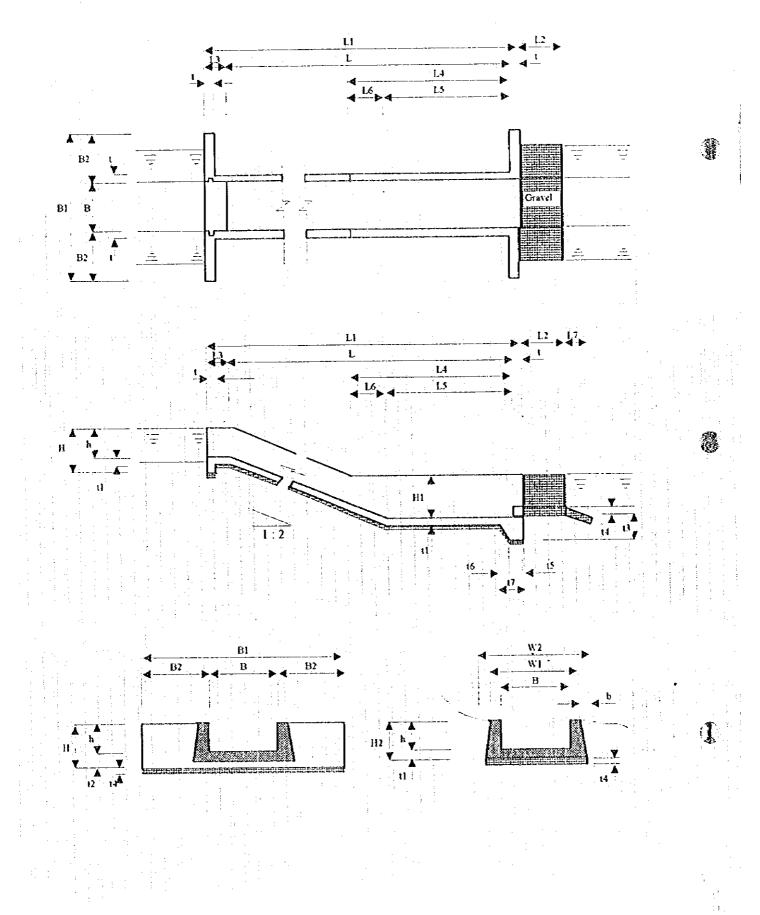
## (5) Typical Structure of Chute



Dimensions of Typical Chute (m)

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Chute Page 2

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Chute	Туре	C1	M	asimur	n Disch	arge (l	(\$)	1,104	NAME OF ADDRESS OF ADDRESS OF			
2				Dim	ensions		-		-			<b></b>
В	h	B1	B2	Ъ	L	่า	<u>L2</u>	13	Lł	LS	<u>L6</u>	L7
1.00	0.50	3.60	1.30	0.10	31.20	32.00	2.00	0.80	9.20	6,00	3.20	0.30
Н	HI	H2	WI	W2	<u>t</u>	11	12	13	14	15	16	U <sup>2</sup>
0.80	1.60	0.80	1.60	1.80	0.30	0.30	0.60	0.30	0.15	0,40	0,10	0.50
Description	unit	Quantity			an a contrast and		Equa	tions				
e la										. =0.5 in s		÷.,
Excavation	m <sup>3</sup>	42.303							(L-L5)			
	m <sup>3</sup>	19.278					1 A A A A A A A A A A A A A A A A A A A		'2)*(L5	+1)		
	m <sup>3</sup>	0.884		`		2)*H+(	· · · · · ·					
4 · · · ·	m <sup>3</sup>	1.885		1		2)*(HI			*B2)*2			
	· m <sup>3</sup> ·	0.979		;		+L7)*(					·	
	m	1.026		. '	(t2-t1)	*( <b>l+(</b> t5+	+17)/2)*	B1+(t+	b)*(4*E	31 -		
Total	m <sup>3</sup>	66.355										(
. ciul	·			÷								
Backfill	m <sup>3</sup>	2,294			b*H2*	(L3+(L	L5)*5	12-1)	1			
	m <sup>3</sup>	1.140				+t1)*L5						
	m <sup>3</sup>	0.104			6*H*E			:				
	<sup>1</sup> <sup>1</sup>	0.247		۰.		- +t1)*82	<b>,</b>		:			
Total	m <sup>3</sup>	3.785			v (	,				14		
10(3)		3.705				:						<
Wet Masonry	m <sup>3</sup>	24,918	1 - 1 - 1 1		<i>u</i> W1+	w2y/2	H2-B*	h)*(L3+	+(L-L5)	*5 <sup>0.5</sup> /2)		: }
wet masoning	m <sup>3</sup>	0.728	1 · ·			)*H*B2						
	ា <sup>10</sup>	1.729		· · · ·	· · · ·	)*(H1+)		; ;				
	m <sup>3</sup>	0.486				)/2*(12-		2			:	
	m m <sup>3</sup>				• .	)*t*B						
	1 · · · · ·	0.435			(11-1-	1) - C-D		• •	:	÷		
Total	m,	28.296				•	х 1					
		0.070				2+L7)*(	د. دروست	(D3)				
Gravel	m	0.979	1.1.1			2+L7) ( 2*(L3+(			5.43			
	m <sup>3</sup>	9.362			- 1 1 1 1.			), 17⊥i	- <b>()</b>	- E 4		
	m	0.432			t <b>∔</b> *(t+	b)*BI*	2					
Total	m <sup>3</sup>	10.773				4						
							· • ·	1 - E	-			
Gravel Surfacin	e m	5.677	'l ·		L2*(E	3+2 <sup>0.5</sup> *E	32)					
. · · · ·				- 1	:		÷					
	•				· .	1				• •		
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# Bill of Quantity of Chute (15m Height 1/12)

# Bill of Quantity of Chute (15m Height 2/12)

:	Chute	Туре	C2	M	aximur	n Disch	arge (l	(5)	300		gosinikadar.Oorav :	n si daqa sergene vene v	
					Din	ensions	(m)						
	В	h	B1	B2	b	L	LI	L2	13	L4	LS	[L6	1.7
	0.80	0.40	3.00	1.10	0.10	31.20	31.90	2.00	0.70	7.80	5,00	2.80	0.30
	Н	HI	H2	WI	W2	t	tl	12	13	t-l	15	16	1-
	0.70	1.40	0.70	1.40	1.60	0.30	0.30	0.60	0.30	0.15	0.40	0.10	0.50
	Description	บก่เ	Quantity	an sa an tha an tha sa an tha sa	<u></u>			Equa	lions	ayan sahar sahar sana			CHI WINE BER WAS
	Excavation	m <sup>3</sup>	35,991			((W2*)	(H2+t4)	·B*h/2	))*(L3+	(L-L5)*	(5 <sup>11 \$</sup> /2)		
		<sup>1</sup> m <sup>3</sup>	13.038			(WI*d	Hi+n)-		2+14*W	2) <sup>*</sup> (L5-	⊧t) <sup>11</sup>		1
		m <sup>3</sup>	0.671				2)*H+(t						
		m <sup>3</sup>	1,441				2)*(Ht+			B21*2			
		m <sup>3</sup>	0.813	1.1			+L7)*(I						
		m <sup>3</sup>	0.855							5\*/ I*D	•		
				+		{(2-11)	11-11-1	u#25.	011(11	b)*(4*8	1		
	Total	<sub>:</sub> m <sup>3</sup>	52.809								с		
								داست. سر د	S.a				
	Backfill	m <sup>3</sup>	2.078	) - -	: :•		(L3+(L		/2 1)			÷ .	a 1 1
\$ .		m³	0.850				H1)*L5				·	1	· .
. :		: m <sup>3</sup> ···	0.077		·	<b>b</b> *Н*В	2	:					
		m <sup>3</sup> .	0.187		1.	b*(HI+	Ht1)*B2	P.	2 <sup>-</sup>	a di	· . · ;		
	Total	m <sup>3</sup>	3,192	:	× 1			1. I.	- 14 - <sup>-</sup>	iya ta		2	2.12
							:		•	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			
	Wet Masonry	m <sup>3</sup>	21.895			((WI+)	W2)/2*	H2-B*h	1)*(L3+	(L-L5)*	5 72)		
		m <sup>3</sup>	0.539		to j ∔		*H*B2		1.11				
- 1		m <sup>3</sup>	1.309	: ;			*(H1+i		2	n an		÷	
71		m <sup>3</sup>	0.405			· · · ·	/2*(i2-i						
		m <sup>3</sup>	0,300		1	(H1-14)		.,		· . *			
:	Total	m <sup>3</sup>	24.448			(migta	γιD			1 I			
: -	rotar	111	24.440		÷							:	
	Gravel	m <sup>3</sup>	0.017			مأخط م	1 7.*/1	ر مەربىيە	011		1.15		
	Olavel	)	0.813				+L7)*(I	1	1		4.4		
		m <sup>3</sup>	8.326			,	*(L3+(I		) 72+L	л-t)		1. 1. s	
		m <sup>3</sup>	0.360		1.1	14*(1+8	)*B1*2						
	Total	m <sup>3</sup>	9.499	in de la constante la constante									
					÷		(	4 (17) 4 (17) 17	an Anna An airteac				
2	Gravel Surfacing	m	4.711			L2*(B-	+2 <sup>°1**</sup> B.	2)					
										1 .			
						•	•		· · ·		• . • .		
				-			5447 P.V.						
· ·	•										•	ŧ.,	
			e de la composición d										
		:		1									
											4.1		
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	· .					4.14			÷	•	1 		·
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# Bill of Quantity of Chute (15m Height 3/12)

Chute	Туре	C3	M	3.100 87.6 212	m Disch	Sector States and	/s)	803	nichian da filmà		ang tang tang tang tang tang tang tang t		
				-	nènsions		1 0				1/	L7	
B	<u>h</u>	Bl	B2	<u>b</u>			L2	13	<u> </u>	LS 7.(10	L6 3.60		
0.50	0.60	2,30	0.90	0.10 W2	31.20	32.10	2.00 t2	0.90	10.60	15	16	0.30	4
<u>H</u> 0.90	<u>HI</u> 1.80	H2 0.90	W1 1.10	1.30	1 0,30	tl 0.30	0.60	0.30	0.15	0.40	0.10	0.50	
Description	unit	Quantity	1.10	1.30	0.50	0	ADVIDUATION OF COMPANY	tions	V.10				,
vescription .	Unit	Quanni	ageorecents with		<b></b>	-8							1
ixcavation	m³	33.967			((W2*(	(H2+t4)	-B*h⁄2	))*(L3+	(L-L5)*	5 <sup>65</sup> /2)		1	
	m <sup>3</sup>	17,192		:	(W)*(I	HI+11)-	B*H1/2	2+t4*W	2)*(L5-	+t)			
	m <sup>3</sup>	0.675			· . ·	2)*H+(t							
	m <sup>3</sup>	1.431		1		2)*(H1+			B2)*2			;	
	m <sup>3</sup>	0.612	а. 1910 г. – 19			+L7)*(İ							ļ
	m <sup>3</sup>	0.656				*(1+(15+			b)*t4*B	1			
Total	៣³	54.532			```		, ,	•		2			
			· ·				÷					· .	
Backfill	m <sup>3</sup>	2.489			b*H2*	(L3+(L-	L5)*5°	<sup>3</sup> /2-1)	•				
	m³	1,470			b*(H1+	HI)*L5			•				
	m	0.081	:		b*H*B	2		<b>,</b> • #	·· ·				
	m³	0.189			b*(H1-	H1)*B2							
Total	m <sup>3</sup>	4.229		. ,	larin F	•	÷			11.00			
			:										
Vet Masonry	m³	21.806		: : :	((WI+	W2)/2*	H2-B*I	1)*(L3+	(Ľ-Ľ5)*	505/2)			-
	m³	0.567			(t+b/2)	*H*B2	*2 . ji	·					
	m³	1.323			(i+b/2)	*(H1+t	i)*B2*	2					
	m <sup>3</sup>	0.311			(15+17)	/2*(12-1	1)*B1		•				4
	m³	0.248			(H1-t4	)*(*B							1
Total	m³	24.254		·			1111 11		}		[		
									÷				
iravel	m <sup>3</sup>	0.612			(4*(L2	+L7)*(l	B+2 <sup>05</sup> *	B2)	-				a a Bay an
	m <sup>3</sup>	6.758		i fr	14*W2	*(L3+(l	L-L5)*	5" <sup>\$</sup> /2+L	5-1)				
	m <sup>3</sup>	0.276	· ·		1+*(1+)	o)*B1*2	2						
Total	m <sup>3</sup>	7.646											
iravel Surfacing	m²	3.546			L2*(B	+2 <sup>0.5</sup> *B	2)					1 1	
	· .									:		11	
	•		· · ·	:		- - -				• .			1
				na na katalan k	~_~_~~~~~~~~	فليعجز بمحجز ومنجور			-			a kanalar da Maraka	]
				j ÷ j		÷,	1 1 1		i i Faith		· · · ·		
							1.1	44			분성 문	(	

Chute	Туре	C4	M	aximu	n Disch	arge (l	/s)	467				
				Din	iensions	(m)						
В	h	<u>B1</u>	B2	<u>b</u>	L	<u>L1</u>	L2	L'	L4	15	LG	17
0.50	0.50	2.10	0.80	0.10	31.20	32.00	2.00	0,80	9,20	6,00	3.20	0.30
H	HI	H2	WI	W2	t	11	12	<u>t</u> 3	14	15	16	t
0.80	1.60	0.80	1.10	1.30	0.30	0.30	0.60	0,30	0.15	0.40	0,10	0.50
Description	unit	Quantity:					Equa	ations				
							D.1.1 (B)					
Excavation	m <sup>3</sup>	32.162							(L-L5)'		· ·	
	m <sup>3</sup>	13.608			•				2)*(L5	Ft)		
	m <sup>3</sup>	0.544				2)*H+(I				÷		
	m³	1,160						b)*14)*	*B2)*2			
	. m³ · ·	0.563		1		+L7)*(l						
	៣	0.599			((2-(1))	*(t+(15+	17)/2)*	BI+((+)	b)*(4*B	<b>il</b>	· · ·	аў. — н
Total	เก <sup>3</sup> ่	48.635										-
	÷ •					•		:		(		
Backfill	m <sup>3</sup>	2.294		;	b*H2*	(L3+(L	L5)*5°	<sup>5</sup> /2-1)				
:• •	• m³ ••	1.140		÷	Ъ <b>*(</b> НІ-	HI)*L5						44
	m³	0.064			b*H*B	2			1997) 1997 - 1997			
	m³	0.152		1 N	b*(H)-	Htl)*B2			4			e 1 - e
Total	m	3,650										e ta g
	4 				÷ ;		1			÷	÷ .	. 1
Wet Masonry	m <sup>3</sup>	20.572			((WI+	W2)/2*	H2-B*I	1)*(L3+	(L-L5)*	*5 <sup>05</sup> /2)		
•	m	0.448	i		(t+b/2)	*H*B2	*2		i. A			
	m <sup>3</sup>	1.064				*(H1+i	sa fa	2			r : ''	:
	m <sup>3</sup>	0.284				/2*(12-1	1.1					
	m <sup>3</sup>	0.218			(111-14	· ·					· . · ·	
Total	m <sup>3</sup>	22.585								:		· • •
		22.002							1			1 - 1 - 1 2
Gravel	m <sup>3</sup>	0.563	1.1		14*11.2	+L7)*(1	B+2 <sup>85</sup> *	B2)				
<b></b>	m <sup>3</sup>	6.762	1.0				(a) 1.3	5"*/2+L	5-1)		÷	: /
	m <sup>3</sup>	0.252			(4) (1) (2)	o)*B1*2	- 1 - A - A					
Total					in trit	,				, ) 		÷
Total	m	7.576						 . 1.				1.1
Gravel Surfacing	m²	3.263			1 2*/2	+2 <sup>.1.5</sup> *B	2)				÷ .	:
mater onnacing	111	3.203			Г. т. (D.	2 D	<i>L</i> )		•			, ^·
							4		· · ·			•
					·.	19 g. d		5	•	· .	1. A.	

# Bill of Quantity of Chute (15m Height 4/12)

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Chute	Туре	C5	M	aximu	n Disch	arge (L	's)	174			and the second second	
				Condense Principal Condition	ensions	(m)					<b>r</b>	
В	h	Bl	<u>B2</u>	<u>b</u>	L	<u>L1</u>	<u>L2</u>	<u>L3</u>	L4	1.5	LG	L7
0.50	0.40	2.10	0.80	0,10	31.20	a practice with the State State State	2.00	0.70	7.80	5.00	2.80	0.30
H	HI	H2	WI	W2	1	11	12	6	. 14	15	16	17
0.70	1.40	0.70	1.10	1.30	0.30	0.30	0.60	0.30	0.15	0,40	0.10	0.50
Description	unit	Quantity				an a	Equa	tions				
						<b></b> •				ر در≷⊡م.		
excavation	m <sup>3</sup>	30,142				(H2+t4)						
	្រាំ	10.415			•	Hi+(1)-				+1}		
	m³	0.488				2)*H+(I						
	m <sup>3</sup>	1.048				2)*(H1-			'B2)*2			:
	m³	0.563			(4*(L2	+L7)*(l	3+2 <sup>63</sup> *)	B2)		•		. :
	m <sup>3</sup>	0.599			(t2-t1) <sup>*</sup>	*(t+(t5+	(7)/2)*	B1+(t+	b)*l4*E	31		
Total	m <sup>3</sup>	43.254									:	. :
								•				
Backfill	m <sup>3</sup>	2.078			b*H2*	(L3+(L	L5)*50	<sup>5</sup> /2-t)	· .			
	m <sup>3</sup>	0.850		- t		+(1)*L5			an tha An thairt			
· · · · · · · · · · · · · · · · · · ·	m <sup>3</sup>	0.056			δ*H*B	- 10 A	5. 1		-			
		0.136	· ·			** +11)*B2		1 - 26 - 4 1				
	m <sup>3</sup>		K	а. 1	0.(11)	111:02	n en tit. F					
Total	m3	3.120	·		1.4					÷.,		ela Aletta
	3	10.105	÷ .		//3014	W2)/2*	U)_D*I	1¥/T 34	4.1.55	*5 <sup>9.5</sup> /21	1.50	
Vet Masonry	m	19.195		· ·			1 A. S. M.	1) · (1-5 i	(6-63)	5 729		
	m <sup>3</sup>	0.392			., .	)*H*B2	4 14	•				
	n <sup>3</sup>	0.952				)*(H1+1	4.1.1	2	: .			
	m <sup>3</sup>	0.284				)/2*(t2-	1)*BI	÷		÷		
	m <sup>3</sup>	0.188	÷		(HI-t4	)* <b>t</b> *B	·					
Total	m <sup>3</sup>	21.010			· .							
				. ;	4						4 4 E	
Gravel	m <sup>3</sup>	0.563			- 1	l+L7)*(			}		. F.A.	
	m <sup>3</sup>	6.765			14*W2	!*(L3+(	L-L5)*.	5° 5/2+1	.5-1)			
	m <sup>3</sup>	0.252		,	1+*(1+	b)*B1*	2					
Total	m <sup>3</sup>	7 580										
										1 - A	1997 - Ale	
Gravel Surfacing	m	3.263	í · ·		L2*(B	+2 <sup>-5</sup> *B	2)	:			ta an ta Tanàna	
	1	1									н. т.	
							11. 1			• ;		
		1. · ·						· • •	:	•	•.	1.

# Bill of Quantity of Chute (15m Height 5/12)



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Chute	Туре	<u>C6</u>	M	aximu	Competence of the second	an a ta an	<u>(s)</u>	133		Alfadat Matara M	orreita de Calab	5.85.1-3942X48
	-				ensions	And the second se				<b></b>		<b></b>
B	<u>h</u>	81	<u>B2</u>	b	L	<u>L)</u>	L2	L3	LI	<u>- L5 -</u>	<u> </u>	
0.40	0.40	1.80	0.70	0.10	31.20	31.90	2,00	0,70	7.80	5,00	2.80	0.30
H	HI	H2	-W1	W2	t	tl	12	13	t+	15	<u>t6</u>	17
0.70	1.40	0.70	1.00	1.20	0.30	0.30	0.60	0.30	0.15	0.40	0.10	0.50
Description	unit	Quantity					Equa	lions				
6										· •		
Excavation	m <sup>3</sup>	28.193	4		((W2*)							
	m <sup>3</sup>	9,540			(WI*(	HI+11)•	B*HI/2	2+14*\{	2)*(L5	+0	:	
	m <sup>3</sup>	0.427			(((t+b/	2)*H+((	+b)*(4)	*B2*2		:	. 1	:
	m <sup>3</sup>	0.917			(((t+b/	2)*(H1+	+1)+(H	+b)* <mark>(-</mark> ])*	B2)*2			
· · · · · · · · · · · · · · · · · · ·	m <sup>3</sup>	0.480			t4*(L2							
		0.513		· ·	(t2-t1)				b)*i.İ*E	81		
Total	m <sup>3</sup>	40.069			((= 11)	1.16	<b>(</b> ), <b>4</b> )	DI	.,			
IUtar	111	40.007								:		1 T 4
Deal-Gil	1	2 0.70			b*H2*		1 51*00	50.0				
Backfill	m <sup>3</sup>	2.078						72 <b>-</b> ()				111
	m <sup>3</sup>	0.850			b*(H1-				:			
	m³	0.049			b*H*B				· ·			
	m <sup>3</sup>	0.119			b*(H1-	H1)*B2					-	1.2
Total	$m^3$	3.096			<sup>-</sup>	4				· · ·		
	- 14				÷ 1					. • •		
Wet Masonry	m <sup>3</sup>	18.295			((W1+	W2)/2*	H2-B*	n)*(L3+	(L-L5)	*5"2/2)		
	m <sup>3</sup>	0.343			(t+b/2)	*H*B2	*2		•			
	ា	0.833	1		(1+b/2)	*(H]+t	i)*B2*	2	:	i i		
	m <sup>3</sup>	0.243				/2*(t2-		2				
	m <sup>3</sup>	0.150			(H1-14		,		r i te	1 N N		
Tatal	m <sup>3</sup> .	19.864			(113-14	,			1			-
Total	. 114	19.004	(1, 1)						:			
	,	6 100				1 7.+0	n	<b>DN</b>	÷			
Gravel	m <sup>3</sup>	0,480				+L7)*(		5		물건 문		
위치 비용 나용이	m <sup>3</sup>	6.245				*(L3+(		5 72+6	5-1)			
	m <sup>3</sup>	0,216			1+*([+]	o)*B1*.	2					
Total	⊡ m³ ⊡	6,940									і. І. с.	
									1	1.	1997 - S	
Gravel Surfacing	m²	2.780		· · ·	L2*(B	+2 <sup>93</sup> *B	2)	· .	÷		. ir	
								· .				
-						i de la compañía de la				-		-
· ·												-
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									an di si General			· · · :
e e de la Constante de la Const Constante de la Constante de la C		· · · ·									-	
					t i . i t			가 가 다 다 드 나				· · ;
			· · ·	н 1 - р р	: : : : : :							
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	an an an an an an an an an an an an an a			÷	. 2						· · · ·	

# Bill of Quantity of Chute (15m Height 6/12)

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# Bill of Quantity of Chute (15m Height 7/12)

