESULT LENGTH OF CONCRETE BEAM : L' = 8.48 m (Average) D13 (w= 1.04 kgf/m) n = 8 Bars W1 = (8.48 - 0.05 x 2) x 8 Bars x 2 x 1.04 = 139.443 $W_2 = (1.50 + 0.25 \times 2) \times 8 \text{ Bars} \times 2 \times 1.04 = 33.280$ DID (W= 0.617 kg/m) $nz = (8.48 - 0.05 \times 2) \div 0.30 + 1 = 29 Bars$ $12 = 0.20 \times 4 + 15 \times 0.01 = 0.950 \, \text{m/Bar}$ $W3 = 0.950 \times 29 \times 2 \times 0.617 = 33.997$ $n_3 = (1.50 \pm 0.25 \times 2) \pm 0.30 + 1 = 8 Bars$ W4 = 0.950 x 8 x 2 x 0.617 = 9.378 w' = 216.098 kgf = 0.216 tf/place W = 0.216 tf/place x 18 places = 3.888 3.888 tf

RESULT									435.2m3										
CALCULATION		CONCRETE BEAM L, = 5.17 m (Average)	 $V_1 = (4.50 + 6.90) \times \frac{1}{2} \times 0.60 \times 1.20 \times \frac{1}{3} = 1.368$	$V_2 = (4.50 + 6.90) \times 1/2 \times 0.60 \times (5.17(+1.50))$	· · · · · · · · · · · · · · · · · · ·	= 22.811		V = 24. 179 m3/place	V = 24.179 m3/place x 18 places = 435,222										
TYPE OF WORK PILE TYPE GROIN TYPE OF WORK STONE FACING	LOGATION: WE, 127L \sim WF, 132L, WF, 143L \sim	T94148					\$1		1,50			STO	MAC ONE	FACIN	5 5 600 2,900	009 m	0-40 E PIL	E	

z.9 Riverbed Protection around Bridge Piers

TYPE OF WORK : LOCATION :

RIVERBED PROTECTION AROUND BRIDGE PIERS

		CALCULATION		RESULT
	4 44			
<u>5</u>	BACK	CFILL WITH SELECTED SOIL		i i i i i i i i i i i i i i i i i i i
·.	<u> </u>			
	A =	(0.50 + 1.00) x ½ x 0.50 =	0.375 m ²	
	7.	26 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	V =	$0.375 \times (10.00 \times +30.00 \times 2) =$	30.000	30.0 m ³
	S. 1975			
	The Carlo			
5	STRU	CTURAL EXCAVATION		
	A ^N L.			
	<u>A =</u>	$(5.00 + 5.50) \times \frac{1}{2} \times 0.50 \times 2 =$	5.250 m ²	
<u>.</u>	V =	5.20 x (30.00 + 1.00 x 2) - (11.00 x 1.00 x 0.50) x		
		= 3.20 × (30.00 + 1.00 × 2) (11.00 × 1.00 × 0.30) × 3	157.00	157.0 m ³
	1 41			
	CADI	ON MATTRESS		
	GABI	ON MATTRESS	<u> Masamak ahta, a tibula</u> Tarang Masamatan K	
.> _:		<u>ar 15 an 18 an 1800 la filo de la companya del companya del companya de la companya del la companya de la comp</u>	<u> Politica de la Maria de Carta de Cart</u>	
	V ₁ =	$(4.50 \times 0.50 \times 240.00) \times 2$	108.000	
				10.80 \$ 8 \$ 1
<u> </u>	V ₂ =	$(10.5 \times 0.50 \times 30.00) \times 2 =$	31.500	139.500 m
		<u> 1908 - Barrier Barrier, de la companya de la comp</u> La companya de la co		The Carlotte State of
			er en	
_				J-1944 (
5) 	RIPR	AP MOUND		
	A ₁ =	(05.10 + 2.50) x ½ x 1.30 =	4.940 m ²	
7				
	A ₂ =	$(4.10 + 2.50) \times \frac{1}{2} \times 0.80 =$	2.640 m ²	A SA HELE
	37		00.000	
<u></u>	V ₁ =	(4.940 + 2.640) x 24.00 =	30.000	
	V ₂ =	$(4.940 + 2.640 + 6.30) \times (10.00 + 2.50 \times 2) =$	208.200	
	* * * * * * * * * * * * * * * * * * * *			
		TOTAL	390.120	390.120 m ³
			jako gisar Alongaharan atau sa Tiboraharan 1980 dari sa	
-		<u>and the second seasons. As the second secon</u>		
-	<u> </u>			