Chute	Туре	<b>C</b> 7	M		m Disch		/s) : : :	392		274 <b>2.767.6772-6</b> 84	-			
				Din	iensions	(m)								
В	h	B1	B2	b	L	LI	• L2	L3	Lŧ	L.5	<u>L6</u>	17	Į	
0.30	0.60	2.10	0.90	0.10	31.20	32.10	2.00	0.90	10.60	7.00	3.60	0,30	Į	
H	HI	H2	WI	W2	t	tl	<u>t2</u>	6	<u>t</u> 4	15	16	t7		
0.90	1.80	0.90	0.90	1.10	0.30	0.30	0.60	0.30	0.15	0.40	0.10	0,50		
Description	unit	Quantity			والرمامين ومحادمها		Equa	tions		danalari wile fered				
	_													· •
Excavation	m³	29.774								*5 <sup>93</sup> /2)	1.12		1	
	m <sup>3</sup>	14.345			"(W1*(I	HI+tI)•	·B*H1/2	!+i4*₩	2)*(L5-	+t)				
1	. m <sup>3</sup>	0.675		:	(((1+b/	2)*H+(	(+b)* <mark>t4</mark> )	*B2*2		-		:		
	m <sup>3</sup>	1.431		•	((((+6/)	2)*(HI-	+11)+((+	b)*t1)*	B2)*2	· .				
	m³	0.543			t4*(L2	+1,7)*()	B+2 <sup>+5</sup> *	B2)				-	. i	
	m <sup>3</sup>	0.599					+17)/2)*		b)*i4*B	31		•		
Total	m <sup>3</sup>	47,365					- , -,		,	1.1				
Total		11.505												
Backfill	i m³	2.489	1.1		<u>አ</u> *µን*	(I 3÷(I )	-L5)*5°	5/2.m				1		
Datkini	m <sup>3</sup>	1.470	1		b*(H)+			+2-LJ		: 1				
					b*H*B	-		1						1. 1. C.
	m <sup>3</sup>	0.081	· :											
	m	0.189			p.(HI	+t1)*B2	<b>;</b>					4		1.1
Total	m <sup>3</sup>	4.229										1		
			•				:							
Wet Masonry	m <sup>3</sup>	20,129	e La serie					))*(L3+	(L-L5)	*5" 5/2)		· · ·		
	m³	0.567		· : .	(t+b/2)	*H*B2	*2	1			÷		1.5	
	m <sup>3</sup>	1.323			(l+b/2)	*(H]+t	l)*B2*	2	•					R
	m <sup>3</sup>	0.284	· •	• •	(15+17)	/2*(t2-	il)*B1	÷	1					C C C C C C C C C C C C C C C C C C C
	m <sup>3</sup>	0.149			(H1-14	)*(*B		· · ·	i i i		· · ·			14 J. A.
Total	m <sup>3</sup>	22.451						· • .		· · · ·				
											:	rit i i i Filipi		
Gravel	m <sup>3</sup>	0,543			t+*(L2	+L7)*(	B+2 <sup>05</sup> *	B2)	an an an an an an an an an an an an an a	· . ·	;			
	m <sup>3</sup>	5.718			· · · ·		L-L5)*5		5-1)			5 1 H. - 12		
	m <sup>3</sup>	0.252			14*(1+)	A								
Total	m <sup>3</sup>	6.513				,								
r Utar	21)	0.515					1.1							
Gravel Surfacing	m²	3.146	N	en en Reference	LAND	+2 <sup>0.5</sup> *B			e te se se					
Graver Surracing	111	3,140			L2 (D	72 D	2)	· ·	· .					:
		en en en en en en en en en en en en en e					:						1	
										•			1.1	1
				ca.c-Derster Int				in the second second			entrated trated		1	
						2	1.1.1				1 - E 2 K			
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		n in the Gradient State		$\frac{1}{2} > \frac{1}{2}$		1 	•				1 .	1 · · ·		51-
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				de la seconda. La seconda								1		
	÷.,		4	· ·							:		•	1
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	1	n an Arrana Arrana an Arra												
	•													
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Chute Page 9

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Chute	Туре	<u>C8</u>	M	aximur	PARTY OF THE OWNER.	C	(S)	236	upacial transformer	aler an and that is in		
	فحد أحدده والا المتحديق و	a management of the second second second second second second second second second second second second second		California and a second second	ensions						1.	<u>L7</u>
B	h	Bl_	<u>B2</u>	b	L		L2	<u>L3</u>	L	<u>L5</u>	<u>L6</u>	
0.30	0.50	1.90	0.80	0.10	31.20	32.00	2,00	0.80	9.20	6,00	3.20	0.30 1
H	<u>H1</u>	H2	WI	W2	1	<u>t1</u>	t2	13	14	15	16	U.50
0.80	1.60	0.80	0.90	1.10	0.30	0.30	0.60	0.30	0.15	0.40	0 10	10.21
Description	unit	Quantity					Equa	tions				
Excavation	m³	28.105							(L-L5)			
· .	m	11.340							2)*(L5	+1)		1 A
	m <sup>3</sup>	0.544				2)*H+((						
	m³	1.160		•		2)*(HI-			*B2)*2	:		
	m <sup>3</sup>	0.494	1. A.	-	t4*(L2	+L7)*(	B+2 <sup>0</sup> *	B2)	· .	-1 = 1		
	_m³	0.542			(12-11)	*(t+(t5+	+(7)/2)*	B]+(t+	b)*i4*E	31 .	1.1	
Total	m <sup>3</sup>	42.185						· . ·				
IUtai		42.105	1			:						
Daalatii	m'	2.294			ь <b>+</b> Ц)+	(L3+(L	-1.5)*5 <sup>0</sup>	5/2-11		1 <sup>2</sup> 1		÷
Backfill		ŧ.		:		+il)*L5			÷ :	÷	ţ.	
	m	1.140	1 A A A A A A A A A A A A A A A A A A A		•				1			
	m³	0.064			6*H*E				1.1		· · ·	
	m	0 152	-	1	9*(HI	+11)*B2						
Total	m3	3.650			•	: 		i se i	1. <sup>1</sup> 1		111	
				:		( ) 				مر با المراجع مراجع المراجع		
Wet Masonry	m <sup>3</sup>	18.833		19				h)*(L34	(L-L5)	*5 (72)	- -	i,
	m <sup>3</sup>	0.118	<u>к</u> . ч.	· .		)*H*B2		1990 - 1997 1997 - 1997			: : :	1 : ·
	m³	1.064			(t+b/2	)*(H1+1	il)*B2*	2		 		
	m <sup>3</sup>	0.257		1.1	(15+17	)/2*(t2-	ti)*BI					· · ·
	m	0.131			(H1-t-	)*(*B					e de la constante de la consta	
Total	m <sup>3</sup>	20.732		6 - E		e di t						
T C C C				i e e				1. de				
Gravel	m'	0,494			: :t4*(L)	2+L7)*(	B+2 <sup>0.5</sup> 4	B2)		1	. · · .	
Olaver	m <sup>3</sup>	5.721	· · ·			2*(L3+(			.5-1)	. :***		
	m <sup>3</sup>	0.228	2		1 1 1	b)*B1*	1. S.					
	m m <sup>3</sup>	6 113	1		<b>1</b> -1 (1)		<b>4</b>					÷
lotal	m	0.14.9						i		e Transa		
					1.54.5	+2" <sup>5</sup> *E				r All an	<b>`</b> . :	
Gravel Surfacing	m	2.863			L2*(Ľ	5+2 TE	\$2}					N
					÷							
									. <b>.</b> .	•		
		<u> </u>	<u> </u>			-					an an an an an an an an an an an an an a	And a second second second second second second second second second second second second second second second
	4.15								н. 1. 1.	1	-	1.11
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# Bill of Quantity of Chute (15m Height 8/12)

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Chute	Туре	<u>C9</u>	M	ALC: NOT A DESCRIPTION	2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	arge (L	/s)	93	-	1976-1991-10-10-10-10-10-10-10-10-10-10-10-10-10	19-18-000/07-07-0	
and the second second second second second second second second second second second second second second secon		T		and the second second second second second second second second second second second second second second secon	ensions	an an an an an an an an an an an an an a					· · · · · · · · · · · · · · · · · · ·	
B	h	Bl	B2	b	L	<u>L1</u>	L2	<u>L3</u>	Lł	<u>L5</u>	LG	L7
0.30	0,40	1.70	0.70	0,10	31.20	and the second second second second second second second second second second second second second second second	2.00	0.70	7.80	5.00	2.80	0.30
H	HI	H2	WI	W2	t	<u>tl</u>	12	13	(4	15	<u>t6</u>	17
0.70	1.40	0.70	0.90	1.10	0.30	0.30	0.60	0.30	0.15	0,40	0,10	0.50
Description	unit	Quantity			aan aanaa dhalan adh		Equa	tions				
	m³											
Excavation		26.243				(H2+t4)						
	m	8.666				11+(1)-			2)*(L5+	H1) .		
	m <sup>3</sup>	0.427	•			2)*H+(t						1997 - 1997 1997 - 1997
	· m³	0.917		•		2)*(H]+			B2)*2			
	m <sup>3</sup>	0.445				+L7)*(E			•	N a f		
	m³	0.485			(t2-t1)	*(t+(t5+	(7)/2)*1	31+(t+t	)*(4*B	1	1.	4 
Total	m³	37.182										
				÷.,							:	
Backfill	m	2.078			b*H2*(	L3+(L-	L5)*5 <sup>01</sup>	<sup>5</sup> /2-t)				
	m³	0.850			b*(H1+	11)*L5	-					
	m <sup>3</sup>	0,049			b+H+B	2				tara. Ngana		
	m'	0 119	•		b*(H1+	11)*B2	н 2					- 
Total	m <sup>3</sup>	3.096	ta an ta			 	* 1 : - *					
			÷	;		· · · · · ·		e la XV. Na al			11 - E	
Vet Masonry	m <sup>3</sup>	17.396	4.19	1.11	((WI+)	W2)/2*I	12-B*h	)*(L3+(	L-L5)*	505/2)		
	m³	0.343			(t+b/2)	*H*B2*	2	t ig	i i			
	m <sup>3</sup>	0.833	14 - E	2,1	(t+b/2)	*(H1+1)	)*B2*2					
	: m <sup>3</sup>	0.230	1 - 3 			/2*(t2-t						
	m³	0.113	1		(H1-H)				e ta			
Total	m <sup>3</sup>	18.914			(,						· .	
Gravel	់ ៣ <sup>3</sup> ំ	0.445		÷ ×	i4*(L2-	+L7)*(E	+2 <sup>0.5</sup> *F	12)				
	m <sup>3</sup>	5.724		4	1. N	*(L3+(L			i-n		. <b>1</b>	
	m³	0.204		2		)*B1*2	· • • • •					
Total	m <sup>3</sup>	6.373				у D1 2						
						· · · ·						
Fravel Surfacing	m	2.580			1.24/84	2" <sup>5</sup> *B2					e 1. 	1
er oprigenig					52 (D)	- 04	,	• •			. •	
1		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -								-		÷

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# Bill of Quantity of Chute (15m Height 9/12)

Chute	Туре	C10	M	aximu	m Disch	large (b	(5)	216				
			alindi. Majini 74 aliya :	Din	iensions	(m)		Michael Services a	ionís endere mener.	A verder inte an transat	<b></b>	* ****
В	h	B1	B2	b	L	L1 -	L2	L3	L4	LS	L6 ·	L7
0.20	0.60	2.00	0.90	0.10	31.20	32,10	2.00	0,90	10,60	7,00	3.60	0,30
Н	HI	H2	WI	W2	(	tl	12	13	<b>t</b> 4	じ	t6	17
0.90	1.80	0.90	0.80	1.00	0.30	0,30	0.60	0,30	0.15	0,40	040	0,50
Description	unit	Quantity			-		Equa	tions				
		1										
Excavation	m³	27.677			((W2*(	H2+(4)	-B*h/2	) <b>*(</b> L3+	(L-L5)*	5 3/2)	÷ .	
	m³ .	12.921			(WI*(	HI+tI)-	B#H1/2	+t1*W	2)*(L5	É) (		
	$m^3$	0.675		1	<b>(((i+b/</b> )	2)*H+(t	+b)*(4)	*B2*2	:		;	
	m <sup>3</sup>	1:431			(((l+b/)	2)*(H1+	t)+((+	b)*(-1)*	B2)*2			:
	m³	0,508		÷	14*(L2	+L7)*(E	3+2 <sup>9,5</sup> *)	B2)	-9 			
	m <sup>3</sup>	0.570		1997 - 1997 1997 - 1997	(t2-t1)*	*(1+(15+	t7)/2)*	B1+(t+	5)*iH*B	1		
Total	m³	43.782										
Backfill	m <sup>3</sup>	2,189			b*H2*	(L3+(L•	L5)*5 <sup>0</sup>	\$/2-0	1 1 1 1			
	m <sup>3</sup>	1.470			b*(H1+		, .	· · .	1.11		1	:
	m <sup>3</sup>	0.081			b*H*B	•						
	m <sup>3</sup>	0.189				- 11)*B2	· .		н н 1 с			
Total	m <sup>3</sup>	4 229			• (		÷.,					
					, () ,	. ,		i stari L			:	
Wet Masonry	m <sup>3</sup>	19.290			(WI+	W21/2*8	12-B*h	5*(1.34	(L-L5)*	5 20		
	m <sup>3</sup>	0 567		· · ·	(t+b/2)							1
	m <sup>3</sup>	1.323				*(HI+t)	(A) = 1.2	,				5 - S
	m <sup>3</sup>	0.270			4	/2*(t2-1		•	-	+		
	m	0.099	· · ·		(H1-(4)		1) DI	3.1.1	1			
Total	m'	21.549			(111-(4)	r t D	an an an an an an an an an an an an an a					• .
TUCAL		21.147				i e					1.11	
Gravel	m³	0.508	· · ·		114/1 3	+L7)+(E	≟ 1 <sup>11 5</sup> ¥3	2) 2)	•			
JIBN	m <sup>3</sup>	5.198				•(L3+(L			5 -1	1	1993. 1	
	m <sup>3</sup>	0.240			14 J. 16 March 19 1			12+0	1-()			
Total	m <sup>3</sup>		• • •		<b>ι∔</b> *(ι+b	9°BI≁Z				:		1
rotal	111	5 947						1. A.		1.1		
Gravel Surfacing	m²	2.946			1.34/15	2" <sup>5</sup> *B2		· . :				
naver sunaving	ui	2.9+6			r*.(R	Z *B2	$\mathbf{y} \in \mathbf{y}$					

# Bill of Quantity of Chute (15m Height 10/12)

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# Bill of Quantity of Chute (15m Height 11/12)

ĺ	Chute	Туре	CII	M	aximu	m Disch	nårge (l	/s)	133						
Ì		STOWING TO VIEW SHOW		an an an an an an an an an an an an an a	A DESCRIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE	iensions	The second second second second second second second second second second second second second second second s	ality for the second second second second second second second second second second second second second second							
	В	h	Bl	B2	b	L	LI	L2	L3	L4	L5	L6	L7		
	0.20	0.50	1.80	0.80	0.10	31.20	32.00	2.00	0.80	9.20	6.00	3.20	0.30		
Į	Н	HI	H2	<u>W1</u>	W2	t	11	<u>t2</u>	. 13	11	15	16	17		
	0.80	1.60	0,80	0.80	1.00	0.30	0,30	0.60	0.30	0.15	(),4()	0.10	0.50		
	Description	unit	Quantity					Equa	lions						
			04.000			inna	(H2+t4)	Dation	Anti Du	a 139	iš <sup>oš</sup> m				Æ.
	Excavation	m³	26.077												<b>N</b>
l		ni <sup>3</sup>	10.206				H1+(1)			2) (L3	τι)				
		m³ `	0.544				2)*H+((			03183					
		m <sup>3</sup>	1.160				2)*(H1			D2) 2			:		
	1 A.	<sup>°</sup> m³	0.459			-	+L7)*(			⊐ بن انيو ا					
		m <sup>3</sup>	0.513	1 St. 1		(12-11)	*(t+(t5+	f(7)/2)*l	<b>B1+(</b> [+	0)"(+",0					•
	Total	<sup>°</sup> m <sup>3</sup>	38.959			•	· .								
	D1.6U					2*117*	(L3+(L	1 51400	5/3 A					1	
	Backfill	m <sup>3</sup>	2.294				• •	-	72-1)	e					: .
		m <sup>3</sup>	1.140				+(1)*L5					: ;	,		
		m	0.064			b*H*E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				·	an an Taona			
		m	0.152		•	0*(H)	+(1)*B2					· · · ) 		1	
	Total	m	3,650		i i i Na s	n a ha ta a Ea ch		1							
		_ 3	17.964	$\{ \cdot, \cdot, \cdot \}$		(1)171	W2)/2*	U1 D#1		11 - 1 5 V	K5 <sup>11.5</sup> /73				
	Wet Masonry	m <sup>3</sup> m <sup>3</sup>	0.448				₩ <i>2₩2</i> )*H*B2		(L) (L) T	(1-1-5)	5 14,			1. TA 1. A	
		m3				1.5.5.	)*(H1+t	2 · · ·	n <sup></sup>		1 + 1		: :		<i>6</i> 24
		n ⊳_m³	1.064				)/2*(12-	(2) A. L. M.	4						÷.
			0.243		1.0	4		11) DI							÷
	÷	m <sup>3</sup>	0.087	!	1	(H1-t4	)יויט					· .			
	Total	m³.	19.806									11	:		
	Gravel	m <sup>3</sup>	0.459			41#/1 1	:+L7)*(	oʻ⊥n <sup>u \$</sup> *1	คาเ						
	Giaver	ំពា <sup>3</sup>	5.201		e a e a e a fa		*(L3+(			5.0					
		m <sup>3</sup>	0.216			1.1	b)*B1*:		, 12 .	, <b>3</b> -17		· · · ·			-
	Tatal	m <sup>3</sup>	5.876	1		14 (17	0, 01	4							
	Total		- 0.870			$\Delta = \frac{1}{2}$									
	Gravel Surfacing	m²	2.663			1.5*/D	+2 <sup>45</sup> *B	2)							
	Glaver Sunacing		2.005			L2 (U	12 0	2)		,					•
						£				÷	•				
										•	•	$\tau = 1 - 1$	• •		
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Chute	Туре	C12	M	LOWER ACCUTATION	n Discl	HAVE NOT THE OWNER	/s)	55	hat are the Constant of	antalay - type - your	wish distant alway	
	ganggangan sa Candrabar 'na	i anna ann an		A REAL PROPERTY AND A REAL	ensions	the state of the second second second second second second second second second second second second second se					r	r•
B	h	Bl	B2	b	L	<u>1</u>	L2	<u>L3</u>	<u>L4</u>	1.5	<u>L6</u>	<u> </u>
0.20	0.40	1.60	0.70	0.10	31.20	31.90	2.00	0.70	7.80	5,00	2.80	0,30
<u>H</u>	HI	H2	WI	W2	l	tl	t2	13	14	U.	16	t
0.70	1.40	0.70	0.80	1.00	0.30	0.30	0.60	0,30	0.15	0.40	0,10	0,50
Description	unit	Quantity					Equa	tions				
Excavation	m³ (	24,294			••	(H2+t4)		-	1			
	m³ –	7.791			(WI*(	H1+t1)•	B*H1/2	+( *\\	2)*(L5	H)		
	<sup>-</sup> m <sup>3</sup>	0.427			(((t+b/	2)*H+(i	+b)*t4)	*B2*2				N
	່ m <sup>3</sup>	0.917		:	(((1+b/	2)*(H1+	+(1)+(1+	b)*(1)*	B2)*2			-
	m <sup>3</sup>	0.411				+L7)*(I						
	m)	0.456	1	:		*(1+(15+		-	6)*i4*E	1		•
Total	m <sup>3</sup>	34.295			(12) (17)	(. (	,,		.,	•		
Total	111	34 27.1										
1 CH	m³	2 0 70			L *T ! ^ *	(L3+(L	T 23829	5/2.13				
Backfill		2.078				• •		72-0)		•		
-	m' :	0.850				+tl)*L5						
	<b>m</b> 3	0.049		1	b*H*B			:				
	m'	0.119			ρ+(H1-	+(I)*B2		: . ·	÷			,
Total	m <sup>3</sup>	3.096	÷	414		E E Constante La Constante				: 	. <u>.</u>	. jî
1											•	
Vet Masonry	m	16.496			((WI+	W2)/2*	H2-B*I	i)*(L3+	(L-L5)	5 <sup>11,5</sup> /2)		
	m <sup>3</sup>	0.343		1 - ÷	(t+b/2)	*H*B2	*2					
	m <sup>3</sup>	0.833			(t+b/2)	<sup>‡</sup> (HI+t	l)*B2*	2	1.1			
	ំពា <sup>រ</sup>	0.216		141		/2*(12-1	•				۰.	
	m <sup>3</sup>	0.075			(HI-14			·	1			
Total	m	17 963	-		(	,	Гэ 	1 + 4				
Totar	<b>H</b>	17,903		g tak	÷ -		1.1			; I		
				e e v	. 1 . 7	+L7)*(i	nin sh⊀ar	ei.				
Gravel	m³	0.411					· · ·	•		. At		i jet
	m³	5 204			- 1 - L	*(L3+(l	- A - 1 - 1	• 12+L	⊇-D			191
	m³	0.192			14*(1+1	o)*B1*2						
Total	m³	5.806								e un eño. Foiel		
					1.1.1							
<b>Gravel Surfacing</b>	m	2.380		$1 = 0^{10}$	L2*(B	+2 <sup>05</sup> *B	2)					
					. •			· .	са. 1			
										•		
					ana ina sair and							
				:								
	. `											
· · ·	: :							1.1	.1			

# Bill of Quantity of Chute (15m Height 12/12)

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## Unit Construction Cost of Chute (1/3, unit : Nu/ 1 m height)

Type	C1	Maxi	mum Discharge (l	/s)	1,104
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m <sup>3</sup>	66.355	30.61	2.031	
Backfill	m <sup>3</sup>	3.785	15.38	58	
Wet Masonry	m <sup>3</sup>	28.296	917.08	25.950	
Gravel	m <sup>3</sup>	10.773	206.60	2.226	
Gravel Surfacing		5.677	367.96	2.089	
Others	L.S			6,471	
Transportation	LS			5.824	
Total				44.648	
fro 1 m Height				2.977	
				-	a na sa n
Туре	C2	Maxi	mum Discharge (l	/s)	300
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m <sup>3</sup>	52.809	30.61	1.616	
Backfill	m <sup>3</sup>	3.192	15.38	49	
Wet Masonry	m <sup>3</sup>	24.448	917.08	22,420	
Gravel	 m <sup>3</sup>	9.499	206.60	1,962	· · · · · · · · · · · · · · · · · · ·
Gravel Surfacing	m	4.711	367.96	1,734	•
Others	LS			5.556	
Transportation	LS		te e la constante	: 5,001	
Total				38.339	
fro 1 m Height				2,556	i i
	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		: 1		
Туре	C3	Maxi	imum Discharge (	l/s)	803
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	: m <sup>3 :</sup>	54.532	30.61	1.669	
Backfill	m <sup>3</sup>	4.229	15.38	65	
Wet Masonry	· m³	24.254	917.08	22.243	
Gravel	m <sup>3</sup>	7.646	206.60	1,580	
Gravel Surfacing	m	3.546	367.96	1,305	
Others	LS			5,372	· · · · · · · · · · · · · · · · · · ·
Transportation	LS			4.835	
Total				37.069	
fro 1 m Height				2.471	
Туре	C1	Max	imum Discharge (	l/s)	467
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m	48.635	30.61	1,489	<u>e e e se sta</u>
Backfill	m'	3.650	15.38	56	
Wet Masonry	m'	22.585	917.08	20.712	
Gravel	m <sup>3</sup>	7.576	206.60	1.565	
	m	3 263	5.47	18	
				4,768	· · · · · · · · · · ·
Gravel Surfacing	1.5				
Gravel Surfacing Others	L.S L.S			4,291	
Gravel Surfacing Others Transportation	L.S L.S			32,899	
Gravel Surfacing Others	and the second s				
Gravel Surfacing Others Transportation	and the second s				· · · · · · · · · · · · · · · · · · ·

## Unit Construction Cost of Chute (2/3, unit : Nu/ 1 m height)

Туре	C5	Maxi	num Discharge (	Vs)	174
ltem	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m <sup>3</sup>	43.254	30.61	1.324	
Backfill	m <sup>3</sup>	3.120	: 15.38	48	
Wet Masonry	m <sup>3</sup>	21.010	917.08	19.268	•••
Gravel	m <sup>3</sup>	7.580	206.60	1.566	
Gravel Surfacing	m	3.263	5.47	18	
Others	LS			4,445	
Transportation	LS			4.000	
Total				30.669	
					· · · · · · · · · · · · · · · · · · ·
fro 1 m Height				2,045	
and and an an an ann an an an ann an ann an				Realization for the second second second second	an an an an an an an an an an an an an a
Туре	<u>C6</u>		num Discharge (		133
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	<u>m<sup>3</sup></u>	40.069	30.61	1.227	· · · · · · · · · · · · · · · · · · ·
Backfill	<sup>3</sup>	3.096	15.38	48	
Wet Masonry	m <sup>3</sup>	19.864	917.08	18,217	
Gravel	m'	6.940	206.60	1,434	
Gravel Surfacing	m	2.780	5.47	15	······································
Others	. L.S			4,188	
Transportation	L.S			3.769	
Total				28,898	
				· · · · ·	
fro 1 m Height				1.927	
		•			ile de XP oblet entretant as our allement
Type	<u>C7</u>		num Discharge (		392
Item	Unit	Quantity	Unit Price	Amount	392 Remark
Item Excavation	Unit m <sup>3</sup>	Quantity 47.365	Unit Price 30.61		
ltem Excavation Backfill	Unit m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229	Unit Price 30.61 15.38	Amount	
Item Excavation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365	Unit Price 30.61	Amount 1,450	
ltem Excavation Backfill	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229	Unit Price 30.61 15.38	Amount 1.450 65	
Item Excavation Backfill Wet Masonry Gravel Gravel Surfacing	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup>	Quantity 47.365 4.229 22.451	Unit Price 30.61 15.38 917.08	Amount 1.450 65 20.589	
Item Excavation Backfill Wet Masonry Dravel Gravel Surfacing Dthers	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S	Quantity 47.365 4.229 22.451 6.513	Unit Price 30.61 15.38 917.08 206.60	Amount 1.450 65 20.589 1.346	
Item Excavation Backfill Wet Masonry Dravel Dravel Stravel Surfacing Dthers Fransportation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup>	Quantity 47.365 4.229 22.451 6.513	Unit Price 30.61 15.38 917.08 206.60	Arnount 1.450 65 20.589 1.346 17 4.693 4.224	
Item Excavation Backfill Wet Masonry Dravel Gravel Surfacing Dthers	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S	Quantity 47.365 4.229 22.451 6.513	Unit Price 30.61 15.38 917.08 206.60	Amount 1.450 65 20.589 1.346 17 4.693	
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacine Dthers Transportation Total	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S	Quantity 47.365 4.229 22.451 6.513	Unit Price 30.61 15.38 917.08 206.60	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384	
Item Excavation Backfill Wet Masonry Dravel Dravel Stravel Surfacing Dthers Fransportation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S	Quantity 47.365 4.229 22.451 6.513	Unit Price 30.61 15.38 917.08 206.60	Arnount 1.450 65 20.589 1.346 17 4.693 4.224	
Item Excavation Backfill Wet Masonry Dravel Dravel Surfacing Differs Fransportation Total fro 1 m Height	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S	Quantity 47.365 4.229 22.451 6.513 3.146	Unit Price 30.61 15.38 917.08 206.60 5.47	Arnount 1.450 65 20,589 1.346 17 4.693 4.224 32,384 2.159	Remark
Item Excavation Backfill Wet Masonry Iravel Iravel Surfacing Others Iransportation Total fro 1 m Height Type	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> L.S L.S L.S C8	Quantity 47.365 4.229 22.451 6.513 3.146	Unit Price 30.61 15.38 917.08 206.60 5.47	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 I/s)	236
Item Exeavation Backfill Wet Masonry Fravel Fravel Surfacine Dthers Fransportation Total fro 1 m Height Type Item	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S L.S L.S C8 Unit	Quantity 47.365 4.229 22.451 6.513 3.146 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 I/s) Amount	Remark
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S C8 Unit m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 4 4 4 4 4 4 4 2.185	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 I/s)	236
Item Excavation Backfill Wet Masonry Dravel Dravel Dravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation Backfill	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> 1.S U.S U.S C8 Unit m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 4 4 4 4 4 4 4 2.185 3.650	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 1/s) Arnount 1.291 56	236
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S L.S L.S C8 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 4 4 4 4 4 4 4 2.185	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 I/s) Amount 1.291	236
Item Excavation Backfill Wet Masonry Dravel Dravel Dravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation Backfill	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> 1.S U.S U.S C8 Unit m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 4 4 4 4 4 4 4 2.185 3.650	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 1/s) Arnount 1.291 56	236
Item Exeavation Backfill Wet Masonry Fravel Fravel Surfacine Dthers Fransportation Total fro 1 m Height Type Item Excavation Backfill Vet Masonry	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S L.S L.S C8 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 Maxin Quantity 42.185 3.650 20.732	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 Us Amount 1.291 56 19,013	236
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation Backfill Wet Masonry Bravel	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S U.S C8 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 Maxin Quantity 42.185 3.650 20.732 6.443	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 17 4.693 4.224 32.384 2.159 1/s) Arnount 1.291 56 19,013 1.331	236
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Transportation Total Item Exeavation Backfill Wet Masonry Bravel Br	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S U.S C8 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 Maxin Quantity 42.185 3.650 20.732 6.443	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20,589 1.346 17 4.693 4.224 32.384 2.159 1/s) Amount 1.291 56 19,013 1.331 16	236
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Fransportation Total fro 1 m Height Type Item Excavation Backfill Vet Masonry Bravel Bravel Bravel Surfacing Dthers Excavation Backfill Fravel Bravel B	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S U.S U.S U.S U.S U.S M <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 Maxin Quantity 42.185 3.650 20.732 6.443	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20,589 1.346 17 4.693 4.224 32.384 2.159 1/s) Amount 1.291 56 19,013 1.331 16 4,341	236
Item Exeavation Backfill Wet Masonry Bravel Bravel Surfacing Dthers Total Total Total Total Total Bravel Br	Unit m <sup>3</sup> m <sup>3</sup> m <sup>2</sup> L.S U.S U.S U.S U.S U.S U.S M <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 47.365 4.229 22.451 6.513 3.146 Maxin Quantity 42.185 3.650 20.732 6.443	Unit Price 30.61 15.38 917.08 206.60 5.47 	Arnount 1.450 65 20.589 1.346 1.7 4.693 4.224 32.384 2.159 1/s) Amount 1.291 56 19,013 1.331 16 4,341 3,907	236

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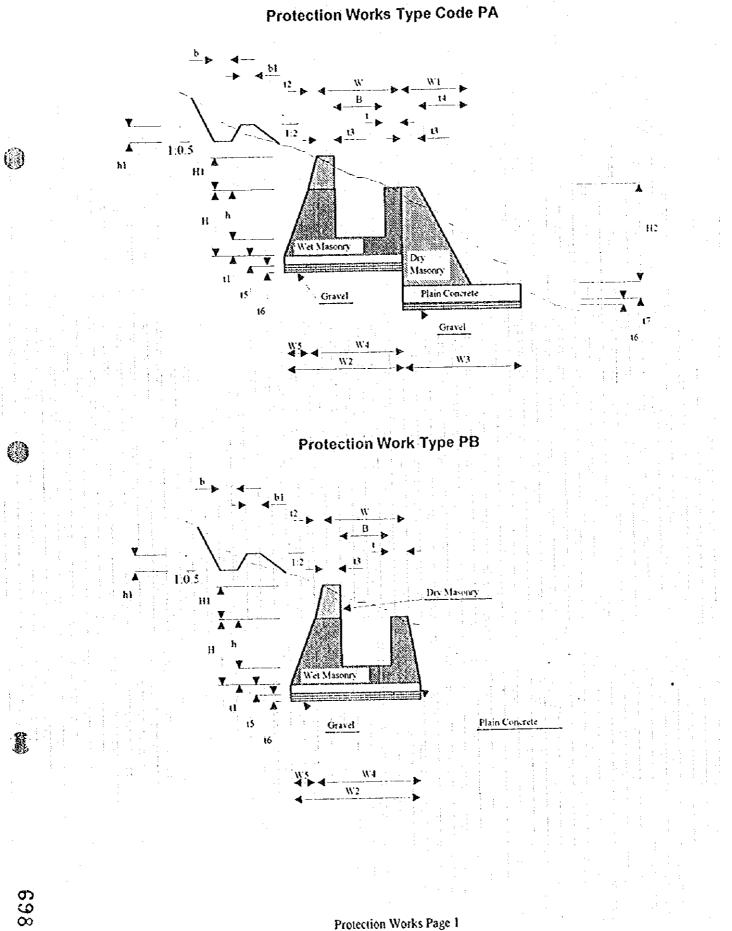
# Unit Construction Cost of Chute (3/3, unit : Nu/ 1 m height)

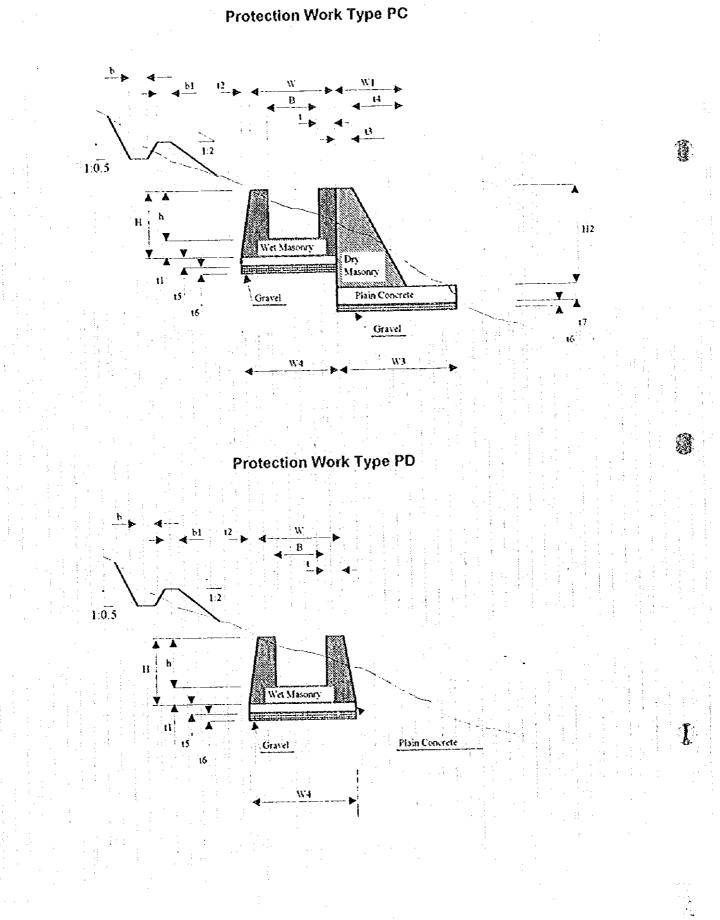
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Туре	C9	Maxir	num Discharge (V	s)	93
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m'	37.182	30.61	1.138	······
Backfill	m	3.096	15.38	48	
	m <sup>3</sup>	18.914	917.08	17.345	
Vet Masonry	m <sup>3</sup>	6.373	206.60	1,317	
Gravel	m		5.47	14	
Gravel Surfacing	m	2.580		3,972	
Dihers	L.S			3.575	
Fransportation	L.S			27,409	
Total					
				1:827	
fro 1 m Height					
and the second second second second second			mum Discharge (l	and a constant of the second second second second second second second second second second second second second	216
Туре	<u>C10</u>	the second second second second second second second second second second second second second second second s	Unit Price	Amount	Remark
Item	Unit	Quantity	a construction of the second second second second second second second second second second second second second	1.340	Itthora
Excavation	ໜ້	43.782	3(0.6)		
Backfill	m	4.229	15.38	65	
Wet Masonry	m <sup>3</sup>	21.549	917.08	19,762	
Gravel	m³	5.947	206.60	1.229	
Gravel Surfacing	m²	2.946	5.47	16	
Others	LS			4.482	
Transportation	LS			4,034	
Total				3(1.929	· · · · · · · · · · · · · · · · · · ·
fro 1 m Height				2.062	
					· · · · ·
Туре	C11	Maxi	mum Discharge (l	/s)	133
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation	n <sup>32</sup>	38.959	30.61	1,193	
Backfill	m <sup>3</sup>	3.650	15.38	56	
Wet Masonry	m	19.8(×6	917.08	18.164	1
	m <sup>3</sup>	5.876	206.60	1.214	
Gravel	Statement and a second statement	2.663	5,47	15	
Gravel Surfacing	<u>m<sup>2</sup></u>	2.003	J.47	4,128	
Others	LS			3,715	
Transportation	LS			28,485	
Total					1
				1.899	<u></u>
fro 1 m Height					
			Disaharga (		55
Туре	C12		imum Discharge (	Amount	Remark
Item	Unit	Quantity	Unit Price		
Excavation	<u> </u>	34.295	30.61	1,050	
Backfill	m³	3.096	15.38	48	
Wet Masonry	m <sup>3</sup>	17.963	917.08	16,473	
Gravel	m³	5.806	206.60	1,200	
Gravel Surfacing	m <sup>2</sup>	2.380	5.47	13	
Grater Surrachik	LS			3,757	·····
Others				3,381	
Others	21			and the second s	
Transportation	L.S	+		25,921	
	L.S			25,921	
Transportation	LS			1,728	

Chute Page 17





#### **Dimensions of Protection Works**

## Туре РА

B         h         H         H1         H2         W         W1         W2         W3         W4         W3           1.00         1.10         1.40         2.00         4.00         1.60         1.10         2.56         4.00         2.28         0.28           1         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.50         0.15         0.15         0.15           Type Code         PA2         Design Discharge         Q=         144         ~         288         (t/s)           0.80         0.80         1.10         2.24         4.00         2.02         0.22           t         11         12         13         t4         15         16         17         h1         b         b1           0.30         0.30         0.40         0.80         0.10         0.10         0.50         1.5         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.10         0.20	r	Туре	Code	PA1	Desi	gn Discha	rge	Q=	270	~	540	(l/s)
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				the second second second second second second second second second second second second second second second s	States of the local division of the local di	And the owner of the owner of the owner of the owner of the owner of the owner of the owner of the owner of the	White and the stand	WI	W2	W3	W4	- W5
t         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.1	$\mathbf{F}$			1.10	2.00	4.00	1.60	1.10	2.56	4.00	2.28	0.28
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	-		Second Street Stre		and the second se	(4	15	16	17	hl		<u>b1</u>
Type Code         PA2         Design Discharge         Q=         144         ~         288         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.80         0.80         1.10         2.00         4.00         1.40         1.10         2.24         4.00         2.02         0.22           i         11         12         13         t4         15         16         17         h1         b         bl           0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA3         Design Discharge         Q=         75         ~         150         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.70         1.00         2.00         4.00         1.10         1.90         4.00         1.15         0.15           0.30         0.40         0.40         1.10         1.86         4.00         1.68         0.18	-					0.80	0.10	0.10	0.50	0.15	and the second second second second second second second second second second second second second second second	A DESCRIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE
B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.80         0.80         1.10         2.00         4.00         1.40         1.10         2.24         4.00         2.02         0.22           t         11         12         t3         t4         15         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.50         0.15	•=		A REAL PROPERTY AND A REAL	The Party of the P	Desi	gn Discha	irge	Q=	144	~		(1/8)
0.80         0.80         1.10         2.00         4.00         1.40         1.10         2.24         4.00         2.02         0.22           t         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15         0.15           Type Code         PA3         Design Discharge         Q=         75         ~         150         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.70         1.00         2.00         4.00         1.10         1.90         4.00         1.70         0.20           t         t1         t2         t3         t4         t5         t6         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.50         0.15         0.15         0.15           Type Code         PA4         Design Discharge         Q= <td><math>\mathbf{F}</math></td> <td>The second second second second second second second second second second second second second second second se</td> <td></td> <td>And the owner of the owner of the owner of the owner of the owner of the owner</td> <td>and the second s</td> <td></td> <td>The state of the local division of the local</td> <td>WI</td> <td>W2</td> <td>W3</td> <td>W4</td> <td><i>W.3</i></td>	$\mathbf{F}$	The second second second second second second second second second second second second second second second se		And the owner of the owner of the owner of the owner of the owner of the owner	and the second s		The state of the local division of the local	WI	W2	W3	W4	<i>W.3</i>
t         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.50         0.15         0.15         0.15         0.15         0.15           Type Code         PA3         Design Discharge         Q=         75         ~         150         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.70         1.00         2.00         4.00         1.10         1.90         4.00         1.70         0.20           t         t1         t2         t3         t4         t5         t6         17         h1         b         b1           0.30         0.40         0.40         0.80         0.10         0.50         0.15         0.15         0.15         0.15           Type Code         PA4         Design Discharge         Q=         60         ~         120         (l/s)           B         h         H         H1         H2         W         W1         W2	}	and the second s			And the second s	4.00	1.40	1.10	2.24	4.00	2.02	0.22
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	•-		11	t2	<sup>5</sup> 13	t4	15	t6	<b>t</b> 7	hl	b	
Type Code         PA3         Design Discharge $Q^{=}$ 75         ~         150         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.70         1.00         2.00         4.00         1.10         1.10         1.90         4.00         1.70         0.20           t         t1         12         t3         t4         t5         t6         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.15         0.15         0.15         0.15           Type Code         PA4         Design Discharge $Q^{=}$ 60         ~         120         (U/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.10         1.86         4.00         1.68         0.18           t         t1         t2         t3         t4         15	F		0.30	0.40	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
B         h         H         H1         H2         W         W1         W2         W3         W4         W2           0.50         0.70         1.00         2.00         4.00         1.10         1.10         1.90         4.00         1.70         0.20           t         tl         tl         tl         tl         tl         tl         tl         tl         bl         bl           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.15         0.15         0.15           Type Code         PA4         Design Discharge         Q=         60         ~         120         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.86         4.00         1.68         0.18           t         tl         tl         tl         tl         tl         tl         bl         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15	F	to be a second second second	COMPANY OF SHOT METERS	train the contract of the second	Desi	ign Discha	nrg¢	Q=	75	<u>``</u>	150	
0.50         0.70         1.00         2.00         4.00         1.10         1.10         1.90         4.00         1.70         0.20           t         t1         t2         t3         t4         t5         t6         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15         0.15           Type Code         PA4         Design Discharge         Q=         60         ~         120         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.10         1.86         4.00         1.68         0.18           t         11         12         13         14         15         16         17         h1         b         b1           0.30         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA5         Design Discharge         Q= <td>┢</td> <td></td> <td>Construction of the local division of the lo</td> <td>н</td> <td>HI</td> <td>H2</td> <td>W</td> <td>ŴI</td> <td>W2</td> <td>- W3</td> <td>W4</td> <td>W5</td>	┢		Construction of the local division of the lo	н	HI	H2	W	ŴI	W2	- W3	W4	W5
t         ti         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15         0.15           Type Code         PA4         Design Discharge         Q=         60         ~         120         (Vs)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.10         1.86         4.00         1.68         0.18           t         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15         0.15	ŀ					4.00	1.10	1.10	1.90	4.00		
0.30 $0.30$ $0.40$ $0.80$ $0.10$ $0.50$ $0.15$ $0.16$ $0.10$ $0.50$ $0.60$ $1.68$ $0.18$ $0.18$ $0.18$ $0.18$ $0.18$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.15$ $0.15$ $0.15$ $0.15$ $0.15$ $0.15$ $0.15$ $0.15$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$ $0.16$	ł		and the second se	ŧ2	13	t4	15	t6 .	17	and the second s		
Type Code         PA4         Design Discharge         Q=         60         ~         120         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.10         1.86         4.00         1.68         0.18           t         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA5         Design Discharge         Q=         36         ~         72         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.50         0.80         2.00         4.00         1.00         1.10         1.72         4.00         1.56         0.16           1         t1         t2         t3         t4         t5         16 <td>ŀ</td> <td></td> <td></td> <td>and the second se</td> <td>0.40</td> <td>0.80</td> <td>0.10</td> <td>0.10</td> <td>0.50</td> <td>0.15</td> <td>0.15</td> <td>No. of Concession, Name</td>	ŀ			and the second se	0.40	0.80	0.10	0.10	0.50	0.15	0.15	No. of Concession, Name
B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.50         0.60         0.90         2.00         4.00         1.10         1.10         1.86         4.00         1.68         0.18           t         ti         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA5         Design Discharge         Q=         36         ~         72         (Vs)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.50         0.80         2.00         4.00         1.00         1.10         1.72         4.00         1.56         0.16           t         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80<	ŀ	a second second second second second	Contraction of the local division of the loc		Des	ign Disch:	arge	Q=		~		and the second se
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ŀ	and the second second second second second second second second second second second second second second second				the second second second second second second second second second second second second second second second s		WI	W2	A REAL PROPERTY AND A REAL		
t         ti         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.16         0.40         0.50         0.80         2.00         4.00         1.00         1.10         1.72         4.00         1.56         0.16         0.16         0.16         0.16         0.15         0.1	ŀ	and the second s			2.00	4.00	1.10	1.10	1.86	4.00	1,68	
0.30       0.30       0.40       0.40       product produc	ł			12	t3	14	15	16	· t7			
Type Code         PAS         Design Discharge $Q=36$ $\sim$ $72$ (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.50         0.80         2.00         4.00         1.00         1.10         1.72         4.00         1.56         0.16           t         t1         t2         t3         t4         t5         t6         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA6         Design Discharge         Q=         24 $\sim$ 48         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.40         0.70         2.00         4.00         1.00         1.10         1.68         4.00         1.54         0.14           t         t1         t2         t3         t4         t5         t6         <		. 0.30	0.30	0.40	0.40	0.80	0.10	0.10	0.50	0.15	0.15	A CONTRACTOR OF THE OWNER
B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.50         0.80         2.00         4.00         1.00         1.10         1.72         4.00         1.56         0.16           t         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA6         Design Discharge         Q=         24         ~         48         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.40         0.70         2.00         4.00         1.00         1.10         1.68         4.00         1.54         0.14           1         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80	ŀ	and the second state of th	Code	PA5	Des	ign Disch	arge	Q=	36	~	the second second second second second second second second second second second second second second second se	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ł	and the second se	T THE REAL PROPERTY NAMES OF TAXABLE PARTY.	Н	HI	H2	W	WI		W3		
t       t1       t2       t3       t4       t3       t6       t7       t1       t2       t3       t4       t5       t6       t7       h1       b       b1         0.40       0.40       0.70       2.00       4.00       1.00       1.10       1.68       4.00       1.54       0.14         1       11       12       13       14       15       16       t7       h1       b       b1       0.30       0.30       0.40       0.40       0.80       0.10       0.10       0.50       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15 </td <td>-</td> <td></td> <td>0.50</td> <td>0.80</td> <td>2.00</td> <td>4.00</td> <td>1.00</td> <td>- 1.10</td> <td>1.72</td> <td>4.00</td> <td>the second second second second second second second second second second second second second second second s</td> <td>and the second s</td>	-		0.50	0.80	2.00	4.00	1.00	- 1.10	1.72	4.00	the second second second second second second second second second second second second second second second s	and the second s
6.30       0.30       0.40       0.40       0.80       0.10	ľ	t	tl	12	6	t-1	15	16				
Image Code         PA0         Design Discharge         W         W2         W3         W4         W5           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.40         0.70         2.00         4.00         1.00         1.10         1.68         4.00         1.54         0.14           1         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA7         Design Discharge         Q=         27         ~         54         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.50         0.80         2.00         4.00         0.90         1.10         1.62         4.00         1.46         0.16           1         11         12         13         14         15         16	ł	0.30	0.30	0.40	0.40	0.80	0.10	0.10		0.15	Charles and the second	CONTRACTOR OF THE OWNER
B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.40         0.40         0.70         2.00         4.00         1.00         1.10         1.68         4.00         1.54         0.14           1         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA7         Design Discharge $Q= 27$ ~         54         (l/s)           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.50         0.80         2.00         4.00         0.90         1.10         1.62         4.00         1.46         0.16           t         11         12         13         14         15         (6         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         <		Type	Code	PA6	Des	ign Disch	arge	• Q=		~		Contraction of the local division of the loc
0.40       0.40       0.70       2.00       4.00       1.00       1.10       1.00       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.15       0.16	ť			Н	HI	H2	W.	W1				
1       11       12       13       14       13       16       16       11       11       12       15         0.30       0.30       0.40       0.40       0.80       0.10       0.10       0.50       0.15       0.15       0.15         Type Code       PA7       Design Discharge $Q=27$ $\sim$ 54       (l/s)         B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.50       0.80       2.00       4.00       0.90       1.10       1.62       4.00       1.46       0.16         t       11       12       t3       t4       15       t6       t7       h1       b       b1         0.30       0.30       0.40       0.40       0.80       0.10       0.10       0.50       0.15       0.15       0.15         0.30       0.30       0.40       0.40       0.80       0.10       0.10       0.50       0.15       0.15       0.15         0.30       0.30       0.40       0.40       0.80       0.10       0.10       0.50       0.15       0.15       0.15       0		0.40	0.40	0.70	2.00	4.00		1.10				
0.30       0.30       0.40       0.30       0.10       0.10       0.10       0.10         Type Code       PA7       Design Discharge $Q=27$ ~       54       (l/s)         B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.50       0.80       2.00       4.00       0.90       1.10       1.62       4.00       1.46       0.16         t       11       12       t3       t4       t5       t6       t7       h1       b       b1       0.30       0.30       0.40       0.80       0.10       0.10       0.50       0.15	ľ	1	11	t2	t3	1 t-1	15	t6 ···				La
Image: Second processor         PA7         Design Discharge         V         V         V         V3         V4         V5           B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.50         0.80         2.00         4.00         0.90         1.10         1.62         4.00         1.46         0.16           1         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA8         Design Discharge         Q=         18         ~         36         (Vs)	ľ	0.30	0.30	0.40	0.40	0.80	0.10		And the Party of t	0.15		
B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.50         0.80         2.00         4.00         0.90         1.10         1.62         4.00         1.46         0.16           t         11         12         13         14         15         16         17         h1         b         b1           0.30         0.30         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           0.30         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA8         Design Discharge         Q=         18         ~         36<(Vs)	: Ì	Туре	Code	PA7	De	sign Disch				-		in a second second second second second second second second second second second second second second second s
0.30         0.30         0.30         2.00         4.00         0.70         1.10         1.10         1.10         b         b1           t         t1         t2         t3         t4         t5         t6         t7         h1         b         b1           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           0.30         0.30         0.40         0.40         0.80         0.10         0.10         0.50         0.15         0.15         0.15           Type Code         PA8         Design Discharge         Q=         18         ~ 36         (Vs)			a second s	H	Н	H2	W					
1         11         12         13         14         15         16         16         17         18<	d I	0.30	0.50	0.80	2.00	4,00	0.90					
0.30         0.30         0.40         0.40         0.80         0.10         0.30         0.10         0.10         0.30         0.10 <th0.10< th="">         0.10         0.10         <th0< td=""><td></td><td>t</td><td>11</td><td>12</td><td>13</td><td>t-l</td><td>15</td><td></td><td></td><td></td><td></td><td></td></th0<></th0.10<>		t	11	12	13	t-l	15					
Type Coac ras Design Discharge with wall wall with with		0.30	0.30	0.40		L	. Lange and the second se	CONCERCIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE	- Contractor Contractor		June 1999	CONTRACTOR OF THE OWNER OF THE OWNER
		Тур	e Code	PA8	De							
		B	h	Н	HI	H2						
0.30 0.40 0.70 2.00 4.00 0.30 1.10		0.30	0.40	0.70	2.00	4.00			-			0.14
		l	tl	12								bl bl
0.30 0.30 0.40 0.40 0.80 0.10 0.10 0.50 0.15 0.15 0.15		0.30	0.30	0.40	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15