TYPE OF WORK: LOCATION: RAILWAY BRIDGE

	CALCULATION	RESULT
☐ STRUCTURAL	L EXCAVATION	
15 70 5 75 75		
1) (0.5 + 5.6) x	0.6 : 2 = 3.18	
2) (2.0 + 2.6) x	06.2	
2) (2.0 + 2.0) X	0.6:2 = 1.38	
$V_1 = (14.25 +$	4.5 : 2 x 2) x 3.18 = 59.625	
$V_2 = 1.38 \times 1$	14.25 = 19.665	
$V_{i} = (V_{1} + V_{2})$	$(2) \times 2 = 158.58$	158.580 m ³
BACKFILLW	ITH SELECTED SOIL	
$A_1 = (5.0 + 1.1)$	$1) \times 0.6 : 2 \times 4 = 1.920$	
$V_1 = 0.480 x$	12.0 m x 2 = 44.640	
		44.640 m ³
		44.640 m³
		44,640 m³
		44.640 m³
		44.640 m³
		44.640 m³

TYPE OF WORK: LOCATION: RAILWAY BRIDGE

	CALCULATION			RESULT
CONCRETE BLOCK	K			C 13. 1 4
UPPER		and the same		
N 0 6 1 4				<u> Carte Fish a </u>
$N_1 = 2 \times 6 + 4$	+ Z	= 18		
$N_2 = 6 \times 9 - 4$		= 50		
		, 30		<u> </u>
$N_3 = n_1 - 1$		= 17		
$N_4 = 19 \times 6$		= 114		
				31 21 Av. + 4
$N_5 = n_3$		= 17		4,515. 3
N = -		- 50		
$N_6 = n_2$		= 50		
$N_7 = n_1$		= 18		<u>a Arrigoria e de l'Ali</u> Elegación

$N_8 = n_4$		= 114	Liginia (kulta) (k	
		119.第15日音樂家	3/23 En 22 × 11 2	
$N_9 = 4 \times 4$		0		
TOTAL	$\sum n$	= 414		000
TOTAL	$N_1 = \sum n \times 2$	= 828		828
				<u> </u>
CONCRETE BROC	K			
LOWER				
$N = 4 \times 4 + 6$	3 + 2 x 15 + 4 + 7 + 7 +	2.1.144.8.1		
N - 4 X 4 T 0) T Z X 13 T 4 T / T / 1	- 3 = 73		
$N_2 = 73 \times 2$		= 146	terio Merio e e il della d Della della del	<u>r i i la traj</u> A u lagravita i
TOTAL	$N_1 + N_2 = 828 + 146$	= 974		974
	Automorphism in the section of the s			
				an a _{lag} abeta a
· · · · · · · · · · · · · · · · · · ·				1 1 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	·			

TYPE OF WORK:

LOCATION : RAILWAY BRIDGE

	RESULT
CALCULATION	RESOLI
5 GRAVEL BEDDING	
N = 828	
$V^1 = 0.75 \times 0.75 \times 0.10 = 0.056 \text{ m}^3/\text{Block}$	
$V = 0.056 \times 828 = 46.368$	46.269
V - 0.030 X 828 - 40.308	46.368
FILTER CLOTH (Geotextile sheet)	
$A = 0.75 \times 0.75$ = 0.563 m ² /Block	Lead of the second
	466164
$\Sigma A = 0.563 \times 828 = 466.164$	466.164 m²
<u>kan merupakan mengan 196 mengan berangan pada perbanan kanan pengan pengan berangan berangan berangan beranga</u> Pengangan pengangan pengangan berangan berangan berangan berangan beranggan beranggan beranggan beranggan bera	
□ RUBBLE STONE FILLING	
$M = 0.3 \times 0.3 \times 0.5$ = 0.045 m ³	
$V = 0.045 \times 974$ = 43.83 m ³	43.830 m ³
43.83 m	45.830 111
는 하는 것이 있는 것이 되었다. 그는 사람들은 사람들이 되었다. 그는 사람들이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. - 사람들은 사람들은 사람들은 사람들이 되었다. 그는 것이 되었다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 것이 되었다. 그는 것이 되었다.	
□ CONCRETE FILLING	
□ CONCRETE FILLING	
D CONCRETE FILLING A = 0.75 x 0.375 : 2+0.75 x 1.50 : 2+(0.75+0.5) x 1.125 : 2 = 1.407	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$ $V^{1} = 5.628 \times 0.5 \times 2 = 5.628$	11 256 m ³
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$ $V^{T} = 5.628 \times 0.5 \times 2 = 5.628$	11.256 m ³
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$ $V^{1} = 5.628 \times 0.5 \times 2 = 5.628$ $V = 5.628 \times 2 \text{ places} = 11.256$	11.256 m ³
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$ $V^{1} = 5.628 \times 0.5 \times 2 = 5.628$ $V = 5.628 \times 2 \text{ places} = 11.256$	11.256 m ³
A = $0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ = 1.407 A = 1.407×4 = 5.628 V ¹ = $5.628 \times 0.5 \times 2$ = 5.628 V = 5.628×2 places = 11.256	
$A = 0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ $= 1.407$ $A = 1.407 \times 4 = 5.628$ $V^{1} = 5.628 \times 0.5 \times 2 = 5.628$ $V = 5.628 \times 2 \text{ places} = 11.256$	
A = $0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ = 1.407 A = 1.407×4 = 5.628 V ¹ = $5.628 \times 0.5 \times 2$ = 5.628 V = 5.628×2 places = 11.256	
A = $0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ = 1.407 A = 1.407×4 = 5.628 V ¹ = $5.628 \times 0.5 \times 2$ = 5.628 V = 5.628×2 places = 11.256	
A = $0.75 \times 0.375 : 2 + 0.75 \times 1.50 : 2 + (0.75 + 0.5) \times 1.125 : 2$ = 1.407 A = 1.407×4 = $5.628 \times 0.5 \times 2$ = 5.628 V = 5.628×2 places = 11.256	

RESULT				0.229 m3				2.080m²				-	5.408B	
CALCULATION		-CONCRETE (TYPE-D)	$\dot{V} = (0.74 \times 0.74 \times 0.50) - (0.30 \times 0.30 \times 0.50)$	= 0.229	- FORM CH<4.0m)	$A_1 = 0.74 \times 0.50 \times 4$ = 1.480	$A_2 = 0.30 \times 0.50 \times 4$ = 0.600	707AL = 2.080	· REINFORCING BAR	D13(w=1.04 18/m)	n - 8 Bars	L=0.65m/Bar	w = 8 × 0.65 × 1.04 = 5.408	
CONTRETE BLOCK (W= 0.5 t/Piece)													化对抗电子 医多角性 医多角性 医多角性 医多种性 医神经病 医阴道性 医神经性 医克勒特氏病 医克勒特氏病 计多数 医多数 医多种 医多种性 医多种性 医多种性 医多种性 医多种性 医多种性 医多种性	
TYPE OF WORK:	LOCATION													

TYPE OF WORK : NATIONAL ROAD BRIDGE - A

LOCATION : A

	CALCULATION	RESULI
STRUCT	URAL EXCAVATION	
$A_1 = (5$	$(0+5.6) \times 0.6 : 2 \times 2 = 6.360 \text{ m}^2$	
	0.000	
$V_1 = 6.$	$360 \times 12.0 \text{ m} = 76.320 \text{ m}^3$	
	$(5+1.1) \times 0.6 : 2 = 0.480 \text{ m}^2$	
$A_2 = (0$	$(.5+1.1) \times 0.6 : 2 = 0.480 \text{ m}^2$	-
- XZ = 0	$480 \times 12.0 \times 2 = 11.52 \text{ m}^3$	100 100 100 100
$\mathbf{v_2} = 0$	400 X 12.0 X 2	
V = V	$v_1 + V_2 = 87.84$	87.84 m ³
V V		+ • • • • • • • • • • • • • • • • • • •
internal and All Salariti		
<u>an Aderya (</u> 1864-ya (
BACKFI	LL WITH SELECTED SOIL	
BACKFI	LL WITH SELECTED SOIL	
	LL WITH SELECTED SOIL 0.5 + 1.1) x 0.6 : 2 = 0.480	
A ₁ = (0	$0.5 + 1.1) \times 0.6 : 2 = 0.480$	
A ₁ = (0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
A ₁ = (0	$0.5 + 1.1) \times 0.6 : 2 = 0.480$	23.04 m
A ₁ = (0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
A ₁ = (0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
A ₁ = (0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
A ₁ = (0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
$A_1 = 0$ $V = 0.$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
$A_1 = 0$ $V = 0.$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m
$A_1 = 0$ $V = 0.$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23.04 m

$V = 0.480 \times 12.0 \times 8 = 23.04$	23.04 m³
日 GABION MATTRESS, FILTER CLOTH	The second of the second
1) GABION MATTRESS	
3.0 x 1.5 x 0.5 TYPE	
n = 30	
	67.5 - 3
$V = 3.0 \times 1.5 \times 0.5 \times 30 = 67.5$	67.5 m³
2) FILTER CLOTH	
	135.000 m ²
$A = 3.0 \times 1.5 \times 30 = 135.0$	133.000 M
골으면, 하늘이 양환 맛을 만든다고 있었는데 얼마를 하고 말을 하다. 말로	
48、4、1000年,因此为1900年,在1900年,190	