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## Type PB

t	h 1.10	PB1 H	HI	gn Discha H2		****	11/2	W3	- W4 - 1	- 11/2 I
t 0.30 ( Type Co				<b>n</b> 2	W	W1	W2			W5
t 0.30 ( Type Co		1.40	2.00		1.60	•	2.56	•	2.28	0.28
0.30 ( Type Co	tl	12	U I	14	15	<b>t</b> 6	t7	hl	b	b1
And the state of the second second second second second second second second second second second second second	0.30	0.40	0.40		0.10	0.10	-	0.15	0.15	0.15
And the second se	de	PB2	Desi	gn Disch.	arge	Q=	144	~		<u>{ /s)</u>
	h	Н	HI	H2	W	WI	W2	W3	¥	W5
0.80	0.80	1.10	2.00		1.40	-	2.24		2.02	0.22
t	tl	12	13	(4	15	16	17	<u>hl</u>	<u>b</u>	bl
0.30	0.30	0.40	0.40	• •	0.10	0.10	•	0.15	0.15	0.15
Туре Со	de	PB3	Desi	ign Disch	arge	Q=	75	: ~ ·		(l/s)
B	h	H	H1	H2	W.	WI	W2	W3	<u>W4</u>	<u>₩5</u>
0.50	0.70	1.00	2.00		1.10	•	1,90	-	1.70	0.20
	u	t2	t3	t4	<u>t5</u>	<u>t6</u>	t7	hl	b	<u>b1</u>
0.30	0.30	0.40	0.40	· •	0.10	0.10	-	0.15	0.15	0.15
Type Co	ode	PB4	Des	ign Disch	arge	Q=	60	~	120	<u>(l/s)</u>
B	h	Н	HI	H2	W	WI	W2	<u>W3</u>	W4	W5
0.50	0.60	0.90	2.00	-	1.10	-	1.86		1 68	0.18
1	tl	t2	<b>t</b> 3	t4	15	16	17	hl	<u>b</u>	<u>b1</u>
0.30	0.30	0.40	0.40	•	0.10	0.10	-	0.15	0.15	0.15
Type Co	ode	PB5	Des	ign Disch		Q=	36		72	<u>(l/s)</u>
В	h	Н	HI	H2	W	W1	W2	W3	WI	<u>W5</u>
0.40	0.50	0.80	2,00	-	1.00	-	1.72	-	1.56	0.16
(	11	12	13	tł	15	16	17	hl	b	<u>b1</u>
0.30	0.30	0.40	0.40	•	0.10	0.10		0.15	0.15	0.15
Type Co	ode	PB6	Des	ign Disch	arge	<u>Q=</u>	24	~	-48	<u>(I/s)</u>
B	h 📜	Н	HI	H2	W	WI	W2	W3	W4	W5
0.40	0.40	0.70	2.00	•	1.00		1.68		1.54	0.14
l l	tl	12	13	14	= <u>t5</u> -	t6	17	<u>h1</u>	b	bi
0.30	0.30	0.40	0.40	-	0.10	0.10	-	0.15	0.15	0.15
Type Co	ode	PB7	Des	sign Disch		<u>Q=</u>	NAME AND ADDRESS OF TAXABLE PARTY.	~	54	(l/s)
В	h	Н	H1	: H2	W	<u>wi</u>	W2	W3		<u>W5</u>
0.30	0.50	0.80	2.00		0.90	<u> </u>	1.62	•	1.46	0.16
1	tl i	t2	6	14	5	16	17	hl	<u>b</u>	bl
0.30	0,30	0.40	0.40	-	0.10	0.10	L	0.15	0.15	0.15
Type C	ode	PB8		sign Discl		Q=		~	36	<u>(Vs)</u>
B	h	Н	HI	H2	W	WI	W2	<u>W3</u>	W4	<u>W5</u>
0.30	0.40	0.70	2.00	<u> </u>	0.90	-	1.58	ļ	1.44	0,14
1	, tl 🗍	12	13	14	15	16	17	hl	b	<u>b1</u>
0.30	0.30	0.40	0.40	<u> </u>	0.10	0.10	•	0.15	0,15	0.15

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## Type PC

ſ	Туре	Code	PC1	Des	ign Discha	irge	Q=	270		540	(1/s)
Ì	В	h	Н	HI	H2	W	W1	W2	W.3	W4	W.5
ľ	1.00	1.10	1.40	2.00	4.00	1.60	1,10	·	- 4,00	1,70	-
1	t	t)	12	ß	t-l	じ	t6	17	hl	b	bl
Î	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
Ī	Туре	Code	PC2	Des	ign Discha	irge	Q=	144	~	288	(l/s)
Ī	В	h	H	HI	H2	W	W)	W2	W3	W.1	W3
	0,80	0.80	1.10	2.00	4.00	1.40	1,10	•	4,00	1.50	•
ſ	. 1	11	t2	13	t-l	15	16	17	hl	<u>_</u> b	bl
	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
	Type	Code	PC3	Des	ign Disch		Q=	75	~	150	(l/s)
	В	h	Н	HI	H2	W.	WI	W2	- W3	W 4	W3
-	0.50	0.70	1.00	2.00	4.00	1.10	1.10	-	4.00	1.20	-
·	t .	11	t2	B	t-l	15	16	t7 ·	hi	b	<u>b1</u>
ľ	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
ľ	Туре	Code	PC4	Des	ign Disch	arge	Q=	60	~	120	(I/s)
ľ	В	h	Н	HI	H2	W	WI	• W2	W3	W4	W5
÷	0.50	0.60	0.90	2.00	4.00	1.10	1.10	•	4.00	1.20	-
÷	l	t l	12	13	t-	t5	16	17	hl	b	b1
	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
Ì	Type	Code	PC5	Des	ign Disch	arge	Q=	36	~	72	(l/s)
	В	i h	Н	HI	H2	W	WI	W2	- W3	W4	W5
	B 0.40	h 0,50	H 0.80	H1 2.00	H2 4.00	W 1.00	W1 1.10	<u>W2</u>	W3 4,00	W4 1.10	
	0.40	0.50	0.80	2.00	4.00	1.00	1.10	-	4.00	1.10	
	0.40 I	0.50 t1 0.30	0.80 t2	2.00 13 0.40	4.00 14	1.00 t5 0.10	1.10 16	- 17	4.00 h1 0.15	1.10 b 0.15 48	bl
) - - -	0.40 1 0.30	0.50 t1 0.30	0.80 t2 0.10	2.00 13 0.40	4.00 14 0.80	1.00 t5 0.10	1.10 16 0.10	- 17 0.50	4.00 h1 0.15	1.10 b 0.15 48 W4	bl 0.15
- - - - -	0.40 1 0.30 Type	0.50 tl 0.30 Code	0.80 t2 0.10 PC6	2.00 13 0.40 Des	4.00 t4 0.80 ign Disch: H2 4.00	1.00 t5 0.10 arge	1.10 16 0.10 <b>Q</b> =	- 17 0.50 24	4.00 h1 0.15	1.10 b 0.15 48	bl 0.15 (l/s)
	0.40 t 0.30 Type B	0.50 (1 0.30 Code h	0.80 t2 0.10 PC6 H	2.00 13 0.40 Des H1	4.00 t4 0.80 ign Disch: H2	1.00 t5 0.10 Arge W	1.10 16 0.10 <b>Q</b> = W1	17 0.50 24 W2 -	4.00 h1 0.15 ~ W3 4.00 h1	1.10 b 0.15 48 W4 1.10 b	bl 0.15 (l/s)
	0.40 1 0.30 Type B 0.40	0.50 t1 0.30 Code h 0.40	0.80 t2 0.10 PC6 H 0.70	2.00 13 0.40 Des H1 2.00	4.00 t4 0.80 ign Disch: H2 4.00	1.00 t5 0.10 arge W 1.00	$   \begin{array}{r}     1.10 \\     16 \\     0.10 \\     \hline     \mathbf{Q} = \\     \hline     \mathbf{W1} \\     \overline{1.10}   \end{array} $	17 0.50 24 W2	4.00 h1 0.15 ~ W3 4.00	1.10 b 0.15 48 W4 1.10	bl 0,15 (I/s) W5
	0.40 t 0.30 Type B 0.40 t 0.30	0.50 t1 0.30 Code h 0.40 t1	0.80 12 0.10 PC6 H 0.70 12	2.00 13 0.40 Des H1 2.00 13 0.40	4.00 14 0.80 ign Disch: H2 4.00 14	1.00 (5 0.10 arge W 1.00 (5 0.10	$   \begin{array}{r}     1.10 \\     16 \\     0.10 \\     \hline     0 \\     0 \\     0 \\     \hline     0 \\     0$	- 17 0.50 24 W2 - 17 0.50 27	4.00 h) 0.15 	1.10 b 0.15 48 W4 1.10 b 0.15 54	bl 0,15 (l/s) bl 0,15 (l/s)
	0.40 t 0.30 Type B 0.40 t 0.30	0.50 tl 0.30 Code h 0.40 tl 0.30	0.80 t2 0.10 PC6 H 0.70 t2 0.10	2.00 13 0.40 Des H1 2.00 13 0.40	4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80	1.00 (5 0.10 arge W 1.00 (5 0.10	$   \begin{array}{r}     1.10 \\     16 \\     0.10 \\     \hline     \mathbf{Q} = \\     \hline     \mathbf{W1} \\     \hline     1.10 \\     16 \\     0.10 \\   \end{array} $	17 0.50 24 W2 17 0.50 27 W2	4.00 hl 0.15 ~ W3 4.00 hl 0.15	1.10 b 0.15 48 W4 1.10 b 0.15	bi 0.15 (l/s) W5 b1 0.15
	0.40 1 0.30 Type B 0.40 1 0.30 Type	0.50 tl 0.30 Code h 0.40 tl 0.30 Code	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7	2.00 13 0.40 Des H1 2.00 13 0.40 Des	4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80 ign Disch	1.00 t5 0.10 arge W 1.00 t5 0.10 arge	$ \begin{array}{r} 1.10\\ 16\\ 0.10\\ Q=\\ W1\\ 1.10\\ 16\\ 0.10\\ Q=\\ \end{array} $	- 17 0.50 24 W2 - 17 0.50 27	4.00 h) 0.15 	1.10 b 0.15 48 W4 1.10 b 0.15 54	bl 0,15 (l/s) W5 b1 0,15 (l/s)
	0.40 t 0.30 Type B 0.40 t 0.30 Type B	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1	4.00 t4 0.80 ign Disch H2 4.00 t4 0.80 ign Disch H2 4.00 t4	1.00 t5 0.10 arge W 1.00 t5 0.10 arge W	$   \begin{array}{r}     1.10 \\     16 \\     0.10 \\     Q = \\     W1 \\     1.10 \\     16 \\     0.10 \\     Q = \\     W1 \\   \end{array} $	17 0.50 24 W2 17 0.50 27 W2	4.00 h1 0.15 ~ W3 4.00 h1 0.15 ~ W3	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4	b1 0.15 (1/s) W5 b1 0.15 (1/s) (1/s) W5 b1
	0.40 1 0.30 Type B 0.40 1 0.30 Type B 0.30	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H 0.80	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 0.40 0.40	4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80 ign Disch:	1.00 (5 0.10 arge W 1.00 (5 0.10 arge W (0.90 (15 0.10	$   \begin{array}{r}     1.10 \\     16 \\     0.10 \\     Q = \\     W1 \\     1.10 \\     16 \\     0.10 \\     Q = \\     W1 \\     1.10 \\   \end{array} $	17 0.50 24 W2 - 17 0.50 27 W2	4.00 hl 0.15 ~ W3 4.00 hl 0.15 ~ W3 4.00	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00	bi 0,15 (l/s) W5 0,15 0,15 (l/s) W5 0,15
	0.40 1 0.30 Type B 0.40 t 0.30 Type B 0.30 t 0.30	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50 tl	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H 0.80 t2	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 0.40 0.40	4.00 t4 0.80 ign Disch H2 4.00 t4 0.80 ign Disch H2 4.00 t4	1.00 (5 0.10 arge W 1.00 (5 0.10 arge W (0.90 (15 0.10	$ \begin{array}{c} 1.10\\ 1.0\\ 0.10\\ -Q=\\ W1\\ 1.10\\ 1.0\\ -Q=\\ W1\\ 1.10\\ 1.0\\ -Q=\\ -W1\\ 0.10\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=$	- 17 0.50 24 W2 - 17 0.50 27 W2 - 17 0.50 18	4.00 h) 0.15 ~ W3 4.00 h) 0.15 ~ W3 4.00 h) 0.15 ~	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00 b	b1 0.15 (1/s) W5 b1 0.15 (1/s) (1/s) W5 b1
	0.40 1 0.30 Type B 0.40 t 0.30 Type B 0.30 t 0.30	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50 tl 0.30	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H 0.80 t2 0.10	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 0.40 0.40	4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80 ign Disch: H2 4.00 t4 0.80 ign Disch:	1.00 (5 0.10 arge W 1.00 (5 0.10 arge W (0.90 (15 0.10	$ \begin{array}{c} 1.10\\ 1.0\\ 0.10\\ Q = \\ W1\\ 1.10\\ 1.0\\ Q = \\ W1\\ 1.10\\ 1.0\\ 0.10 \end{array} $	- 17 0.50 24 W2 - 17 0.50 27 W2 - 17 0.50 27 - 17 0.50	4.00 h) 0.15 	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00 b 0.15	bi 0,15 (l/s) W5 0,15 0,15 (l/s) W5 0,15
	0.40 t 0.30 Type B 0.40 t 0.30 Type B 0.30 t 0.30 Type	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50 tl 0.30 Code	0.80 t2 0.10 PC6 H 0.70 12 0.10 PC7 H 0.80 t2 0.10 PC8	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des	4.00 14 0.80 iga Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 0.80 14 14 0.80 15 15 15 15 15 15 15 15 15 15	1.00 t5 0.10 arge W 1.00 t5 0.10 arge W i.0.90 i5 0.10 arge	$ \begin{array}{c} 1.10\\ 1.0\\ 0.10\\ -Q=\\ W1\\ 1.10\\ 1.0\\ -Q=\\ W1\\ 1.10\\ 1.0\\ -Q=\\ -W1\\ 0.10\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=\\ -Q=$	- 17 0.50 24 W2 - 17 0.50 27 W2 - 17 0.50 18	4.00 h) 0.15 ~ W3 4.00 h) 0.15 ~ W3 4.00 h) 0.15 ~	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00 b 0.15 36	b1 0,15 (1/s) W5 b1 0,15 (1/s) W5 b1 0,15 (1/s)
	0.40 t 0.30 Type B 0.40 t 0.40 t 0.30 Type B 0.30 t 0.30 Type B	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50 tl 0.30 Code h	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H 0.80 t2 0.10 PC8 H	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 H1 A B A B B B B B B B B B B B B B	4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 ign Disch: H2 4.00 14 0.80 14 12 0.80 14 0.80 14 0.80 14 12 0.80 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 12 14 14 12 14 12 14 12 14 14 14 12 14 14 14 14 14 14 14 14 14 14	1.00 (5 0.10 arge W 1.00 (5 0.10 arge W 0.90 (5 0.10 arge W	1.10 (6 0.10 Q= W1 1.10 (6 0.10 Q= W1 1.10 (6 0.10 Q= W1	- 17 0.50 24 W2 - 17 0.50 27 W2 - 17 0.50 18 W2	4.00 hl 0.15 ~ W3 4.00 hl 0.15 ~ W3 4.00 hl 0.15 ~ W3 4.00 hl	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00 b 0.15 36 W4	bl 0,15 (l/s) W5 bl 0,15 (l/s) W5 bl 0,15 (l/s) U(s) W5 W5
	0.40 t 0.30 Type B 0.40 t 0.30 Type B 0.30 t 0.30 Type B 0.30	0.50 tl 0.30 Code h 0.40 tl 0.30 Code h 0.50 tl 0.30 Code h 0.30	0.80 t2 0.10 PC6 H 0.70 t2 0.10 PC7 H 0.30 t2 0.10 PC8 H 0.70	2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 13 0.40 Des H1 2.00 Des	4.00 t4 0.80 ign Disch H2 4.00 t4 0.80 ign Disch H2 4.00 t4 0.80 ign Disch H2 4.00 t4	1.00 (5 0.10 arge W 1.00 (5 0.10 arge W (0.90 (15 0.10 arge W 0.90	$ \begin{array}{c} 1.10\\ 6\\ 0.10\\ Q=\\ W1\\ 1.10\\ 6\\ 0.10\\ Q=\\ W1\\ 1.10\\ 6\\ 0.10\\ Q=\\ W1\\ 1.10\\ 0 \end{array} $	- 17 0.50 24 W2 - 17 0.50 27 W2 - 17 0.50 18 W2 -	4.00 h1 0.15 ~ W3 4.00 h1 0.15 ~ W3 4.00 h1 0.15 ~ W3 4.00	1.10 b 0.15 48 W4 1.10 b 0.15 54 W4 1.00 b 0.15 36 W4 1.00	b1 0.15 (1/s) W5 b1 0.15 (1/s) W5 b1 0.15 (1/s) W5 W5

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#### **Dimensions of Protection Works**

## Type PD

						<u></u>	270		540	(l/s)
Туре	And the state of the local division in the l	PD1	The second second second second second second second second second second second second second second second s	ign Discha		<u>Q=</u>		<u></u>	W4	W5
В	<u>h</u>	<u> </u>	HI	<u>H2</u>	W	<u></u> W1		<u> </u>	$\frac{374}{1.80}$	
1.00	1.10	1.40	2.00		1.60				- <u>1.69</u> 8	bl
t	<u>tl</u>	12	13	14	15 .	16		0.15	0.15	0.15
0.30	0.30	0.10	-		0.10	0.10			288	CONTRACTOR OF THE
Туре	and the second se	PD2		ign Discha		<u>Q</u> =	144	<u> </u>		<u>(1/s)</u> W5
B	<u>h</u>	H	HI	<u>H2</u>	W	W1	W2	W3	<u>W4</u> 1.60	<u> </u>
- 0.80	0.80	1 10	2.00	-	1.40			-	1.00 b	 b1
t	11	<u>t2</u>	13	tł	15	16		hl		0.15
0.30	0.30	0.10	-	-	0,10	0.10	-	0.15	0,15	
Туре	Code	PD3	Des	ign Disch:	and a state of the	<u>Q=</u>	75	~	150	( <i>U</i> /s)
В	h	Н	HI	H2	<u>W</u> .	<u>W1</u>	-W2	W3		W5
0.50	0.70	1.00	2.00	*	1.10	-			1.30	
t	tl	12	13	14	15	16	17	hl	<u>b</u>	bl
0.30	0.30	0.10	-	•	0.10	0.10	-	0.15	0.15	0.15
Туре	Code	PD4	Des	ign Discha	arge	Q=	60	~	120	<u>(l/s)</u>
В	h	н	H	H2	W	WI	W2	<u>W3</u>	W4/	W5 -
0.50	0.60	0.90	2.00	-	1.10		-		1.30	• • • • •
t	tl	12	13	t4	្រ	16	17	hl	b	<u>b1</u>
0.30	0.30	0.10	-	-	0.10	0.10	•	0.15	0.15	0.15
Туре	Code	PD5	Des	ign Disch	arge	Q=	36	~	72	<u>(l/s)</u>
В	h	Н	HI	H2	W	WI	W2	<u>W3</u>	W4	<u>W3</u>
0.40	0.50	0.80	2.00	•	1.00	•	•		1.20	
t t	<u>t</u>	t2	13	t-i	15	16	17	hl	b	bl
0.30	0.30	0.10	•	-	0.10	0.10		0.15	0.15	0.15
Type	Code	PD6	Des	ign Disch	arge	Q=	24	~	-48	<u>(l/s)</u>
B	h	H	HI	H2	- <b>W</b> - 2	WI	W2	W3	<u>W4</u>	* W5
0.40	0.40	0.70	2.00	-	1.00		-	-	1.20	
t t	1	t2	t3	£4	15	16	17	hl	<u>b</u>	<u>b1</u>
0.30	0.30	0.10	•	•	0.10	0.10	-	0.15	0.15	0.15
Type	Code	PD7	Des	sign Disch	arge	Q=	27	~	54	(l/s)
B	h	Н	Н	H2	W	WI	• W2	W3	W4	W5
0.30	0.50	0.80	2.00	-	0.90	•	•	•	1.10	
t	11	12	13	14	15	16	17	<sup>1</sup> hl	<b>b</b>	61
0.30	0.30	0.10		1	0.10	0.10	-	0.15	0.15	0.15
Type	Code	PD8	De	sign Disch	arge	Q=	18	~	36	(l/s)
В	h	н	HI	H2	W	WI	W2	W3	W4	W5
0.30	0.40	0.70	2.00	<u> </u>	0.90		· ·		- 1.10	-
		+	13	14	15	16	17	hl	b	ы
1	1 1 1	12	L 10	1 17						
	0.30	0.10	•		0.10	0.10		0,15	0.15	0.15