TYPE OF WORK : NATIONAL ROAD BRIDGE - B LOCATION : B

CALCULATION		RESULT
☐ STRUCTURAL EXCAVATION		
$A_1 = (5.0 + 5.1) \times 0.6 : 2$	= 3.03	
$A_1 = (5.0 \pm 5.1) \times 0.0 \times 2$		
$V_1 = 2.625 \times 21.0 \text{ m } \times 2$	= 72.72	
$A_2 = (0.5 + 1.1) \times 0.5 : 2$	= 0.33	
$V_2 = 0.4 \times 12.0 \times 2$	= 11.880	
$\mathbf{V}_{+}=\mathbf{v}_{1}\mathbf{V}_{1}+\mathbf{v}_{2}$ and the second second section \mathbf{V}_{1}	84.6	84.600 m ³
e para 1900 de la capación de la ca O capación de la cap		
BACKFILL WITH SELECTED SOIL		
		1 Activities 1989
$A_1 = (5.0 + 1.1) \times 0.6 : 2$	= 0.48	
$V_1 = 0.480 \times 12.0 \text{ m } \times 2$	= 14.4	
V1 - 0.460 X 12.0 III X 2		1.33) 1.33, 1.44 + 3 1.54 + 1.55 + 1.55 + 1.55
$V_2 = 0.480 \times 9.0 \times 4$	= 17.28	
$V = V_1 + V_2$	= 31.68	31.68 m ³
☐ GABION MATTRESS, FILTER CLOTH		
1) GABION MATTRESS		
1) GADION WALLESS		
n = 47		
$V = 3.0 \times 1.5 \times 0.5 \times 47$	= 105.75	105.75 m ³
2) FILTER CLOTH		
2) AIDIDA ODOTTI		
$A = 3.0 \times 1.5 \times 47$	= 211.5	211,500 m ²

TYPE OF WORK: NATIONAL ROAD BRIDGE - C

LOCATION : C

CALCULATION		RESULT
□ STRUCTURAL EXCAVATION		
$A_1 = (9.5 + 10.0) \times 0.5 : 2 =$	4.875	
A ₁ = (3.3 / 10.0) × 0.3 / 2	4.073	
$V_1 = 4.875 \times 12.0 =$	58.5	58.500 m ³
$A_2 = (0.5 + 1.1) \times 0.6 : 2 =$	0.48	
$V_2 = 0.48 \times 6.0 \times 2 =$	5.76	5.760 m ³
	3.70	3.700 m
		<u> </u>
BACKFILL WITH SELECTED SOIL		San Agail and San
<u> Parales de la Companya de la califacta de la Companya de la Companya de la Companya de la Companya de la Comp</u> La califacta de la Companya de la Co		
$A = (5.0 + 1.1) \times 0.6 : 2 =$	0.48	
$V = 0.48 \times (12.0 + 6.0) \times 2 =$	18.24	18.240 m ³
	<u>a tanan marajaran 1995, andri angri a</u>	
	said face	
		<u> </u>
		- 1
	<u>Komen na takan l</u>	
n Property (1964). De la la martina de la martina de la		

TYPE OF WORK : NATIONAL ROAD BRIDGE - C LOCATION : C

CALCULATION		RESULT
GABION MATTRESS, FILTER CLOTH		
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
I) GABION MATTRESS		
n = 15		
V = 3.0 x 1.5 x 0.5 x 15	= 33.75	22.750
V = 3.0 x 1.3 x 0.3 x 13	= 33./3	33.750 m ³
2) FILTER CLOTH		
$A = 3.0 \times 1.5 \times 15$	= 67.5	67.500 m ²
	APPENDING TO THE SECOND	
F RIPRAP MOUND		
- Ku Kai Moono		
$A_1 = (4.5 + 6.5) \times 1.0 : 2$	= 5.5	
$V_1 = 5.5 \times 12.0 \text{ m } \times 2$	= 66.000	A Charles to
$A_2 = 1.0 \times 4.5 : 2$	1.0	
$V_2 = 1.0 \times 4.5 \times 1.0 \times 12.0$	= 16.5	
$V = V_1 + V_2$	= 82.6	82.500 m ³
The second secon		
		And the second of the second o

TYPE OF WORK:

LOCATION : NEW SIMONGAN BRIDGE

CALCULATION		RESULT
☐ STRUCTURAL EXCAVATION		
$A_1 = 6.0 \times 0.8 =$	4.800	
$A_2 = (6.5 + 7.2) \times 0.7 : 2 =$	4.795	
$A_3 = (0.5 + 0.7) \times 0.7 : 2 =$	0.420	
$V_1 = 4.800 \times 21.0$	100.800	
$V_2 = 4.795 \times 21.0 =$	100,695	
	100.095	
$V_3 = 0.420 \times 12.0 \times 2 = 0.420 \times 12.0 \times 12$	10.080	
$V = V_1 + V_2 + V_3 = V_2 + V_3 = V_1 + V_2 + V_3 = V_1 + V_2 + V_3 = V_2 + V_3 = V_1 + V_2 + V_3 = V_2 + V_3 = V_1 + V_2 + V_3 = V_1 + V_2 + V_3 = V_2 + V_3 = V_1 + V_2 + V_3 = V_1 + V_2 + V_3 = V_2 + V_3 = V_1 + V_2 + V_3 = V_2 + V_3 = V_3 + V_4 + V_4 + V_5 + V_5 = V_5 + V_5 + V_5 + V_5 + V_5 = V_5 + V_5 + V_5 + V_5 + V_5 = V_5 + $	211.575	211.575 m ³
□ BACKFILL WITH SELECTED SOIL		
- BACKING WITH SERBECTES GOTE		
0.70	0.595	
A = (0.5 + 1.2) x 0.7 : 2 =	0.393	
$V = 0.595 \times (21.0 + 12.0 \times 2)$	26.775	26.775 m ³
	den jarok jarous (n. 4096). Produkski til 104 og stoch	
□ CONCRETE BLOCK		
CONCRETE BLOCK		
$\mathbf{n} = 8 \times 14 - 2$	110	110
GRAVEL BEDDING		
V = 1.5 x 1.5 x 0.10 x 110 =	24.750	24.750 m ³
GEOTEXTILE SHEET		
	047.500	247 500 -2
$A = 1.5 \times 1.5 \times 110$	247.500	247.500 m ²
RUBBLE STONE FILLING		
$V = (12.00 \times 21.00 \times 0.70) - 110 \times 0.87 =$	80.700	80.700 m ³
Y - (12,00 x 21,00 x 0.70)-110 x 0.07	00.700	00,700 m
	The second secon	

TYPE OF WORK : LOCATION : TOLL ROAD BRIDGE

F STRUCTURAL EXCAVATION A ₁ = (5.0+5.5) x 0.5 : 2 = 2.625 V ₁ = 2.625 x 21.0 m x 2 = 110.25 A ₂ = (0.5+1.1) x 0.5 : 2 = 0.4 V ₂ = 0.4 x 12.0 x 2 = 9.600 V = V ₁ + V ₂ = 119.85 119.85 F BACKFILL WITH SELECTED SOIL A ₁ = (5.0+1.1) x 0.5 : 2 = 0.4 V ₁ = 0.4 x 21.0 m x 2 = 16.8 V ₂ = 0.4 x 12.0 x 2 = 9.6 V = V ₁ + V ₂ = 26.4 26.4	JLT
$A_{1} = (5.0 + 5.5) \times 0.5 : 2 = 2.625$ $V_{1} = 2.625 \times 21.0 \text{ m } \times 2 = 110.25$ $A_{2} = (0.5 + 1.1) \times 0.5 : 2 = 0.4$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.600$ $V = V_{1} + V_{2} = 119.85 = 119.85$ $A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m } \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	
$V_{1} = 2.625 \times 21.0 \text{ m} \times 2 = 110.25$ $A_{2} = (0.5 + 1.1) \times 0.5 : 2 = 0.4$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.600$ $V = V_{1} + V_{2} = 119.85 = 119.85$ $A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	140
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$A_{2} = (0.5 + 1.1) \times 0.5 : 2 = 0.4$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.600$ $V = V_{1} + V_{2} = 119.85 = 119.85$ $A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	
$A_{2} = (0.5 + 1.1) \times 0.5 : 2 = 0.4$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.600$ $V = V_{1} + V_{2} = 119.85 = 119.85$ $A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	1,1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$V_{2} = 0.4 \times 12.0 \times 2$ $V = V_{1} + V_{2}$ $= 119.85$ 119.85 $A_{1} = (5.0 + 1.1) \times 0.5 : 2$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2$ $V_{2} = 0.4 \times 12.0 \times 2$ $= 9.6$ $V = V_{1} + V_{2}$ $= 26.4$ 26.4	
$V = V_1 + V_2 = 119.85$ $P BACKFILL WITH SELECTED SOIL$ $A_1 = (5.0+1.1) \times 0.5 : 2 = 0.4$ $V_1 = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_2 = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_1 + V_2 = 26.4$ 26.4	
P BACKFILL WITH SELECTED SOIL $A_1 = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_1 = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_2 = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_1 + V_2 = 26.4 = 26.4$	
P BACKFILL WITH SELECTED SOIL $A_1 = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_1 = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_2 = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_1 + V_2 = 26.4 = 26.4$	m ³
$A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	
$A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	71 L
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$A_{1} = (5.0 + 1.1) \times 0.5 : 2 = 0.4$ $V_{1} = 0.4 \times 21.0 \text{ m} \times 2 = 16.8$ $V_{2} = 0.4 \times 12.0 \times 2 = 9.6$ $V = V_{1} + V_{2} = 26.4 = 26.4$	a takan
$V_1 = 0.4 \times 21.0 \text{ m} \times 2$ = 16.8 $V_2 = 0.4 \times 12.0 \times 2$ = 9.6 $V = V_1 + V_2$ = 26.4 26.4	
$V_1 = 0.4 \times 21.0 \text{ m} \times 2$ = 16.8 $V_2 = 0.4 \times 12.0 \times 2$ = 9.6 $V = V_1 + V_2$ = 26.4 26.4	
$V_1 = 0.4 \times 21.0 \text{ m} \times 2$ = 16.8 $V_2 = 0.4 \times 12.0 \times 2$ = 9.6 $V = V_1 + V_2$ = 26.4 26.4	5.2
$V_2 = 0.4 \times 12.0 \times 2$ = 9.6 $V = V_1 + V_2$ = 26.4 26.4	
$V_2 = 0.4 \times 12.0 \times 2$ = 9.6 $V = V_1 + V_2$ = 26.4 26.4	100
$V = V_1 + V_2 = 26.4$ 26.4	
$V = V_1 + V_2 = 26.4$ 26.4	
	2.33
	m³
	, f 4
	55.
	1 1
	7.5