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# BQ of Protection Works for 1 m (1/16)

. <b>F</b>	TAMA	20140-14 <b>1-1</b> -17/2	PAI				Q=	270		540	- (l/s)	
	Type	В	h	Н	HI	H2	11	W1	11.5	W3	W4	W3
	Dimensions	1.00	1.10	1.40	2.00	4.00	- 1.60	1.10	2.56	1.00	2.28	0.28
		1.00	<u>tl</u>	12	13	14	15	<b>t</b> 6	t	hl	b	bl
ł		0.30	0.30	0.40	0.40	0.80	0.10	0,10	0.50	015	0.15	015
ŀ	Item	Unit	Quantity		1999 - 1999 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -	A THE CONTROL OF		Equation	1			
	110111											
	Excavation	m'	6.656			W2*(H	+H1/2+t	5+16)				
	EXCAVATION	m <sup>3</sup>	9.200			W3*(H	2+16+17)	/2				
		m <sup>3</sup>	0.034			h]*(l+	0.5)*b		: .			· i
		 ກ <sup>3</sup>	-0.550			-h*B/2						
		m <sup>3</sup>	15.340					·			:	
	Total	m	13.340	-				1	•			· · · · ·
		, ,		н. 1		W5+14	2+1115+	(2/2)*H		- <u>† 1</u>	8 - 1 -	1
	Backfill	m³ .	1.156			M J 11	2 . (	(2,2,11)		· · ·	•	1. 
		1		· · .		b1*h1/	<b>ว</b>				•	
	Embankment	m³	0.011	ļ		01-117	2		· ·			
				1		: • 28 h. = 4 P	*/D±+\	13+13+11	'2-B-1)*	H/2		
	Wet Masonry	m³	2.162	1 J -	· .	1-0+11	יינסדווים	(1) 12 1 1	12-0-17			
							~~*III   /		3+112		an an an an an an an an an an an an an a	
	Dry Masonry	m <sup>3</sup>	4.200			(13+12)	2)*H1+l	(t3+W1)/	2.117			
			1. A.	4.1								
	Plain Concrete	m³	2.250		t	15*W2	+17*W3	an an an				
			1.1.1			1						
	Gravel	m <sup>3</sup>	0.650	5 C		16*(W	2+W3)					· · · ·
÷ .			1	1		· · ·		, : 				فيراددون ويتبار والوريية المزر
		VILLENCE TO PORT	States of the local division of the local di	The survey of the local division of the loca	Cart William Street		<u> </u>	116				
	Туре	,	PA2			1 บา	Q=	144 W	$\overline{w_2}$	288	(l/s)	W5
	Type Dimensions	B	h		H1 2.00	H2	W	WI	<u>W2</u> 2.24	W3	W4	
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		0.80	h 0.80	1.10	2.00	4.00	W 1.40	W1 1,10		W3	W4	
		0.80 t	h 0.80 tl	1.10 t2	2.00 t3	4.00	W 1.40 15	W1 1.10 16	2.24 17	W3 4.00 h1	W4 2.02 b	0.22 b1
	Dimensions	0.80 t 0.30	h 0.80 tl 0.30	1.10 12 0.40	2.00 t3	4.00	W 1.40 15	W1 1.10 16 0.10	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
tinationalise and the second se		0.80 t	h 0.80 tl 0.30	1.10 12 0.40	2.00 t3	4.00	W 1.40 15	W1 1.10 16	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
	Dimensions	0.80 t 0.30 Unit	h 0.80 tl 0.30 Quantity	1.10 12 0.40	2.00 t3	4.00 14 0.80	W 1.40 t5 0.10	W1 1.10 16 0.10 Equati	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
and the second se	Dimensions	0.80 t 0.30 Unit	h 0.80 11 0.30 Quantity 5.15	1.10 12 0.40 2	2.00 t3	4.00 14 0.80	W 1.40 15 0.10 H+H1/2	W1 1.10 16 0.10 Equati +(5+(6)	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
a service and the service of the ser	Dimensions	0.80 t 0.30 Unit	h 0.80 tl 0.30 Quantity 5.15 9.20	1.10 t2 0.40	2.00 t3	4.00 14 0.80 W2*( W3*(	W 1.40 t5 0.10 H+H1/2 H2+t6+t	W1 1.10 16 0.10 Equati +t5+16) 7)/2	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
an a state and a state of the	Dimensions	0.80 t 0.30 Unit ni <sup>3</sup> m <sup>3</sup>	h 0,80 11 0,30 Quantity 5,15 9,20 0,03	1.10 12 0.40 2 4	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b	W1 1.10 16 0.10 Equati +t5+16) 7)/2	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
	Dimensions	0.80 t 0.30 Unit	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32	1.10 12 0.40 2 0 4 0	2.00 t3	4.00 14 0.80 W2*( W3*(	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b	W1 1.10 16 0.10 Equati +t5+16) 7)/2	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
<ul> <li>A start of the sta</li></ul>	Dimensions	0.80 t 0.30 Unit ni <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32	1.10 12 0.40 2 0 4 0	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b	W1 1.10 16 0.10 Equati +t5+16) 7)/2	2.24 17 0.50	W3 4.00 h1	W4 2.02 b	0.22 b1
	Dimensions Item Excavation	0.80 t 0.30 Unit	h 0,80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06	1.10 12 0.40 2 0 4 4 0 6	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B	W 1.40 15 0.10 H+H1/2 H2+t6+t +0.5)*b 2	W1 1.10 16 0.10 Equati +(5+(6) 7)/2	2.24 (7 0.54	W3 4.00 h1	W4 2.02 b	0.22 b1
(a) a set of a set	Dimensions Item Excavation	0.80 t 0.30 Unit	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06	1.10 12 0.40 2 0 4 4 0 6	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B	W 1.40 15 0.10 H+H1/2 H2+t6+t +0.5)*b 2	W1 1.10 16 0.10 Equati +t5+16) 7)/2	2.24 (7 0.54	W3 4.00 h1	W4 2.02 b	0.22 b1
<ul> <li>A state of the sta</li></ul>	Dimensions Item Excavation Total	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90	1.10 12 0.40 2 0 4 4 0 6	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*)	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W:	W1 1.10 16 0.10 Equati +(5+(6) 7)/2	2.24 (7 0.54	W3 4.00 h1	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90	1.10 12 0.40 2 0 4 4 0 6	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W:	W1 1.10 16 0.10 Equati +(5+(6) 7)/2	2.24 (7 0.54	W3 4.00 h1	W4 2.02 b	0.22 b1
<ul> <li>a set a se</li> </ul>	Dimensions Item Excavation Total	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90	1.10 12 0.40 2 0 4 4 0 6	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2	W1 1.10 (6) 0.10 Equati +(5+16) 7)/2	2 24 17 0.5(1	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90	1.10 12 0.40 2 0 1 4 0 6 1	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2	W1 1.10 (6) 0.10 Equati +(5+16) 7)/2	2.24 (7 0.54	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
<ul> <li>A set of the set of</li></ul>	Dimensions Item Excavation Total Backfill	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90	1.10 12 0.40 2 0 1 4 0 6 1	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B W5*) b1*h t*h+	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t)	W1 1.10 16 0.10 Equati +t5+16) 7)/2 5+12/2)*1 +(13+12+1	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01	1.10 12 0.40 2 0 4 4 0 6 6 5 1 37	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B W5*) b1*h t*h+	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t)	W1 1.10 (6) 0.10 Equati +(5+16) 7)/2	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01	1.10 12 0.40 2 0 4 4 0 6 6 5 1 37	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B W5*) b1*h t*h+	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t)	W1 1.10 16 0.10 Equati +t5+16) 7)/2 5+12/2)*1 +(13+12+1	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01 1.61	1.10 12 0.40 2 0 4 4 0 6 6 11	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h (t3+t	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t)	W1 1.10 16 0.10 Equati +t5+16) 7)/2 5+12/2)*1 +(13+12+1 +(13+W)	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01 1.61	1.10 12 0.40 2 0 4 4 0 6 6 37	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h (t3+t	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t) 2/2)*H1	W1 1.10 16 0.10 Equati +t5+16) 7)/2 5+12/2)*1 +(13+12+1 +(13+W)	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01 1.61 3 2.2	1.10 12 0.40 2 0 4 0 6 5 1 1 37 24	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h t*h+ (t3+t) (t3+t)	W 1.40 t5 0.10 H+H1/2 H2+t6+t +0.5)*b 2 H/2+(W: 1/2 t1*(B+t) 2/2)*H1	W1 1.10 16 0.10 Equati +(15+16) 7)/2 5+(2/2)*] +(13+12+1 +(13+W /3	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.80 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.80 11 0.30 Quantity 5.15 9.20 0.03 -0.32 14.06 0.90 0.01 1.61 3 2.2	1.10 12 0.40 2 0 4 0 6 5 1 1 37 24	2.00 t3	4.00 14 0.80 W2*( W3*( h1*(1 -h*B) W5*) b1*h t*h+ (t3+t) (t3+t)	W 1.40 15 0.10 H+H1/2 H2+t6+t1 +0.5)*b 2 H/2+(W: 1/2 t1*(B+t) 2/2)*H1 2/2)*H1 V2+t7*W	W1 1.10 16 0.10 Equati +(15+16) 7)/2 5+(2/2)*] +(13+12+1 +(13+W /3	2.24 (7 0.50 on	W3 4.00 h1 0.15	W4 2.02 b	0.22 b1

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## BQ of Protection Works for 1 m (2/16)

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Туре	and a state of the second	PA3			:	Q=	75	~	150	(l/s)	
Dimensions	В	h	Н	ĤI	H2	W	WI	W2	W.3	W4	
	0.50	0.70	1.00	2.00	4.00	1.10	1.10	1.90	4.00	1.70	0.20
	1	11	12	13	t4	15	16	17	hl	b	61
Sectors and the sector of the sector	0.30	0.30	0.40	0.40	0,80	0.10	0.10	0.50	0.15	0.15	0.15
ltem	Unit	Quantity				a fa de servicio de Vertera ana. A	Equation				
	,										
Excavation	m <sup>3</sup>	4.180				+H1/2+t					
Edd (1997)	m³	9.200			•	2+16+17)	12				·
	m	0.034	н. С		h <b>ì*(</b> 1+(	).5 <b>)*</b> b					
	m <sup>3</sup>	-0.175	· ·		-h*B/2						
Total	m³	13.239									
Backfill	m <sup>3</sup>	0.900			W5*H/2	2+(W5+t	2/2)*H1				
											· .
Embankment	m³	0.011			b1*h1/2				1	:	
					f						1
Wet Masonry	m'	1.400			1*h+t1*	(B+t)+(t	3+t2+W	2-B-1)*H	/2		
				금격			:		19 J		
Dry Masonry	m³_	4.200			(13+12/2	?)*H1+(t	3+WI)/2	*H2	· ·		
									1		
Plain Concrete	m³	2.190			15*W2+	17*W3					
		4 · · · · · · · · · · · · · · · · · · ·			· · ·				•		
Gravel	٣'	0,590		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	16*(W2	+₩3) [			14		
				100 A. 100 A.							
	-			and the second second second second second second second second second second second second second second secon	reparate and the second second second			- total and the	130	(1/2)	and the second second second second second second second second second second second second second second secon
Туре		PA4				Q=	60	~	120	(l/s)	I ws
Type Dimensions	B	h	H	H1	H2	W	WE	W2	W3	W4	W5
NAMES OF TAXABLE PARTY AND ADDRESS OF TAXABLE PARTY.	0.50	h 0.60	0.90	2.00	4.00	W 1.10	Wi 1.10	W2 1.86	W3 4.00	W4 1.68	0.18
NAMES OF TAXABLE PARTY AND ADDRESS OF TAXABLE PARTY.	0.50 t	h 0,60 11	0.90 t2	2.00 13	1.00 t4	W 1.10 15	W1 1.10 (6	W2 1.86 17	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions	0.50 t 0.30	h 0.60 11 0.30	0.90	2.00	4.00	W 1.10 15 '0.10	W1 1.10 (6 0.10	W2 1.86 17 0.50	W3 4.00	W4 1.68	0.18
NAMES OF TAXABLE PARTY AND ADDRESS OF TAXABLE PARTY.	0.50 t	h 0,60 11	0.90 t2	2.00 13	1.00 t4	W 1.10 15 '0.10	W1 1.10 (6	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item	0.50 t 0.30 Unit	h 0.60 11 0.30 Quantity	0.90 t2 0.40	2.00 13	4,00 14 0.80	W 1.10 15 0.10	W1 1.10 (6 0.10 Equation	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions	0.50 t 0.30 Unit m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906	0.90 12 0.40	2.00 13	4.00 (4 0.80 W2*(H	W 1.10 15 0.10 +H1/2+1	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200	0.90 t2 0.40	2.00 13	4.00 (4 0.80 W2*(H W3*(H	W 1.10 15 0.10 +H1/2+t 2+t6+t7)	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034	0.90 t2 0.40	2.00 13	4.00 (4 (0.80) W2*(H W3*(H h)*(1+	W 1.10 15 0.10 +H1/2+1 2+(6+17) 0.5)*b	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150	0.90 t2 0.40	2.00 13	4.00 (4 0.80 W2*(H W3*(H	W 1.10 15 0.10 +H1/2+1 2+(6+17) 0.5)*b	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034	0.90 t2 0.40	2.00 13	4.00 (4 (0.80) W2*(H W3*(H h)*(1+	W 1.10 15 0.10 +H1/2+1 2+(6+17) 0.5)*b	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2	W 1.10 15 0.10 +H1/2+1 2+16+17) 0.5)*b	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 t7 0.50 1	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2	W 1.10 15 0.10 +H1/2+1 2+16+17) 0.5)*b	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 t7 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841	0.90 t2 0.40	2.00 13	4.00 (4 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 t7 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 t7 0.50	W3 4.00 h1	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/	W 1.10 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+ 2	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/	W 1.10 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+ 2	W1 1.10 (6 0.10 Equation 5+(6)	W2 1.86 17 0.50	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011 1.257	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/ t*h+t1	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+ 2 (B+t)+(	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50 1 2-B-1)*H	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011	0.90 t2 0.40	2.00 13	4.00 t4 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/ t*h+t1	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+ 2 (B+t)+(	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50 1 2-B-1)*H	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011 1.257 4.200	0.90 t2 0.40	2.00 13	4.00 14 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/, t*h+t1 (t3+t2/	W 1.10 15 0.10 +H1/2+t 2+t(W5+ 2+t(W5+ 2 *(B+t)+t( 2)*H1+t(	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50 1 2-B-1)*H	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011 1.257	0.90 t2 0.40	2.00 13	4.00 14 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/, t*h+t1 (t3+t2/	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+ 2 (B+t)+(	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50 1 2-B-1)*H	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1
Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.50 t 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.60 11 0.30 Quantity 3.906 9.200 0.034 -0.150 12.990 0.841 0.011 1.257 4.200	0.90 t2 0.40	2.00 13	4.00 14 0.80 W2*(H W3*(H h1*(1+ -h*B/2 W5*H/ b1*h1/, t*h+t1 (t3+t2/	W 1.10 15 0.10 +H1/2+t 2+t6+t7) 0.5)*b 2+(W5+ 2 *(B+t)+( 2)*H1+(t +t7*W3	W1 1.10 (6 0.10 Equation 5+(6) )/2	W2 1.86 17 0.50 1 2-B-1)*H	W3 4.00 h1 0.15	W4 1.68 b	0.18 b1

#### BQ of Protection Works for 1 m (3/16)

1	Туре		PA5		and the second second second second second second second second second second second second second second secon	@@#`\$\```\$```\$ <b>```</b> \$	Q=	36	~	72	: (1/s)	
	Dimensions	В	h	H	HI	H2	Ŵ.	\\']	W2	W3	W.†.	W.S
	Differingus	0.40	0.50	0.80	2.00	4.00	1.00	1.10	1.72	4.00	1.56	0,16
		• t	11	12	13	14	15	16	17	hl	b	<b>Ь</b> І.
		0.30	0.30	0.40	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
	Item	Unit	Same and the second second second second second second second second second second second second second second	10.900 Lange with - 2.90				Equation	A supervision of the state	ALCONO.	ant anticent a spinst car. B	1. 2. C. 2.
	ncm	Unit	Quantity				<u></u>	Lquanta		al por approximate difference		
+	<b>n</b>	m³	2 10			UI0#/UI	H1/2+t5	(146)				
	Excavation		3.440			-						
		m³	9.200				2+16+17).	2			- 1	
		m³	0.034			h <b>i*(</b> 1+0	).5)*b	· · · · ·		· ·		-
		. m <sup>3</sup>	-0.100			-h*B/2			· . 1	1	1	
	Total	m <sup>3</sup>	12.574							:		
								· .		1	•	
	Backfill	m'	0.784			W5*H/2	2+(W5+t	2/2)*HI				
								· .	1		·	
	Embankment	m	0.011			b1*h1/2	t i s		1 . · ·			
÷						· · · · ·	• •		· · ·			; ;
j	Wet Masonry	m3	1.088		·	1*h+t1*	(B+1)+(i	3+12+W	2-B-1)*H	/2		
	weemasoniy	411	1.000			1 11-11						
1	Dn: Macanni	m'	4.200	- -		(13+17/7	)*H1+(t	3+W1V2	9*H2			
	Dry Masonry	111	4.200	· · · ·	· .	(1) (2/2	.) m.u				• •	:
		: 3			e de la	1241031			a, i			
	Plain Concrete	m	2.172			(5*W2+	UTW3			an tell. Tell a la com		1
					аланы. Ар					· · · · ·	· · ·	
	Gravel	m³	0.572			t6*(W2	+W3)	1.1	5			
									· · · · · · · · · · · · · · · · · · ·			
	CROCKETCHING IN THE OWNER WATCHING TO BE				1		~~~~			10	(1)(-)	
	Type	B	PA6		- HI	Пну	Q=	24		48  3	(1/s)	T W5
	Type Dimensions	B	h	H 0.70	81 2.00	H2	W	W1	W2	W3	Wi	W5
	and the second second second second second second second second second second second second second second second	0.40	h 0.40	0.70	2.00	4.00	W 1.00	- W1 1.10	W2 1.68	W3 4.00	W4 1.54	0.14
	and the second second second second second second second second second second second second second second second	0.40 1	h 0,40 tl	0.70	2.00 t3	4.0() t4	W 1.00 15	W1 1.10 t6	W2 1.68 17	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions	0.40 1 0.30	h 0.40 tl 0.30	0.70	2.00	4.00	W 1.00	W1 1.10 t6 0.10	W2 1.68 17 0.50	W3 4.00	W4 1.54	0.14
	and the second second second second second second second second second second second second second second second	0.40 1	h 0,40 tl	0.70	2.00 t3	4.0() t4	W 1.00 15	W1 1.10 t6	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item	0.40 1 0.30 Unit	h 0.40 11 0.30 Quantity	0.70 12 0.40	2.00 t3	4.00 t4 0.80	W 1.00 15 0.10	W1 1.10 16 0.10 Equatio	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions	0.40 1 0.30 Unit m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192	0.70 12 0.40	2.00 t3	4.00 t4 0.80 W2*(H	W 1.00 15 0.10 +H1/2+1	W1 1.10 t6 0.10 Equatio 5+16)	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200	0.70 12 0.40	2.00 t3	4.00 t4 0.80 W2*(H W3*(H	W 1.00 15 0.10 +H1/2+1 2+t6+t7)	W1 1.10 t6 0.10 Equatio 5+16)	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034	0.70 12 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h]*()+0	W 1.00 15 0.10 +H1/2+1 2+t6+t7)	W1 1.10 t6 0.10 Equatio 5+16)	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200	0.70 12 0.40	2.00 t3	4.00 t4 0.80 W2*(H W3*(H	W 1.00 15 0.10 +H1/2+1 2+t6+t7)	W1 1.10 t6 0.10 Equatio 5+16)	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034	0.70 12 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h]*()+0	W 1.00 15 0.10 +H1/2+1 2+t6+t7)	W1 1.10 t6 0.10 Equatio 5+16)	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080	0.70 12 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2	W 1.00 15 0.10 +H1/2+1 2+t6+t7)	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*()+0 -h*B/2 W5*H/	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011	0.70 (2 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2 W5*H/ b1*h1/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729	0.70 (2 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2 W5*H/ b1*h1/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+	W1 1.10 16 0.10 Equatio 5+16) /2	W2 1.68 17 0.50	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011 0.953	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*()+0 -h*B/2 W5*H/ b1*h1/2 t*h+t1*	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+ 2 (B+i)+(i)	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*()+0 -h*B/2 W5*H/ b1*h1/2 t*h+t1*	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011 0.953 4.200	0.70 12 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2 W5*H/ b1*h1/2 t*h+t1* (t3+t2/2	W 1.00 15 0.10 +H1/2+1 2+t6+t7) 0.5)*b 2+(W5+ 2 (B+t)+(t) 2)*H1+(t)	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011 0.953	0.70 12 0.40	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2 W5*H/ b1*h1/2 t*h+t1* (13+12/2	W 1.00 15 0.10 +H1/2+1 2+16+17) 0.5)*b 2+(W5+ 2 (B+i)+(i)	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011 0.953 4.200 2.168	0.70	2.00 t3	4.00 (4 0.80 W2*(H W3*(H h1*()+( -h*B/2 W5*H/ b)*h1/2 (*h+t1* (13+12/2 (5*W2-	W 1.00 15 0.10 +H1/2+1 2+t6+t7) 0.5)*b 2+(W5+ 2 +(B+i)+( 2)*H1+( +17*W3	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry	0.40 1 0.30 Unit m <sup>3</sup> m <sup>3</sup>	h 0.40 11 0.30 Quantity 3.192 9.200 0.034 -0.080 12.346 0.729 0.011 0.953 4.200	0.70	2.00 t3	4.00 14 0.80 W2*(H W3*(H h1*(1+0 -h*B/2 W5*H/ b1*h1/2 t*h+t1* (13+12/2	W 1.00 15 0.10 +H1/2+1 2+t6+t7) 0.5)*b 2+(W5+ 2 +(B+i)+( 2)*H1+( +17*W3	W1 1.10 16 0.10 Equatio 5+16) /2 2/2)*H1 3+12+W	W2 1.68 17 0.50 n /2-B-0)*ł	W3 4,00 h1 0,15	W4 1.54 b	0.14 b1

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## BQ of Protection Works for 1 m (4/16)

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Туре	PL TROUGHT AND IN	PA7		***		Q=	27	~	54	(U/s)	
Dimensions	В	h	Н	HI	H2	W	WI	W2	<b>W</b> 3	1.1	W.5
	0.30	0.50	0.80	2.00	4.00	0.90	1.10	1.62	4.00	1.46	0,16
	t <sup>i</sup>	t l	t2	13	14	15	16	17	hl	þ	bl
	0,30	0.30	0.40	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.15
ltem	Unit	Quantity	19.4994 (19.299 (19.29) (19.29)		age and a first the second second second second second second second second second second second second second	and the second	Equation		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -		LICE HEPSTANA NELT
				and the second second second							
Excavation	m³	3.240			W2*(H-	+H1/2+t5	5+16)				
	m <sup>3</sup>	9.200		÷	W3*(H)	2+16+17),	2				
	m <sup>3</sup>	0.034			h]*(1+(	1					
	m <sup>3</sup>	-0.075			-h*B/2	) 0	•				
<b>1</b>	ារ ៣ <sup>3</sup>				•II*D/2		1				
Total	m	12,399									
Backfill	m <sup>3</sup>	0.784			W5*H/2	2+(W5+t	2/2)*H1				
				:							
Embanknient	m	0.011		:	b1*h1/2	1	· · ·				1.1
						÷ .		· .			
Wet Masonry	m <sup>3</sup>	1.058			t*h+tl*	(B+t)+(t	3+t2+W.	2-B-t)*H	/2		,
•••										· .	
Dry Masonry	m <sup>3</sup>	4.200		e po de	(13+12/2	)*H1+(t	3+W1)/2	*H2	Ng - F		
		1.200			((5 (2))	, (.			1		
Plain Concrete	m³	2.162		,	t5*W2+	17#11/2		· · · ·			
Plain Concrete		2.102	· . •		(J: W21	0.42	$(1,\frac{1}{2}) = 4^{-1}$	-		•	
	,	A - 23			100.000			2 - E			•
Gravel	m'	0.562	10.00		16*(W2	+W3)			1.1		·
			C. MAR. & P.C. MAR. MICH.		AND THE OWNER OF THE OWNER OF					(11.)	
Туре		PA8				Q=	18	~	36	(l/s) W4	W5.
Dimensions	B	<u>h</u>	H	HI	H2	W O OO	WI 1 10	W2	<u>W3</u>		and the second second second
	0.30	0.40	0.70	2.00	4.00	0.90	1.10	1.58	4.00	1.44	0.14 b1
		11	t2	<u>t3</u>	14	15	16	17 0.50	h1 0.15	<u>ь</u> 0.15	0.15
	0.30	0.30	0.40	0.40	0.80	0.10	0.10	Surgery and the second second		1 0.10	
11001						100 B 100 B 100 B	Equation	<b>)</b> .			· 1.
ltem	Unit	Quantity	<u>, , 2</u>					2			
										1	
Excavation	m <sup>3</sup>	3.002			1997 - N. S.	+H1/2+i	5+16)				
	m <sup>3</sup> m <sup>3</sup>				1997 - N. S.		5+16)				
	m <sup>3</sup>	3.002			1997 - N. S.	+H1/2+1 2+t6+t7)	5+16)				
	m <sup>3</sup> m <sup>3</sup>	3.002 9.200			W3*(H	+H1/2+1 2+t6+t7)	5+16)				
Excavation	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060			W3*(H h1*(1+)	+H1/2+1 2+t6+t7)	5+16)				
	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034			W3*(H h1*(1+)	+H1/2+1 2+t6+t7)	5+16)				
Excavation Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176			W3*(H h1*(1+) -h*B/2	+H1/2+1 2+t6+t7) 0.5)*b	5+16) /2				
Excavation	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060			W3*(H h1*(1+) -h*B/2	+H1/2+1 2+t6+t7)	5+16) /2				
Excavation Total Backfill	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729			W3*(H. h1*(1+) -h*B/2 W5*H/.	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+1	5+16) /2				
Excavation Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176			W3*(H h1*(1+) -h*B/2	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+1	5+16) /2				
Excavation Total Backfill Embankment	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011			W3*(H h1*(1+( -h*B/2 W5*H/ b1*h1/2	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+t	\$+16) /2 2/2)*H1				
Excavation Total Backfill	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729			W3*(H h1*(1+( -h*B/2 W5*H/ b1*h1/2	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+1	\$+16) /2 2/2)*H1		V2		
Excavation Total Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011 0.923			W3*(H. h1*(1+( -h*B/2 W5*H/. b1*h1/2 t*h+t1*	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+t 2 (B+t)+((	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	V2		
Excavation Total Backfill Embankment	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011			W3*(H. h1*(1+( -h*B/2 W5*H/. b1*h1/2 t*h+t1*	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+t	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	ν2		
Excavation Total Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011 0.923			W3*(H. h1*(1+( -h*B/2 W5*H/. b1*h1/2 t*h+t1*	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+t 2 (B+t)+((	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	ν2		
Excavation Total Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011 0.923			W3*(H. h1*(1+( -h*B/2 W5*H/. b1*h1/2 t*h+t1*	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+1 2 (B+t)+(t	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	V2		
Excavation Total Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011 0.923 4.200			W3*(H h1*(1+( -h*B/2 W5*H/ b1*h1/2 t*h+t1* (t3+t2/2	+H1/2+1 2+t6+t7) 0.5)*b 2+(W5+1 2 (B+t)+(t	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	ν2		
Excavation Total Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	3.002 9.200 0.034 -0.060 12.176 0.729 0.011 0.923 4.200			W3*(H h1*(1+( -h*B/2 W5*H/ b1*h1/2 t*h+t1* (t3+t2/2	+H1/2+t 2+t6+t7) 0.5)*b 2+(W5+t 2 (B+t)+(t 2)*H1+(t +t7*W3	5+16) /2 2/2)*H1 3+12+W	2-B-1)*H	V2		

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## BQ of Protection Works for 1 m (5/16)

Туре		PB1				Q=	270	~	540	(l/s)	
Dimensions	В	h	Н	HI	H2	<i>W</i> .	W1	W2	W3	W4	Μ.
	1.00	1.10	1.40	2.00		1.60		2.56		2.28	0,2
	t	t l	12	13	t4 .	tS	16	<b>t</b> 7	hl	6	bl
	0.30	0.30	0.40	0.40	-	0.10	0.10	•	0.15	0.15	0.1
Item	Unit	Quantity				an an an an an an an an an an an an an a	Equation		des e de jai di		
		, , ,									
Excavation	m <sup>3</sup>	6.656			W2*(H4	H1/2+15	5+16)				
	m³	0.034			h1*(1+0	).5)*b				1. Th	
	m <sup>3</sup>	-0.550	:	1 1	•h*B/2						
Total	m <sup>1</sup>	6.140					1 - 1 - 1 44				
. otal											
Backfill	m <sup>3</sup>	1.156			W5*H/2	2+(W5+L	2/2)*H1		1		
Dacistin		1.1.0		÷				- 1 :	ta de la composición de la composición de la composición de la composición de la composición de la composición		
Embankment	m <sup>3</sup>	0.011		· · · ·	b1*h1/2						
Linosikiikii		0.011			01 ,2		1		1.1.1		
Wet Masonry	m <sup>3</sup>	2.162			t*h+t]*	: (B+i)+(i	3+i2+W	2-B-I)*H	L/2		
u er migsonný	111	2.102		1		ν		, .			
Dry Masonry	ល់	1.200			(13+12/2	)*H1				al da K	
		1.400		· · · · ·							
Plain Concrete	m <sup>3</sup> .	0.256			15*W2		n de la seconda de				ti s
		0.250		ar ar a						а 11. г. – А	
Gravel	m <sup>3</sup>	0.256		24 A 27 A	t6*W2				· · · · · ·		
Ularçı	116	0.230			10 112	· .			· ·	. :	· :
					-					••••	· .
Туре	ion ann an	PB2	and a state of the second			Q=	144	~	288	(t/s)	
Dimensions	8	h	Н	HI	H2	N W	WI	W2	_W3	W4	I I
and the second second	0.80	0.80	1.10	2.00		-1.40	-	2.24	•	2.02	0
	.1	U	t2	t3	14	15	16	17	ht	<u>b</u>	b
	0.30	. 0,30	0,40	0,40	<u> </u>	0.10	0.10		0.15	0.15	0
Item	Unit	Quantity	:				Equation	n ;			
Excavation	m	5.152		1		+H1/2+i	5+16)		1. I.		
	m	0.034			hl*(1+(	0.5)*b					÷ .
	m	-0.320		914	-h*B/2						÷
Total	m <sup>3</sup>	4,866		a en el Tarreste			• •			·	:
										· · ·	
Backfill	m	0.961			W5*H/	2+(W5+	12/2)*HI				
	1	1				· · · ·		•	-		
			1 .						1 A A A A A A A A A A A A A A A A A A A	: : :	
Embankment	m <sup>3</sup>	0.011			_b1*h)/2	2	;	1.1	4.1		
		0.011									111
	m³ m³	0.011					13+12+W	2-B-t)*ł	<b>1/2</b>		
Embankment					t*h+1]*	'(B+t)+(	i3+12+W	2-B-1)*1	1/2		
Embankment						'(B+t)+(	i3+t2∔W	2-B-t)*ł	V2		
Embankment Wet Masonry	m³	1.637			t*h+1]*	'(B+t)+(	13+12+W	2-B-()*{	¥2		
Embankment Wet Masonry Dry Masonry	m³	1.637			t*h+1]*	'(B+t)+(	(3+t2+W	2-B-()*ł	1/2		
Embankment Wet Masonry	m³ m³	1.637			t*h+1}* (13+t2/2	'(B+t)+(	3+t2+W	2- <b>B-()*</b> 1	V2		
Embankment Wet Masonry Dry Masonry Plain Concrete	m³ m³	1.637			t*h+1}* (13+t2/2	'(B+t)+(	i3+t2+W	'2-B-()*	¥2		
Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup>	1.637 1.200 0.224			t*h+t]* (13+t2/2 t5*W2	'(B+t)+(	3+t2+W	( <b>2-B-i</b> )*i	V2		

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#### BQ of Protection Works for 1 m (6/16)

Туре		PB3	andre aven seinen.	000000 <del>0000000000000000000000000000000</del>		Q=	75		150	(l/s)	CHENGE & THE STREET	
Dimensions	B	h	Н	HI	H2	W	W1	W2	W3	W4	W.5	
Diatosiony	0.50	0.70	1.00	2.00		1.10	-	1.90		1.70	0.20	
	1	t1	t2	(3	14	1.5	16	t7	hl	b	bl	
	0.30	0.30	0.40	0.40	•	0.10	0.10	•	0.15	0.15	0.15	
Item	Unit	Quantity	and a state of the state of the	ar sign gegeniseten	TOTAL CONTRACTOR	COLOR STREET	Equation	and the second sec	<u></u>	ng ani ang kata atawa	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	Ulat	Quantity			1					غىر <del>ا</del> سەر بەر سەر سەر بەر مەر مەر مەر مەر مەر مەر مەر مەر مەر م		
Excavation	m <sup>3</sup>	4.180			₩ <b>2</b> ¥/14	+H1/2+15	i+16)					
CAVAVALION	m <sup>3</sup>				hl*(l+(							
		0.034				J.J.U						
	m <sup>3</sup>	-0.175			-h*B/2							
Total	_m³	4.039										
Backfill	្រា³	0.900		·	W5*H/2	2+(W5+t	2/2)*HI				-	
						<u>.</u>						
Embankment	m³	0.011	5		bl*h1/2							
							2		:			:
Wet Masonry	ំ៣	1.400			t*h+t1*	(B+t)+(t	3+12+W	2-B-1)*H	1/2			
n et masonij		1.400									i.	
D	m <sup>3</sup>	1 200			(13+12/2	N#U1	: f					· · · ·
Dry Masonry	m	1.200			(0+12/2	у п.		· · · ·				
	. <b>.</b>											
Plain Concrete	m³	0.190			15*W2	194			· · ·	· · · · ·		
			1	•	an Arran Arra							
Gravel	m	0.190	· · · · ·		16*W2			:				
		÷ 1			· · ·			•				
			1999 - A.								and the second state of the	
Туре		PB4				Q=	60	~	120	(l/s)		
Dimensions	B	h	Н	.H)	H2	W	WI -	W2	W3 -	W4	W5	<b>4</b> 27
	0.50	0.60	0.90	2.00	-	1.10	-	1.86	-	1.68	0.18	
	t	tl	12	13 -	14	15	16	17	b)	b	bi	
	0.30	0.30	0.40	0.40	•	0.10	0.10	- 1	0.15	0.15	0.15	
Item	Unit	Quantity		An	decembro acerce		Equation	1				
					· · ·							
Excavation	m <sup>3</sup>	3 906			W2*(H	+H1/2+t	5+16)					
L.waradon	m <sup>3</sup>	0.034			hl*(1+							
		<b>1</b> - K. 1 - K.				0.57 0	as É de					
	m <sup>3</sup>	-0.150			•h*B/2		h i		1 2			
Total	m <sup>3</sup>	3.790										
	l '''								· .	1		
			. :				· ·	· .	· .	* . · ·		
Backfill	m <sup>3</sup>	0.841			W5*H/	2+(\\5+1	2/2)*H1	- - -		• . •		
			• • • • • •	•	W5*H/	2+(\\5+1	2/2)*H1	· · ·	-	• . •		
					W5*H/ 6}*h1/.		2/2)*H1					
Backfill	m <sup>3</sup>	0.841			1. 1. s		2/2)*H1					
Backfill Embankment	m <sup>3</sup> m <sup>3</sup>	0.841			b]*h1/.	2			V2			
Backfill	m <sup>3</sup>	0.841			b]*h1/.				V2			
Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237			6)*h1/. t*h+t1*	2 *(B+t)+(1						
Backfill Embankment	m <sup>3</sup> m <sup>3</sup>	0.841			b]*h1/.	2 *(B+t)+(1			¥2			
Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.257 1.200			b)*h1// t*h+t1 (t3+t2/	2 *(B+t)+(1			¥2			
Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237			6)*h1/. t*h+t1*	2 *(B+t)+(1			ν ν ν ν ν ν ν ν ν ν ν ν ν ν ν ν ν ν ν			
Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237 1.200 0.186			6)*h1/ t*h+t1 (t3+t2/ 15*W2	2 *(B+t)+(1			V2			
Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.257 1.200			b)*h1// t*h+t1 (t3+t2/	2 *(B+t)+(1			V2			
Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237 1.200 0.186			6)*h1/ t*h+t1 (t3+t2/ 15*W2	2 *(B+t)+(1			V2			
Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237 1.200 0.186			6)*h1/ t*h+t1 (t3+t2/ 15*W2	2 *(B+t)+(1			Ψ <b>2</b>			
Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.841 0.011 1.237 1.200 0.186			6)*h1/ t*h+t1 (t3+t2/ 15*W2	2 *(B+t)+(1			ν. <b>V2</b>			

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# BQ of Protection Works for 1 m (7/16)

Туре	1947/42-42 <sup>-10</sup> 20-1020	PB5	langi ang kang di pang kang di pa			Q=	36	~	72	(ł/s)	
Dimensions	В	h	Н	HI	H2	11.	WI	W2	W3-	W4	11:5
	0.40	0,50	0.80	2.00	-	1.00	•	1.72	+	1.56	0.16
	1	tl	12	13	14	15	16	1	hl	b	<b>b</b> 1
	0.30	0.30	0.40	0.40	-	0.10	0.10		0.15	0.15	015
ltern	Unit	Quantity	Mean of Frank	27-36-00-87-00-87-00		ACCORDENCE AND A DESCRIPTION OF A DESCRI	Equation				
		Quantity			4220-723-5-5 <b>7</b>						
Excavation	m <sup>3</sup>	3.440			W2*(H+	41/2+15	(+16)				
LACAVATION	m <sup>3</sup>		•		-						
		0.034			hl*(1+0	1.5).0					
	m³	-0.100			-h*B/2						:
Total	n <sup>3</sup>	3.374				11		•			
:							an an an an an an an an an an an an an a				
Backfill	m <sup>3</sup>	0.784			W5*H/2	?+(W5+1	2/2)*H1				
					e Al an an an an an an an an an an an an an	÷					
Embankment	m³	0.011			b1*h1/2		:	×			
			÷ .		· · · · ·						
Wet Masonry	m³	1.088	÷		t*h+t1*	(B+t)+(t	3+12+W.	2-B-t)*H	J2		
Dry Masonry	m <sup>3</sup>	1.200			(13+12/2	)*HI			•	.:	
Diş Masoluş		1.200			(1.5) (1.6) 4	, <b></b>	1. E				
Plain Concrete	m³	0.172	b e t		15*W2		·				
riam Concrete	111	<b>0.172</b>			U 112						a Ala a
~ •			de la sp			e Fire		:	·	· .	
Gravel	m³	0.172			16*W2						
	1.00		· · ·	•			1.		· ·		
	oderio alta ' - :		ute a tes Milling		***				-48	(l/s)	
Type		PB6	n later a fast later in some		112	Q=	24		+0. W3	WI	W
Dimensions	B	<u>h</u>	H	H1	H2	W I OO	.:W1	1.68		1.54	0.1
·	0.40	0.40	0.70	2.00		1.00	16	1.08	hl	b	bl
	0.30	0.30	12 0.40	<u>t3</u> 0.40	14	0.10	0.10		0.15	0.15	0.1:
and the second state of the second second second second second second second second second second second second	and the second second	The second second second second second second second second second second second second second second second s	V.4V		L	STREET, STREET	Equation	And the second second second second second second second second second second second second second second second			
Item	Unit	Quantity					Equation				<u> </u>
	3				11124/11					÷ : .	÷ .
Excavation	m <sup>3</sup>	3 192	1.1.1			+H1/2+t	5+10}				
	m,	0.034			hl*(1+0	1.2)*0			1 - A	1997 - 19	
	m <sup>3</sup>	-0 080	, i i		-h*B/2			1		· .	
Total	m <sup>3</sup>	3.146		an an an an an an an an an an an an an a				- 1		÷	
			1	-	· .	·		$(x_{i}) \in \mathcal{T}_{i}(x_{i})$	-	· .	
Backfill	់៣³	0.729			W5*H/2	2+(W5+1	2/2)*HI	• • • •	• .		. :
·								<del>ب</del> و ب			
Embankment	m³	0.011			b1*h1/2		· · · ·	4 - 51 1 - 1 4 5		14 L	£
				• •							11 
Wet Masonry	m <sup>3</sup>	0.953		: 1	1*h+t1*	(B+t)+(t	3+12+W	2-B-0*1	/2		
						,					
weensasonay		1.200			(13+12/2	n¥Ω1					in an
	<b>1 1 1</b>				. (1.) * (2/2	.,	s An An	•			
Dry Masonry	m <sup>3</sup>	1.200									
Dry Masonry											
	m² m³	0.168	•		15*W2	-					
Dry Masonry Plain Concrete	m³	0.168									
Dry Masonry			•		15*W2 16*W2						· · ·
Dry Masonry Plain Concrete	m³	0.168									

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#### BQ of Protection Works for 1 m (8/16)

Type         PB7         Q=         27 $\sim$ 54         (l/s)           Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.50         0.80         2.00         -         0.90         -         1.62         -         1.46         0.16           1         1         12         13         tH         15         16         17         h1         b         b1           0.30         0.30         0.40         0.40         -         0.10         0.10         -         0.15         0.15         0.15           Item         Unit         Quantity         Equation         Equation         Equation         -         + <td< th=""><th></th></td<>	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	
Excavation $m^3$ 3.240       W2*(H+H1/2+t5+t6) $m^3$ 0.034       h1*(1+0.5)*b $m^3$ -0.075       -h*B/2         Total $m^3$ 3.199         Backfill $m^3$ 0.784         Embankment $m^3$ 0.011         b1*h1/2	
Excavation $m^3$ 3.240       W2*(H+H1/2+t5+t6) $m^3$ 0.034       h1*(1+0.5)*b $m^3$ -0.075       -h*B/2         Total $m^3$ 3.199         Backfill $m^3$ 0.784         Embankment $m^3$ 0.011         b1*h1/2	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
m <sup>3</sup> -0.075       -h*B/2         Total       m <sup>3</sup> 3.199         Backfill       m <sup>3</sup> 0.784       W5*H/2+(W5+12/2)*H1         Embankment       m <sup>3</sup> 0.011       b1*h1/2         Wet Masonry       m <sup>3</sup> 1.058       t*h+t1*(B+t)+t(13+t2+W2-B-t)*H/2         Dry Masonry       m <sup>3</sup> 1.200 $(t3+t2/2)*H1$ Plain Concrete       m <sup>3</sup> 0.162       t6*W2         Type       PB8       Q=       18 $\sim$ 36 $(l/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5	
Total $m^3$ 3.199         Backfill $m^3$ 0.784 $W5*H/2+(W5+t2/2)*H1$ Embankment $m^3$ 0.011 $b1*h1/2$ Wet Masonry $m^3$ 1.058 $t*h+t1*(B+t)+(t3+t2+W2-B-t)*H/2$ Dry Masonry $m^3$ 1.200 $(t3+t2/2)*H1$ Plain Concrete $m^3$ 0.162 $t5*W2$ Gravel $m^3$ 0.162 $t6*W2$ Type       PBS $Q= 18$ $\sim$ $36$ $(l/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5	
Backfill $m^3$ $0.784$ $W5*H/2+(W5+t2/2)*H1$ Embankment $m^3$ $0.011$ $b1*h1/2$ Wet Masonry $m^3$ $1.058$ $t*h+t1*(B+t)+(t3+t2+W2-B-t)*H/2$ Dry Masonry $m^3$ $1.058$ $t*h+t1*(B+t)+(t3+t2+W2-B-t)*H/2$ Dry Masonry $m^3$ $1.200$ $(t3+t2/2)*H1$ Plain Concrete $m^3$ $0.162$ $t5^*W2$ Gravel $m^3$ $0.162$ $t6^*W2$ Q= 18 ~ 36 (1/s)         Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5 $0.30$ $0.40$ $0.70$ $2.00$ $ 0.90$ $ 1.58$ $ 1.44$ $0.14$	
Embankment $m^3$ $0.011$ $b1*h1/2$ Wet Masonry $m^3$ $1.058$ $t^*h+t1*(B+t)+(t3+t2+W2-B-t)*H/2$ Dry Masonry $m^3$ $1.200$ $(t3+t2/2)*H1$ Plain Concrete $m^3$ $0.162$ $t5*W2$ Gravel $m^3$ $0.162$ $t6*W2$ Type       PB8 $Q=$ $18$ $\sim$ $36$ $(1/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30 $0.40$ $0.70$ $2.00$ - $0.90$ - $1.58$ - $1.44$ $0.14$	
Embankment $m^3$ $0.011$ $b1*h1/2$ Wet Masonry $m^3$ $1.058$ $t^*h+t1*(B+t)+(t3+t2+W2-B-t)*H/2$ Dry Masonry $m^3$ $1.200$ $(t3+t2/2)*H1$ Plain Concrete $m^3$ $0.162$ $t5*W2$ Gravel $m^3$ $0.162$ $t6*W2$ Type       PB8 $Q=$ $18$ $\sim$ $36$ $(1/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30 $0.40$ $0.70$ $2.00$ - $0.90$ - $1.58$ - $1.44$ $0.14$	
Wet Masonry $n^3$ 1.058 $t^*h+t1^*(B+t)+(t3+t2+W2-B-t)^*H/2$ Dry Masonry $m^3$ 1.200 $(t3+t2/2)^*H1$ Plain Concrete $m^3$ 0.162 $t5^*W2$ Gravel $m^3$ 0.162 $t6^*W2$ Type       PB8       Q=       18 $\sim$ 36 $(l/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	
Wet Masonry $n^3$ 1.058 $t^*h+t1^*(B+t)+(t3+t2+W2-B-t)^*H/2$ Dry Masonry $m^3$ 1.200 $(t3+t2/2)^*H1$ Plain Concrete $m^3$ 0.162 $t5^*W2$ Gravel $m^3$ 0.162 $t6^*W2$ Type       PB8       Q=       18 $\sim$ 36 $(l/s)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	
Dry Masonry $m^3$ 1.200 $(13+12/2)*H1$ Plain Concrete $m^3$ 0.162 $15*W2$ Gravel $m^3$ 0.162 $16*W2$ Type       PBS       Q=       18 $\sim$ 36 $1/5$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	
Dry Masonry $m^3$ 1.200 $(13+12/2)*H1$ Plain Concrete $m^3$ 0.162 $15*W2$ Gravel $m^3$ 0.162 $16*W2$ Type       PBS       Q=       18 $\sim$ 36 $1/5$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	
Plain Concrete $m^3$ 0.162 $t5*W2$ Gravel $m^3$ 0.162 $t6*W2$ Type       PB8       Q=       18 $\sim$ 36 $(Vs)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	· · · ·
Plain Concrete $m^3$ 0.162 $t5*W2$ Gravel $m^3$ 0.162 $t6*W2$ Type       PB8       Q=       18 $\sim$ 36 $(Vs)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	
Plain Concrete $m^3$ 0.162 $t5*W2$ Gravel $m^3$ 0.162 $t6*W2$ Type       PB8       Q=       18 $\sim$ 36 $(Vs)$ Dimensions       B       h       H       H1       H2       W       W1       W2       W3       W4       W5         0.30       0.40       0.70       2.00       -       0.90       -       1.58       -       1.44       0.14	1.
Gravel     m³     0.162     (6*W2       Type     PBS     Q=     18     ~ 36     (1/5)       Dimensions     B     h     H     H1     H2     W     W1     W2     W3     W4     W5       0.30     0.40     0.70     2.00     -     0.90     -     1.58     -     1.44     0.14	1.
Gravel     m³     0.162     (6*W2       Type     PBS     Q=     18     ~ 36     (1/5)       Dimensions     B     h     H     H1     H2     W     W1     W2     W3     W4     W5       0.30     0.40     0.70     2.00     -     0.90     -     1.58     -     1.44     0.14	
Type         PB8         Q=         18         ~ 36         (l/s)           Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.40         0.70         2.00         -         0.90         -         1.58         -         1.44         0.14	
Type         PB8         Q=         18         ~ 36         (l/s)           Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.40         0.70         2.00         -         0.90         -         1.58         -         1.44         0.14	
Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.40         0.70         2.00         -         0.90         -         1.58         -         1.44         0.14	
Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.40         0.70         2.00         -         0.90         -         1.58         -         1.44         0.14	÷ •
Dimensions         B         h         H         H1         H2         W         W1         W2         W3         W4         W5           0.30         0.40         0.70         2.00         -         0.90         -         1.58         -         1.44         0.14	<i>(</i> 2).
0.30 0.40 0.70 2.00 - 0.90 - 1.58 - 1.44 0.14	ভ
	*:
t 1) t2 t3 t4 t5 t6 t7 h1 b b1	
0.30 0.30 0.40 0.40 - 0.10 0.10 - 0.15 0.15 0.15	
Iten Unit Quantity Equation	
Excavation m <sup>3</sup> 3.002 W2*(H+H1/2+t5+t6)	i tori. Fort
m <sup>3</sup> -0.060	•
Total m <sup>3</sup> 2.976	
Backfill m <sup>3</sup> 0.729 W5*H/2+(W5+t2/2)*H1	
Embankment m <sup>3</sup> 0.011 b1*h1/2	
Wet Masonry m <sup>3</sup> 0.923 t*h+t1*(B+t)+(13+12+W2-B-t)*H/2	
	1
Dry Masonry m <sup>3</sup> 1.200 (t3+t2/2)*H1	<b>.</b>
	1
Plain Concrete m <sup>3</sup> 0.158 t5*W2	
Gravel m <sup>3</sup> 0.158 t6*W2	