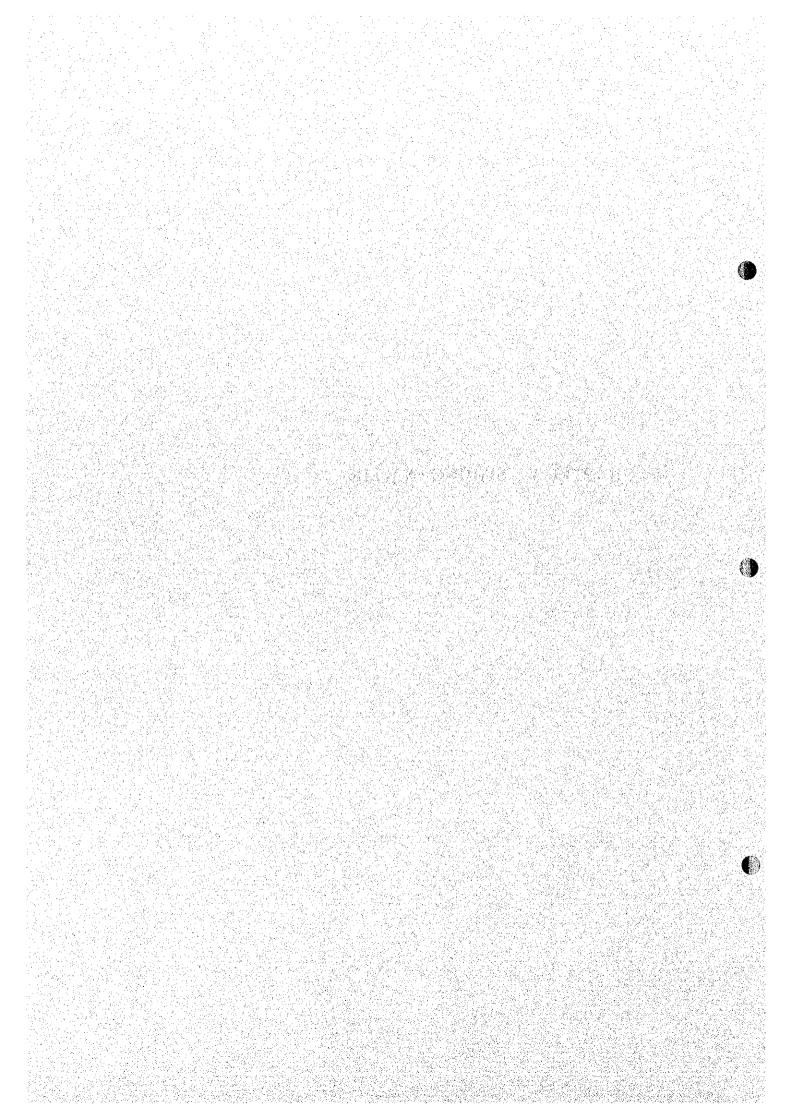
TYPE OF WORK:

LOCATION : TOLL ROAD BRIDGE

		RESULT
A DYDDA BORONE STATE OF THE		
☐ RUBBLE STONE FILLING		
$A_1 = 1.0 \times 4.5 : 2$		
A - 1.0 X 4.3 . Z	= 2.25	
$A_2 = 0.8 \times 4.5 : 2$	- 1 000	
	= 1.800	<u> </u>
$A = A_1 + A_2$	= 4.05	
	7.05	
$V = 4.05 \times 0.5$	= 2.025	2.025 m ³
		2.025 111
		100000000000000000000000000000000000000
GABION MATTRESS, FILTER CLOTH		
1) GABION MATTRESS		
1) GABION MATTRESS n = 45		
n = 45		
	= 101.25	101.25 m ³
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$	= 101.25	101,25 m³
n = 45	= 101.25	101,25 m³
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH		
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$	= 101.25 = 202.5	101.25 m ³ 202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m ²
$n = 45$ $V = 3.0 \times 1.5 \times 0.5 \times 45$ 2) FILTER CLOTH $A = 3.0 \times 1.5 \times 45$	= 202.5	202.500 m²

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CHAPTER 3 SIMONGAN WEIR



3.1 Channel Excavation

TYPE OF WORK

CHANNEL EXCAVATION

LOCATION : WF. 96 ~ WF 104

	1	CALCULA	ATION			RESULT
• Excavati	on below i	water leve	el EL+5.5	20		
Station	Distance	Area	Average	Volume		
	(m)	Cm²)	(M ²)	(m ³)		
wf. 96		30.69			:	
97	50.59	3ग. २६	33.98	1719.0		
98	51.92	14.50	25.88	1343.7		
99	50.40	0.00	7. 2S	365.4		
100	51.02	167.10	83.55	4262.7		
101	49.82	111.57	139.34	6941.9		an ann ta tha sa
102	54.05	94.96	103.27	5581.7		
103	51.07	113.22	104.09	5315.9		
104	58.36	112.28	112.75	6580.1		
			TOTA2	32110.4		32110.4 m ³
- × Indi	ading Soft	Rock Exc	avation			
		(V=50	om ³)			
			lang galang dan diberahan sa Mangalang			
· Excavati	on above	water le	ve) EL+	5.20		
Station	Distance	Area	Average	Volume		
	(m)	(m ²)	(m ²)	(m ³)		
WF. 96		46.08				
97	50.59	18-14	32.11	1624.4		
98	51.92	0.00	9.07	470.9		
99	50.40	0.00	0.00	0.0		
100	51.02	2.06	1.03	52.0		
101	49.82	33.85	17.96	894.8		
	1 1 1 1 1 1 1 1 1 1 1 1	The second secon				
102	54.05	/8.22	26.04	1407.5		
102	54.05 51.07	/8.22 28.04	26.04	1181.2		
	The second of the second	100				
103	51.07	28.04	23.13	1181.2		
103	51.07	28.04	23.13	1181.2		7057.7 m ³
103	51.07	28.04	23.13 24.45	1426.9		7057.7 m ³

CALCULATION
- STRUCTURES
A, = 15.00 x 2 x 1.118
A2 = 26.00 × 1 × 1.118
9 1 1 1 C 2 20 0 V = 2 V
A4 = (11.00+5.00) x/2x4.
As = 1/2 × 9.00 × 5.00
- REUETHENT
STATION DISTANCE
(4)
00/
101 49.82
102 54.05
103 51.07
104 58.36
70 7.81
The second of th

	TYPE OF WORK: BACKFILL W.	BACKFILL WITH SELECTED SOIL	CALCULATION	RESULT
	LOCATION: Weir and	Weir and Intake Structures		
			V= (5.2) × 42.00	
	1/1 = Downstream of Weir at left Bank	left Bank		
			1/2= 15,94 × 49,00	-
	Vz: Downstream of Weir at Right Bank	27 Right Bank		
			V3 = (69,2) + 81,49) ×25.00 = 37 19.50	
	Us: Downstream of Weir at Approach Wall Section	popodo Wall Section		
			1/4 = (54.85 + 60.83) × 18.50 = 11.80.205	
	V4: Flain Booy OF Weir			
			Vs = (72 08+ 67.82) x (7.50+ 21.00) = 4015.65	
3 - 4	Us: Opstream of Woir at Approach wall Section	pproad wall Section		:
4				
			1022): 66	10221.7m3

					•			ر م											: :					•	
RESULT								2784.1 m		\$ ⁷ 144.				+4, +											
						:		2,								•				-					
		9		64				75	-			:		** *		·.				7 10 20					
		1425,48		1358.64			4 4.	= 2784,12				:				- Arriva									
		11) 3							N.		*		25			1							
Z	1	"	:	n				TOTA1									14 1 1					•			
JLATI(Water Comments	x 49.00		(8.00)	27					1 1			14								. 1				
CALCULATION	rui.	×	\$ 150	1	:										1.										
		20.29)		7,50								.; ; ;													
		- 20.		×											1									A second report report	
		V. = (13.65+		Vz = 53.28 × (7.50+								*									1 - 1. A 2 - 1. 1 - 1.		**********		
		V, = C	j	V2 =																					
																								3	
•																									
EARTH FILL ON RIVERBED				in The second			. 10																		
ZIVER		1.																							
NO.																									
FILL																									
IRTH					. 1																				
14													7. 												
Έ						•																			
F WOF	ON:						: · · .			. 4. 3 1															
TYPE OF WORK:	LOCATION:																								
																 1, 1				J. S.	100				

RESULT								306.7m3								
2			-	:				 30							-	
				69		۵۵		306.67	• • • • • • • • • • • • • • • • • • • •							
				130.69		175.98	1	= 306								
NOIT				4		u		TOTAL								
CALCULATION				0	Transition of the state of the	(
				× 7.00		× 7.80	4									
		(Right Bank)		= 18 67 ×	(Left Bank)	25.14 ×										
		(Right	>	٠,	CLeft	V2 =										
														7.		
FUT	1 ROAF															
MBAWER	APPROACH ROAD									i dy La fil						
	1															
TYPE OF WORK	LOCATION															
TYPE 0	LOCATI	ings ings														

· · · · · · · · · · · · · · · · · · ·				
TYPE OF WORK:	STRUCTURAL EXCAUATION	CALCULATION	RESULT	
LOCATION	Weir and Intake Structures			
		V1 = 13:67 × 42:00 = 574:14		
VI : TOWNSTREAM O	VI : FOUNTSTRAIN of Weir at left Bank	Vz = 16.19 x 42.00 = 679.98		
Vo: Dringtoom	Vs: Drington of 1110, of Right Rout			
		$V_3 = 6.86 \times 49.00 = 288.12$		
Va . Dannetroum	V3. Do mostrom of West at C. M. d. C. R. Continue			
	The state of the s	14 = (16.62 + 53.69) x 25.00 = 1757.75		
		1		
V4 townstream	44 townstream of Weir at Approach wall Section	1/5 = 21.04 × 5 × 25.00 = 2630.00		
. Vs: Pownstream	Us: Downstream of Weir at Concrete Apron Pection	V6 = (82.29+ 26.00x3+17.60x2+104.67) × 18,50		
Ve: Hain Body of Weir	of wein	<i>5 5</i> /82: <i>4</i> /8		
		Vn=(42,28+19,60×2+5,13+9,4)+95,62) x 7.50		
Vq: Upstream of	Un: Upstream of weir at Concrete Apron and A. W. Peatlan			
		1218.80		
1/8		V8 = (42, 28 + 75, 62) × 21, 00 = 2475.90		a e
				24.
Vo: Concrete Blo	14: Concrete Blocks at Upstream of Wein	V9 = 837.0 × (0.70+0.10) = 669.60		
No: Gabion Hai	No: Gabion Hattress at Opstream of weit	VIO = 775.4 × 0.50		
		TOTAL = 15865,95	15866.0m3	

TYPE OF WORK:	DEMOLITION OF EXISTING STRUCTURES	CALCULATION	RESULT
LOCATION:	$8 \cdot \mathbf{\eta}$	- REVETMENT	
Do at a de	11.5 G + J + J + S - 11. J	V1 = 8:10 × 0.30 × 88:00 = 213.84	
71. Domustre	VI TOWNSTRAM OF WEIT AT LETT DANK		
Vz: Downstre	Vz: Downstream of Weir at Right Bank	Vz = 9.45 × 0.30 × 85000 = -240.98	
Vs : Upstream	Va : Upstream of Weir at Right Existing Sluice.	V3 = 3,70 × 0.80 × 26.00 = 76.960	
Va: Upstream	14: Upstream of weir at Left Bank	$V_4 = 6.00 \times 0.50 \times /3.00 = 39.000$	
Vs Near Rig	Vs. Near Right Existing Stuice	- RETAINITING WALL	
V. D. 1.	// C		
7 (gn T	EXISTOR ALLICE	Vs - 450 × 0.60 × 25.00 = 67.50	
Jan uschamit		STRUCTURES	
		$\sqrt{b} = (9.00 \times 19.00 \times 7.00) = 11.97.00$	
			-
		VT = (30,00 × 1.65 × 3.50) + (6.00 × 2.00 × 3.50)	
		+ (83.00 × 0.80 × 60.00)	1
		3203.25	
		707AL = 5038.53	5038.53
		:	
	\$1. 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		