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Type		PC1				Q=	270	~	540	(1/s)	
Dimensions	B	h	H	HI	112	W.	WI	W2	11.3	W4	113
	1.00	1.10	1.40	2.00	4,00	1.60	1.10			and the second se	
	1	tl	<u>t2</u> /	13	14		والتحصيرة وتداخلوا ومراجع		the second second second second second second second second second second second second second second second s	والمتحصين ويرجعها	<u>bl</u>
	0.30	CONTRACTOR OF THE OWNER	0.10	0.40	0.80	and the second sec	Contractor of the local division of the loca	ALL DESCRIPTION OF A DE	0.15	0.15	0.15
Item	Unit	Quantity				]	quation	1			
						<b>.</b>					
Excavation							:				
				۰.	-		2		1		
					-	.5)*b					. :
		-0,550			-h*B/2				:		
Total	-m <sup>3</sup>	11.404						:	et av		
Backfill	m <sup>3</sup>	0.070			H*t2/2	· · ·			:		
							. 1	· .	· · ·		
Embankment	m³	0.011			b1*h1/2	-				1 :	1
					· ·				· · · ·		
Wet Masonry	m³	1.210	-		(W4+W	)/2*H•B	*h :				n in the The design
							et de las			s at	
Dry Masonry	m,	3.000			(t3+W1	)/2*H2			e di Ale A	· · · ·	
			1.1				$\{1, \dots, n_{k}\}$				
Plain Concrete	m'	2,170			15*W4+	17*W3	÷			2 a 2	
			1.11			· · · · · ·					
Gravel	_m²	0.570			16*(W4	+W3}			- 14		el de la
and the second second second second second second second second second second second second second second second				T	and all the strategy of	<u>0-</u>	111		788	<u>a</u> /s)	
THE OWNER WATCHING THE PARTY OF A DESCRIPTION OF A DESCRI		Contraction Average International	<u>с п</u>		1 117	State of the local division of the local div	and the fact of the local division of the	1 112	COLUMN IN COLUMN	COLUMN TRAVEL	- W5
Dimensions	the second second	the second second second second second second second second second second second second second second second se					the second second second second second second second second second second second second second second second se			1.50	1 .
			the second second second second second second second second second second second second second second second s			the second second second second second second second second second second second second second second second s	and the second s	1 17	hl	Ъ	61
		the second second second second second second second second second second second second second second second s	A second s		0.80	0.10	0.10	0.50	0.15	0,15	0.15
Item	he seems to be see	Statement and statements		Annoneser			Equatio	H)			1.
					- (- +						
Excavation	m <sup>3</sup>				W4*(H	+15+16)					
Excavation	m <sup>3</sup>	1,950									
Excavation	m <sup>3</sup>	1,950 9,200			W3*(H	2+16+17					
Excavation	m <sup>3</sup>	1,950 9,200 0.034			W3*(H h1*(1+	2+16+17 0.5)*b					
	m³ m³ m³	1,950 9,200 0.034 -0,320			W3*(H	2+16+17 0.5)*b					
Excavation Total	m <sup>3</sup>	1,950 9,200 0.034			W3*(H h1*(1+	2+16+17 0.5)*b					
Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1,950 9,200 0.034 -0.320 10.864			W3*(H h1*(1+ -h*B/2	2+16+17 0.5)*b					
	m³ m³ m³	1,950 9,200 0.034 -0,320			W3*(H h1*(1+	2+16+17 0.5)*b					
Total Backfill	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.034 -0.320 10.864 0.055			W3*(H h1*(1+ -h*B/2 H*t2/2	2+16+17 0.5)*b					
Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1,950 9,200 0.034 -0.320 10.864			W3*(H h1*(1+ -h*B/2	2+16+17 0.5)*b					
Total Backfill Embankment	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 0.034 -0.320 10.864 0.055			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/	2+16+17 0.5)*b 2					
Total Backfill	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.034 -0.320 10.864 0.055			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/	2+16+17 0.5)*b					
Total Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.034 -0.320 10.864 0.055 0.011			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V	2+i6+i7 0.5)*b 2 Y)/2*H-I					
Total Backfill Embankment	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 0.034 -0.320 10.864 0.055			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V	2+16+17 0.5)*b 2					
Total Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.200 0.034 -0.320 10.864 0.055 0.011 0.955 3.000			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V (I3+W	2+i6+i7 0.5)*b 2 V)/2*H-I 1)/2*H2					
Total Backfill Embankment Wet Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.034 -0.320 10.864 0.055 0.011			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V (I3+W	2+i6+i7 0.5)*b 2 Y)/2*H-I					
Total Backfill Embankment Wet Masonry Dry Masonry	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	1.950 9.200 9.200 0.034 -0.320 10.864 0.055 0.011 0.955 3.000			W3*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V (t3+W t5*W4	2+i6+i7 0.5)*b 2 V)/2*H-I 1)/2*H2					
	Dimensions Item Excavation Total Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	DimensionsB1.001.0010.30ItemUnitExcavationm³m³m³m³Totalm³BackfillEmbankmentm³Wet Masonrym³Plain Concretem³Gravelm³0.8010.30	Dimensions         B         h           1.00         1.10         1         1           1         1         1         1           0.30         0.30         0.30           Item         Unit         Quantity           Excavation         m³         2.720           m³         9.200         m³         9.200           m³         0.034         m³         0.034           Total         m³         0.0550         m³         11.404           Backfill         m³         0.070         m³         0.011           Embankment         m³         0.070         m³         0.011           Wet Masonry         m³         1.210         Dry Masonry         m³         3.000           Plain Concrete         m³         2.170         m³         0.570           Type         PC2         Dimensions         B         h           0.80         0.80         0.80         1         1	Dimensions         B         h         H           1.00         1.10         1.40           1         t1         t2           0.30         0.30         0.10           Item         Unit         Quantity           Excavation $m^3$ 2.720 $m^3$ 9.200 $m^3$ 0.034 $m^3$ 0.0550           Total $m^3$ 11.404           Backfill $m^3$ 0.070           Embankment $m^3$ 0.011           Wet Masonry $m^3$ 3.000           Plain Concrete $m^3$ 0.570           Type         PC2           Dimensions         B         h           0.80         0.80         1.10           1         11         t2           0.30         0.30         0.10	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dimensions         B         h         H         H1         H2 $1.00$ $1.10$ $1.40$ $2.00$ $4.00$ 1 $t1$ $t2$ $t3$ $t4$ $0.30$ $0.30$ $0.10$ $0.40$ $0.80$ Item         Unit         Quantity $0.40$ $0.80$ Item         Unit         Quantity $0.40$ $0.80$ Excavation $m^3$ $2.720$ $W4*(H*)$ $m^3$ $0.034$ $h1*(1+0)$ $h1*(1+0)$ $m^3$ $0.034$ $h1*(1+0)$ $h1*(1+0)$ $m^3$ $0.0550$ $-h*B/2$ $h*B/2$ Total $m^3$ $0.070$ $H*t2/2$ Embankment $m^3$ $0.011$ $b1*h1/2$ Wet Masonry $m^3$ $3.000$ $(t3+W)$ Pry Masonry $m^3$ $3.000$ $(t3+W)$ Plain Concrete $m^3$ $0.570$ $t6*(W4)$ $Type$ $PC2$ $DC$ $DC$	Dimensions         B         h         H         H1         H2         W           1.00         1.10         1.40         2.00         4.00         1.60           1         1         12         13         14         15           0.30         0.30         0.10         0.40         0.80         0.10           Item         Unit         Quantity          1         1         1           Excavation         m <sup>3</sup> 2.720         W4*(H+t5+t6)         0.80         0.10           m³         9.200         W3*(H2+t6+t7)/         m³         0.034         h1*(1+0.5)*b           m³         0.034         h1*(1+0.5)*b         n*B/2         1         1.404           Backfill         m³         0.070         H*t2/2         H*t2/2           Embankment         m³         0.070         H*t2/2         H*t1/2           Wet Masonry         m³         1.210         (W4+W)/2*H-B         1.210         (W4+W)/2*H2           Plain Concrete         m³         2.170         t5*W4+t7*W3         16*(W4+W3)           Type         PC2         Q=         Q=         Dimensions         B         h         H	Dimensions         B         h         H         H1         H2         W         W1           1.00         1.10         1.40         2.00         4.00         1.60         1.10           1         t1         t2         t3         t4         t5         16           0.30         0.30         0.10         0.40         0.80         0.10         0.10           Item         Unit         Quantity         Equation         Equation         Equation         Equation           m³         2.720         W4*(H+t5+t6)         W3*(H2+t6+t7)/2         M3*(H2+t6+t7)/2         M3*(H2+t6+t7)/2           m³         0.034         h1*(1+0.5)*b         -h*B/2         M3*(H2+t6+t7)/2         M4*(H+t5+t6)           m³         0.034         h1*(1+0.5)*b         -h*B/2         M3*(H2+t6+t7)/2         M4*(H+t0.5)*b         M3*(H2+t6+t7)/2           Total         m³         0.070         H*t1/2/2         M3*(H2+t6+t7)/2         M4*(H+t0.5)*b         M3*(H2+t6+t7)/2           Backfill         m³         0.0010         b1*h1/2         M4*(H*t0.5)*b         M3*(H2+t6+t7)/2         M4*(H*t0.5)*b         M3*(H2+t6+t7)/2           Dry Masonry         m³         0.001         (W4+W)/2*H+B*h         M3*(H	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	B         h         H         H1         H2         W         W1         W2         W3           Dimensions         B         h         H         H1         H2         W         W1         W2         W3           1.00         1.10         1.40         2.00         4.00         1.60         1.10         -         4.00           1         t1         t2         t3         t4         t5         16         17         h1           0.30         0.30         0.10         0.40         0.80         0.10         0.10         0.50         0.15           item         Unit         Quantity         Equation         Equation         Equation           Excavation         m <sup>3</sup> 2.720         W4*(H+t5+t6)         m3         0.15           m <sup>3</sup> 0.034         h1*(1+0.5)*b         -         +18/2         -         -           Total         m <sup>3</sup> 11.404         H<	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

BQ of Protection Works for 1 m (9/16)

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Protection Works Page 16

Dimensions		PC3			the course in the Third and the Course	Q=	75	~	150	(l/s)	
Distantisions .	B	h	H	HI	H2	W	WI	W2	<u>₩3</u>	W4	W3
	0.50	0.70	1.00	2.00	4.00	1.10	1.10	-	4,00	1.20	
	1	tl	t2 -	13	14	ស	16	17	<u>h1</u>	<u>b</u>	bl
ann a suna an dh'a abaile an an a' Church a' Church an a' an a' an a' an a' an a' an a' an a' an a' an a' an a	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	015	0.15
ltem	Unit	Quantity					Equation	1			
Excavation	<b>տ</b> ³	1.440		-	W4*(H-	+15+16)					
	m <sup>3</sup>	9,200			W3*(H2	!+16+17}	21				-
	m <sup>3</sup>	0.034		1	h1*(1+(						
: -	m <sup>3</sup>	-0.175			•h*B/2			÷			1
Total	m <sup>3</sup>				-11 0/2	÷ .					
Total	m	10,499					1997 - A.				: -
							1		. •		
Backfill	m³	0.050			H*12/2	* *	: .				
							14 - <sup>1</sup>			•	
Embankment	m³	0.011		· · · · ·	b1*h1/2						10.00
						·	· ·		•		
Wet Masonry	m <sup>3</sup>	0.800			(W++W	)/2*H-B	*հ				. ·
					÷		e e su Transia	· · ·	1917 - 1917	1	
Dry Masonry	m³	3.000		1 - N	(13+W1	)/2*H2					
								1.1.1			1. T.
Plain Concrete	3^	2.120			15*W4+	17*113				1 K	
Than Concrete		2.12.		· ·					: :		
Graval	m³	0.520		i kara	16*(W4	111/21				$\Delta E = E + \delta e$	
Gravel	- 113	0.520			1021 394	+ <b>W</b> 3)			an an an an an an an an an an an an an a		
Сарантирания в разлежится и сарания и са Толина		PC4				0-	60	- Married Calves Viet Married Calves	120	(l/s)	
Туре						Q=		<u>~</u>			1 11/2
Dimensions	B	h	H	<u>H1</u>	H2	W	WI	<u>W2</u>	W3	W4	<u>W5</u>
	0.50	0.60	0.90	-2.00	4.00	1.10	1.10		4.00	1.20	
	t	tl	<u>t2</u>	- 13	14	<u> </u>	<u>t6</u>	17	hl	b	bl
							0,10	0.50	0.15 :	0.15	0.15
	0.30	0.30	0.10	0.40	0,80	0.10	Distance Party Sector	ça menen menenderin a	Stand Schule Colds State Co		
Item	0.30 Unit	Quantity	0.10	0.40	0.80	MEASURE CHARGE	Equation	)	1		
	Unit	Quantity	0.10	0.40			Distance Party Sector				
	Unit m <sup>3</sup>	THE R. P. LEWIS CO., LANSING MICH.	0.10	0.40	W4*(H	+15+16)	Equation	1			
	Unit	Quantity	0.10	0.40		+15+16)	Equation	<b>}</b>			
	Unit m <sup>3</sup>	Quantity 1.320	0.10	0.40	W4*(H W3*(H	+15+16) 2+16+17)	Equation				
	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034	0.10	0.40	W4*(H W3*(H b1*(1+(	+15+16) 2+16+17)	Equation				
Excavation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150	0.10	0.40	W4*(H W3*(H	+15+16) 2+16+17)	Equation				
	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034	0.10		W4*(H W3*(H b1*(1+(	+15+16) 2+16+17)	Equation				
Excavation Total	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404			W4*(H W3*(H) h1*(1+( -h*B/2	+15+16) 2+16+17)	Equation				
Excavation	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150		0.40	W4*(H W3*(H b1*(1+(	+15+16) 2+16+17)	Equation				
Excavation Total Backfill	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045		0.40	W4*(H W3*(H h1*(1+( -h*B/2 H*(2/2	+15+16) 2+16+17) ).5)*b	Equation				
Excavation Total	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404		0.40	W4*(H W3*(H) h1*(1+( -h*B/2	+15+16) 2+16+17) ).5)*b	Equation				
Excavation Total Backfill Embankment	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011			W4*(H W3*(H) h1*(1+( -h*B/2 H*(2/2 b1*h1/2	+15+16) 2+16+17) ).5)*b	Equation				
Excavation Total Backfill	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045			W4*(H W3*(H h1*(1+( -h*B/2 H*(2/2	+15+16) 2+16+17) ).5)*b	Equation				
Excavation Total Backfill Embankment	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011			W4*(H W3*(H h1*(1+( -h*B/2 H*(2/2 b1*h1/2 (W4+W	+15+16) 2+16+17) ) 5)*b )/2*H-B	Equation				
Excavation Total Backfill Embankment Wet Masonry	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011			W4*(H W3*(H) h1*(1+( -h*B/2 H*(2/2 b1*h1/2	+15+16) 2+16+17) ) 5)*b )/2*H-B	Equation				
Excavation Total Backfill Embankment	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011 0.735			W4*(H W3*(H h1*(1+( -h*B/2 H*(2/2 b1*h1/2 (W4+W	+15+16) 2+16+17) ) 5)*b )/2*H-B	Equation				
Excavation Total Backfill Embanknient Wet Masonry Dry Masonry	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011 0.735 3.000	0.10		W4*(H W3*(H) h1*(1+( -h*B/2 H*t2/2 b1*h1/2 (W4+W (t3+W1	+15+16) 2+16+17) ).5)*b )/2*H-B )/2*H2	Equation				
Excavation Total Backfill Embankment Wet Masonry	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011 0.735			W4*(H W3*(H h1*(1+( -h*B/2 H*(2/2 b1*h1/2 (W4+W	+15+16) 2+16+17) ).5)*b )/2*H-B )/2*H2	Equation				
Excavation Total Backfill Embanknient Wet Masonry Dry Masonry	Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.320 9.200 0.034 -0.150 10.404 0.045 0.011 0.735 3.000			W4*(H W3*(H) h1*(1+( -h*B/2 H*t2/2 b1*h1/2 (W4+W (t3+W1	+15+16) 2+16+17) ) 5)*b )/2*H-B )/2*H2 17*W3	Equation				

#### BQ of Protection Works for 1 m (10/16)

Q=

75

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150

(l/s)

РСЗ

Type Dimensions

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Туре		PC5		- 1		Q≠	36	~	72	(Us)	
Dimensions	В	h	Н	HI	H2	W	W1	W2	W3	W.4	W.
	0.40	0.50	0.80	2.00	4,00	1.00	1.10	-	4.00	1.10	-
	t	tl	t2 -	ß	14	េ	16	17	hi	b	bl
	0.30	0.30	0.10	0.40	0.80	0.10	0.10	0.50	0.15	0.15	0.1
ltem	Unit	Quantity	alay news a payment	Approximation of the second		CT STORAGE MARK	Equation	MARKA AND ADDRESS	and the second second		
		and the second of	ويعرونين ويرجعهم والمراجع	والله الله الله الله الماليون ، ومن ا				·			
Excavation	m³	1 100			W4*(H4	151161					
EXCAVATION		1,100									
	m³	9,200				2+16+17),	12			• •	
	m'	0.034		· · ·	hl*(1+0	).5 <b>)</b> *b					
	m <sup>3</sup>	-0.100			-h*B/2						
Total	m <sup>3</sup>	10.234	÷								
		10.20								•	
D 1.61	m <sup>3</sup>	0.010			H*t2/2					· ·	
Backfill	ш	0.040			n-12/2				· ·		
					· · ·	÷				÷ .	
Embankment	m <sup>3</sup>	0.011			bl*hl/2						
									. : •	5	1.1
Wet Masonry	m <sup>3</sup>	0.640	· .		(W4+W	)/2*H-B	*h				•• •
			1.4.4.								
Dry Masonry	m <sup>3</sup>	3.000			(t3+WI)	)/ว่∗นว				•	
rui masomi	#H	5.000	· · · ·		แระพบ	prz · 112			1. 1.	1	
						÷	•	1			1.1
Plain Concrete	m³	2.110	. 4		(5*W4+	17*W3	•				1
											.:
Gravel	m³	0.510			16*(WI	+₩3)	· .		: .+	· · ·	
			·				••				
Туре		PC6				Q=	2-1	~	48	(l/s)	
Dimensions	В	h 📋	Н	HI	H2	W	WI	W2	W3		W.
	0.40	0.40	0.70	2.00	4.00	1.00	1.10	-	4.00	. 1.10	<u>.</u>
	(	tl	12	. 13	t-1 :	t5 .	16	t7	hl	b	bl
	0.30	0.30	0.10 :	0.40	0.80	0.10	0.10	0.50	0,15	0,15	0.1
Item	Unit	Quantity	- (1961) - (1962) - (				Equation	1		Andre M.F.C. Wester	
			· · · · · · · · ·		· · · ·	·····					
Excavation	m <sup>3</sup>	0.990			W4*(H-	515±163		an Carl			
LACAVACION		1						an the second			
	m³	9,200				2+16+17)	(2				
	im <sup>3</sup>	0.034			hl*(l+(	) 5)*b	: :			. 1 A	
	m <sup>3</sup>	-0.080			-h*B/2			+ <u></u> + +		· · · 1	
Total	m <sup>3</sup>	10,144					1	· · ·			
			: -		:			e de		·	
Backfill	m <sup>3</sup>	0.024	· ·		H*(2/2	. <u>.</u>		•	•		
Backfill		0,035			11 12/2				t i		: . · ·
				4.14							
	m <sup>3</sup>	0.011		n tari y	bl*h1/2				ł		· .
Embankment											
Embankment	t i				(W4+W	')/2*H·B	*h				
	m <sup>3</sup>	0.575	3 3		• • •		14 1 T 1 1 1 1	t		1.1	1.1
Embankment Wet Masonry	m³	0.575	* *								* ÷
Wet Masonry					/(3+10)	v2+115					
	m <sup>3</sup> m <sup>3</sup>	0.575 3.000			(13+W1	)/2*H2					· · ·
Wet Masonry Dry Masonry	m³	3.000									
Wet Masonry					(13+W1 15*W4+						
Wet Masonry Dry Masonry	m³	3.000									
Wet Masonry Dry Masonry	m³	3.000				17*W3					

BQ of Protection Works for 1 m (11/16)

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## BQ of Protection Works for 1 m (12/16)

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	PC7				Q=	27	-	No. of Concession, Name	A REPORT OF A VIEW OF A VI	
В	<u> </u>	H	HI	H2	W	WI		and the second sec	And in case of the local division of the loc	W5
0.30	0,50	0.80	2.00	4.00	0.90	C. State State State State State		the second second second second second second second second second second second second second second second se	and the second se	
1	tl	12	13	Concession and the second second	the second second second second second second second second second second second second second second second s		Commences of Commences	and the second se	and the second s	<u>b1</u>
0.30	AND ADDRESS OF TAXABLE PARTY.	0.10	0.40	0.80	CONTRACTOR OF STREET, SAMELING	and an international states and		0.15	0.15	0.15
Unit	Quantity				 	Equation		and an and a second second second second second second second second second second second second second second		
					ъ					
	1.000			-						
m <sup>3</sup>	9.200					2				•
m <sup>3</sup>	0.034	1	:	-	).5)*b					1
m <sup>3</sup>	-0.075			-h*B/2						
m	10.159	:								
							:			
m <sup>3</sup>	0.040	÷.		H*(2/2			:			
					· :					
m <sup>3</sup>	0.011			b1*h1/2	2				•	
							· · · · ·	:		
m <sup>3</sup>	0.610	de la composición de la compos		(W4+W	)/2*H-B	*h		-		
				÷						
m,	3 000	1991 - 1997 1997 - 1997 - 1997		(13+WI	)/2*H2	1	4.5	111		t sta
		lan at								:
m <sup>3</sup>	2 100		· · ·	15*W4+	17*W3				· · · ·	
{	2.100									≹ - + +
	ñ 500		· · · I.	16*(WI	+W3)			· :		
	0.500		÷.	•••••••••••••••••••••••••••••••••••••••						· · · 34
L	PC8	agent are suit if the	<u> </u>		Q=	18		36	(1/s)	
B	h	Н	HI	H2	W	WI	W2	W3		W5
0.30	0.40	.0.70	2.00	4.00	0,90	1.10		and the second sec		<b>_</b>
*t*	t1	t2 -	13	(4			and the second s			<u>bl</u>
0.30	0,30	0.10	0.40	0.80	0.10	Contractor Carlo	Contractor of the second	0.15	0.15	0.15
Unit	Quantity					Equation	<u>n i i i</u>			
m <sup>3</sup>	0.900				1.					
m'	9,200			W3*(H	12+16+17	)/2				
m <sup>3</sup>	0.034			h1*(1+	0.5)*b					
m <sup>3</sup>	-0,060	•		-h*B/2		•	· .	1.1	11 A A	
						1		•		
្លារ	0.035			H*(2/2			-	•		· .
				: •	er er er			an An at s		1.1
m <sup>3</sup>	0,011		: :}	bl*hl/	12					
		(a) 10 (1)								
			11 A. A.			1 A A A A A A A A A A A A A A A A A A A				1 - E - E - E - E - E - E - E - E - E -
				(W1+)		B*h				1
m <sup>3</sup>	0,54			(W4+)	₩)/2*H-I	B*h		:	•	
m <sup>3</sup>	0,545	14				B*h				
	0,545	14			W)/2*H-I 1)/2*H2	B*h		:	· · ·	
m <sup>3</sup> m <sup>3</sup>	0,545	) 		(13+W	1)/2*H2				· · ·	
m <sup>3</sup>	0,545	) 		(13+W						
m <sup>3</sup> m <sup>3</sup>	0,54 3.000 2.100			(13+W 15*W4	1)/2*H2					
	0.30 1 0.30 Unit m <sup>3</sup> m <sup>3</sup>	B         h           0.30         0.50           1         11           0.30         0.30           Unit         Quantity           m³         1.000           m³         0.034           m³         0.034           m³         0.040           m³         0.000           m³         0.000           m³         0.000           m³         0.030           Unit         Quantity           m³         0.030           Unit         Quantity           m³         0.034           m³         0.035	B         h         H           0.30         0.50         0.80           1         11         12           0.30         0.30         0.10           Unit         Quantity           m <sup>3</sup> 1.000           m <sup>3</sup> 0.034           m <sup>3</sup> 0.034           m <sup>3</sup> 0.034           m <sup>3</sup> 0.040           m <sup>3</sup> 0.011           m <sup>3</sup> 0.040           m <sup>3</sup> 0.040           m <sup>3</sup> 0.010           m <sup>3</sup> 0.011           m <sup>3</sup> 0.020           m <sup>3</sup> 0.040           m <sup>3</sup> 0.000           m <sup>3</sup> 0.000           m <sup>3</sup> 0.000           m <sup>3</sup> 0.900           m <sup>3</sup> 0.900           m <sup>3</sup> 0.034           m <sup>3</sup> 0.035	B       h       H       H1         0.30       0.50       0.80       2.00         1       11       12       (3)         0.30       0.30       0.10       0.40         Unit       Quantity	B         h         H         H1         H2           0.30         0.50         0.80         2.00         4.00           t         t1         t2         t3         t4           0.30         0.30         0.10         0.40         0.80           Unit         Quantity	B         h         H         H1         H2         W           0.30         0.50         0.80         2.00         4.00         0.90           1         11         t2         t3         t4         15           0.30         0.30         0.10         0.40         0.80         0.10           Unit         Quantity	B         h         H         H1         H2         W         W1           0.30         0.50         0.80         2.00         4.00         0.90         1.10           1         11         t2         t3         t4         t5         t6           0.30         0.30         0.10         0.40         0.80         0.10         0.10           Unit         Quantity         Equation         Equation         Equation         Equation           m³         1.000         W4*(H+t5+t6)         W3*(H2+t6+t7)/2         m3         0.034         h1*(1+0.5)*b         n+B/2           m³         0.075         -h*B/2         n*B/2         n*B/2         n*B/2         n*B/2           m³         0.040         H*t2/2         N         N         n*H*B/2         n*B/2           m³         0.610         (W4+W)/2*H-B*h         N         N         N         N           m³         0.610         (t3+W1)/2*H2         N         N         N         N         N           m³         0.610         t5*W4+t7*W3         N         N         N         N           m³         0.500         t6*(W4+W3)         N         N	B         h         H         H1         H2         W         W1         W2           0.30         0.50         0.80         2.00         4.00         0.90         1.10         -           t         t1         t2         t3         t4         t5         t6         17           0.30         0.30         0.10         0.40         0.80         0.10         0.10         0.50           Unit         Quanity         Equation         Equation         -         -         -           m³         1.000         W4*(H+t5+t6)         -         -         -         -           m³         0.034         h1*(1+0.5)*b         -         -         -         +         -           m³         0.040         H*t2/2         -         -         +         +         -         -         +         +         -         -         +	B         h         H         H1         H2         W         W1         W2         W3           0.30         0.50         0.80         2.00         4.00         0.90         1.10         -         4.00           t         t1         t2         t3         t4         15         t6         17         h1           0.30         0.30         0.10         0.40         0.80         0.10         0.10         0.50         0.13           Unit         Quantity         Equation         Equation         -         4.00           m³         1.000         W4*(H+15+16)         -	B         h         H         H1         H2         W         W1         W2         W3         W4           0.30         0.50         0.80         2.00         4.00         0.90         1.10         -         4.00         1.00           1         11         12         13         14         15         16         17         h1         b           0.30         0.30         0.10         0.40         0.80         0.10         0.10         0.50         0.15         0.15           Unit         Quantity         Equation         Equation         -

## BQ of Protection Works for 1 m (13/16)

Туре		PD1			Andreganskin mýslik k	Q=	270	~~~~~	540	(l/s)	
Dimensions	В	h	Н	HI	H2	II.	ŴI	W2	11/3	1.1	WS
	1.00	1.10	1.40	2.00	-	1.60	•	-		1.80	• ·
	ť	tl	t2	13	<u>t</u> 4	15	<u>t6</u>	17	hl	<u>b</u>	61
	0.30	0.30	0.10		-	0.10	0.10	-	0.15	0.15	0.15
ltem	Unit	Quantity					Equation	)			
Excavation Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	2.880 0.034 -0.550 2.364			W4*(H- h1*(1+( -h*B/2		* * *				•••
Backfill Embankment	៣ <sup>រ</sup> ៣ <sup>រ</sup>	0.070 0.011			H*t2/2 b1*h1/2	2				•	
Wet Masonry Plain Concrete Gravel	m <sup>3</sup> m <sup>3</sup>	1,280 0,180 0,180			(W4+W t5*W4 t6*W4	/)/2*H-B	**h				

							: .		4		
Туре	and a second	PD2			a an an an an an an an an an an an an an	Q=	144	~	288	(8/5)	
Dimensions	В	h	H.	HI	112	W	WI	W2	W3	<u></u>	W5
	0.80	0.80	1.10	2.00		1.40	· ·			1.60	
	t	tl	12	13	t4 -	15	16	17	<u>h1</u>	b	bl
	0.30	0.30	0 10	-		0.10	0.10	<u> </u>	0,15	0.15	0.15
Item	Unit	Quantity	, i			<u>i (</u>	Equation	1		<u></u>	
Excavation	m <sup>3</sup>	2.080			W4*(Ĥ	+15+16)	i pref G				
EXcavation	m <sup>3</sup>	0.034			h1*(1+	たんし おし よう					
	- m <sup>3</sup>	-0.320	· ·	•	-h*B/2					1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Total	m <sup>3</sup>	1.794			-11 (0, 2						
			1	· · ·		•					×
Backfill	m <sup>3</sup>	0.055		•	H*12/2	· · ·		 	•	•	· · ·
Embankment	. n <sup>3</sup>	0.011			b]*hl/2	2		·			
Wet Masonry	m <sup>3</sup>	1.010			(W4+W	/)/2*H-B	i*h				
WCL 14123018.3											
Plain Concrete	m3	0.160			t5*W4						
Gravel	m'	0.160			16*W4					• •	
	1			: .				-			
1											
						:			ng-ag-canan ara Bel	الديدية محمد محمد يعنون	

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# BQ of Protection Works for 1 m (14/16)

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Туре	5.6.592 M-20.9	PD3		nonge gelt des belle fab		Q=	75	~	150	(Us)	artikada yangka disa
Dimensions	В	h	Н	HI	H2	W	WI	W2	W3	-W4	W5
2	0.50	0.70	1.00	2.00	-	1.10	-	-	-	1.30	-
	t	11	t2	13	14	15	16	t7	hl	b	bl
	0.30	0.30	0.10	-	•	0,10	0.10	-	0.15	0,15	0.15
Item	Unit	Quantity	n andre angelen des Starts.	And the second second second second second second second second second second second second second second second	and a second second second second second second second second second second second second second second second		Equation	1			
				<u></u>	and a she of the second second second second second second second second second second second second second se						
xcavation	m	1.560			₩ <b>4</b> *(H	+15+16)					
xtaration	 m³	0.034	:		hi*(1+(		•				
	m <sup>3</sup>	0.175			-h*B/2	, .					
_	n 1	· · · ·	· .		-n D/2		1	· ·			
Total	m'	1.419	• •								-
					11*-212						
Backfill	m <sup>3</sup>	0.050	19		H*(2/2						
			· · · ·	•							ŝ
Embankment	m <sup>3</sup>	0.011			b1*h1/2	!					
									•		
Vet Masonry	m	0.850		1	(W4+W	')/2*H-B	*h				
			-:				:	: 문 관 관			
lain Concrete	m	0.130			15*W4						an an an an an an an an an an an an an a
								· · .		· · ·	· ;
iravel	m	0.130			(6*W4	14.4					
						$A_{i} = A_{i}$		. : .		1.16	
				:			1.	•			1.
						· ·					
Туре	faceration of	PD4				Q=	60	~	120	(l/s)	
Dimensions	8	) h	Н	HI	H2	W	WI	W2	W3 *	W4	W5
	0.50	0.60	0.90	2.00	- 1	1.10	•	-	<u> </u>	1.30	<u> </u>
ne a de la color de terres. No estas estas	t	tl	12	13	14	: 15	16	17	h) :	b	51
	0.30	0.30	0.10	-		0.10	0.10	•	0.15	0.15	0.15
ltem	Unit	Quantity					Equatio	n			
Excavation	m	1,430			W4*(H	+15+16)					
	m <sup>3</sup>	0.034			h]*(]+	0.5)*b	. i				
		-0.150			-h*B/2				1		1
Tatal	m <sup>3</sup>	1.314								-	
Total	[ <sup>111</sup> .	1.334	· ·	:							
					H*12/2	:		e An an Anna			
Backfill	m <sup>3</sup>	0.045			n*12/2	1		-	•		
						•	·		· ·		
Embankment	m <sup>3</sup>	0.011			bl*hl/	<b>4</b>					
	Ι.										
Vet Masonry	m <sup>3</sup>	0.780			(#4+#	V)/2*H-E	5 <b>h</b>				Ì
					•					,	
lain Concrete	[m³	0.130		•	`t5*₩4		· · · · ·			÷ .	
iajn Conciete								· ·			
Tain Conciere	1.5	0 130			16*W4			·			
	i m'		1 .		1	:	÷ .				
	<sup>m</sup>	· · ·	1.1.1								
Gravel	m										
	m,					· ·					·

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Туре	an an an an an an an an an an an an an a	PD5			aradalah inggan	Q=	36		72	(l/s)	
Dimensions	В	h	H	HI	H2	W	17	W2	W3	- W4	W.5
	0.40	0.50	0.80	2.00	•	1.00	+	•	-	1.20	
	t	1)	t2	13	t <del>1</del>	15	16	1?	hl	b	<u>b1</u>
	0.30	0.30	0.10	-	-	0.10	0.10	-	0.15	0.1:	0.15
ltem	Unit	Quantity			C ALCOLOGICAL STRATE		Equation	)			
an agus a shapina a' a shini na shini na shini a shini a	and the second s							· .	· .		
Excavation	· m <sup>3</sup>	1.200			W4*(H+	15+16)					
	m <sup>3</sup>	0.034			h1*(1+0	(.5)*b					
	m <sup>3</sup>	-0.100			-h*B/2				•		
Total	m³	1.134									
10(8)	196	1. 1 <u>-</u> 7 1				· · · ·		х <sup>1</sup> н.	-		
Backfill	m	· 0.040			H*i2/2						
Dackin	110	0.040			11 (2)2						
C. J. J. Land	n <sup>3</sup>	0.011			b1*h1/2	•			·	:	
Embankment	m	0.011			01 11/2	· · · · ·	e i s				
					A	')/2*H-B	*1.				
Wet Masonry	m³	0.680			(\¥++ \¥	<i>}</i> /2* <b>⊡</b> -D	т <b>н</b>		•		
		:				i. 1			4.1		
Plain Concrete	m <sup>3</sup>	0.120			(5*W4				11 <sup>-</sup>		
				·			÷				т
Gravel	m	0.120			t6*W4						
				E State State				. 4 <sup>10</sup> h			
				7	-				1		
								1997 - 1997 -			
The set of the set of		PD6		1		<b>0</b> =	24	~	-18	(l/s)	
Type Dimensions	В	l h	Н	HI	H2	Ŵ	WI	W2	W3		W.S
DIMENSIONS	0.40	0.40	0.70	2.00	+	1.00			1	1.20	-
	t	t1			+				hl		bl
			1 12	13	1 1 14	15 .	1 16	11/	1 10	b b	· · ·
	the second second second second second second second second second second second second second second second se		12	13	14	15 0,10	0.10	17	0.15	0.15	
llem	0.30	0.30	12 0.10			15 0.10	0.10		the second second second second second second second second second second second second second second second s		
liem	the second second second second second second second second second second second second second second second se						And the second s		the second second second second second second second second second second second second second second second s		0.1
	0.30 Unit	0.30 Quantity	0.10		<b>I</b> -	0.10	0.10		the second second second second second second second second second second second second second second second s		
Item Excavation	0.30 Unit m <sup>3</sup>	0.30 Quantity 1.080	0.10		¥4*(H	0.10 +15+16)	0.10		the second second second second second second second second second second second second second second second s		
	0.30 Unit m <sup>3</sup>	0.30 Quantity 1.080 0.034	0.10		W4*(H h1*(1+	0.10 +15+16)	0.10		and the second s		
Excavation	0.30 Unit m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080	0.10		¥4*(H	0.10 +15+16)	0.10		and the second s		
	0.30 Unit m <sup>3</sup>	0.30 Quantity 1.080 0.034	0.10		W4*(H h1*(1+	0.10 +15+16)	0.10		and the second s		
Excavation Total	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034			W4*(H h1*(1+ -h*B/2	0.10 +15+16)	0.10		and the second s		
Excavation	0.30 Unit m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080			W4*(H h1*(1+	0.10 +15+16)	0.10		and the second s		
Excavation Total Backfill	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2	0.10 +(5+16) 0.5)*b	0.10		and the second s		
Excavation Total	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034	0.10		W4*(H h1*(1+ -h*B/2	0.10 +(5+16) 0.5)*b	0.10		and the second s		
Excavation Total Backfill Embankment	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035 0.011			W4*(H h1*(1+ -h*B/2 H*(2/2 b1*h1/	0.10 +(5+(6) 0.5)*b	0.10 Equatio		and the second s		
Excavation Total Backfill	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035 0.011			W4*(H h1*(1+ -h*B/2 H*(2/2 b1*h1/	0.10 +(5+16) 0.5)*b	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035 0.011 0.610			W4*(H h1*(1+ -h*B/2 H*(2/2 b1*h1/ (W4+V	0.10 +(5+16) 0.5)*b 2 V)/2*H-E	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035 0.011			W4*(H h1*(1+ -h*B/2 H*(2/2 b1*h1/	0.10 +(5+16) 0.5)*b 2 V)/2*H-E	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 0.080 1.034 0.035 0.011 0.610 0.120	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V t5*W4	0.10 +(5+(6) 0.5)*b 2	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 -0.080 1.034 0.035 0.011 0.610	0.10		W4*(H h1*(1+ -h*B/2 H*(2/2 b1*h1/ (W4+V	0.10 +(5+(6) 0.5)*b 2	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry Plain Concrete	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 0.080 1.034 0.035 0.011 0.610 0.120	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V t5*W4	0.10 +(5+(6) 0.5)*b 2	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry Plain Concrete	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 0.080 1.034 0.035 0.011 0.610 0.120	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V t5*W4	0.10 +(5+(6) 0.5)*b 2	0.10 Equatio		and the second s		
Excavation Total Backfill Embankment Wet Masonry Plain Concrete	0.30 Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	0.30 Quantity 1.080 0.034 0.080 1.034 0.035 0.011 0.610 0.120	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V t5*W4	0.10 +(5+(6) 0.5)*b 2	0.10 Equatio		and the second s		

# BQ of Protection Works for 1 m (15/16)

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## BQ of Protection Works for 1 m (16/16)

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В	h	Н	- HI	H2	<i>W</i> .	WI	W2	W3	W4	W'5
Contraction of the local division of the loc	and the second se	0.80	2.00	-	0,90		•	-	1.10	
t		12	13	(4	t.	16	17	hl	b	<b>b</b> 1
	and the second	summer and the first	•	-	0.10	0.10	-	0.15	0.15	0.15
CONTRACTOR OF	THE PARTY NAMES AND ADDRESS OF			AT BOARDONN'S	ANT AND A DECKNOLOGICAL DECKNOLOGICAL DECKNOLOGICAL DECKNOLOGICAL DECKNOLOGICAL DECKNOLOGICAL DECKNOLOGICAL DEC	Equation		and the second second second second second second second second second second second second second second secon		DF(198 AF(10822).cpgs.
- Onliv	<u> v</u> uu								ar allen an Andrik (1996) (1997) (1997)	
	1 100			W.1*/H-	+13+16)					
				•	3.5)*0		1			
				-h*B/2						
៣ <sup>3</sup> ៈ	1.059								•	
		· · ·		a di senara r>Senara di senara di se						
m <sup>3</sup>	0.040			H*t2/2	11		· · ·			
	0.011	1	: :	51*51/3	•			1		
m-	.0.011		· · ·	01 11/2						· ·
	14 - L				· · · ·			•		Ì
m'	0.650		· · ·	(W4+W	′)/2*H•B	*h				
					$(M_{1,1},\dots,M_{n})$					
ា <sup>3 :</sup>	0.110			15*W4				÷		
1.31									· .	
m <sup>3</sup>	6 110	- <u>1</u>	.:	16*W4	1		. · ·			
	0.110					s 1 1	ji tan t Ara			
					- 	- 14 A		· · ·		
		1.1	· ·			•			•	
i i			1. e 1.							
				andrein, 1921 - A. Parto		10		an sain ann ann ann		
	and the second se	<u>ц</u>	L L L	T us	a company de seconde visco de	the second second second second second second second second second second second second second second second s		and the second states	CONTRACTOR OF TAXABLE PARTY.	W5
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0.30 Unit	0.30 Quantity	the second second second second second second second second second second second second second second second s	-		0.10	0.10 Equation	5	0.15		0.15
Unit	Quantity	0.10		•		A	5	0.15		0.15
	And the Party of t	0.10		•	0.10 +15+16)	A	5	0.15		0.15
Unit m <sup>3</sup>	Quantity 0.990	0.10		•	+15+16)	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034	0.10		W+*(H h1*(1+	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060	0.10		)	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034	0.10		W+*(H h1*(1+	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964	0.10		W4*(H h1*(1+ -h*B/2	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060	0.10		W+*(H h1*(1+	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964	0.10		W4*(H h1*(1+ -h*B/2	+15+16) 0.5)*b	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964	0.10		W4*(H h1*(1+ -h*B/2	+15+16) 0.5)*6	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2	+15+16) 0.5)*6	A	5	0.15		0.15
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.031	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/	+15+16) 0.5)*6	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.031 0.031	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.031	0.10		W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.035 0.031 0.580 0.110			W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V 15*W4	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.035 0.031 0.580 0.110			W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.031 0.031			W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V 15*W4	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.035 0.031 0.580 0.110			W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V 15*W4	+15+16) 0.5)*5	Equation	5	0.15		
Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 0.990 0.034 -0.060 0.964 0.035 0.035 0.031 0.580 0.110			W4*(H h1*(1+ -h*B/2 H*t2/2 b1*h1/ (W4+V 15*W4	+15+16) 0.5)*5	Equation	5	0.15		
	0,30	B         h           0.30         0.50           t         t1           0.30         0.30           Unit         Quantity           m³         1.100           m³         0.034           m³         -0.075           m³         0.040           m³         0.011           m³         0.011           m³         0.650           m³         0.110           m³         0.110           m³         0.110           m³         0.110	B         h         H           0.30         0.50         0.80           t         t1         t2           0.30         0.30         0.10           Unit         Quantity            m <sup>3</sup> 1.100         m           m <sup>3</sup> 0.034            m <sup>3</sup> 0.034            m <sup>3</sup> 0.040            m <sup>3</sup> 0.040            m <sup>3</sup> 0.011            m <sup>3</sup> 0.011            m <sup>3</sup> 0.110            m <sup>3</sup> 0.110            m <sup>3</sup> 0.110            m <sup>3</sup> 0.110            m <sup>3</sup> 0.110	B         h         H         H1           0.30         0.50         0.80         2.00           t         t1         t2         t3           0.30         0.30         0.10         -           Unit         Quantity         -         -           m³         1.100         -         -           m³         0.034         -         -           m³         0.040         -         -           m³         0.040         -         -           m³         0.011         -         -           m³         0.011         -         -           m³         0.010         -         -           m³         0.110         -         -           m³	B         h         H         H1         H2 $0.30$ $0.50$ $0.80$ $2.00$ -           t         t1         t2         t3         t4 $0.30$ $0.30$ $0.10$ -         -           Unit         Quantity         -         -         -           m <sup>3</sup> $1.100$ W4*(H-         -         -           m <sup>3</sup> $0.034$ h1*(1+4)         -         -           m <sup>3</sup> $0.075$ -         +         B/2           m <sup>3</sup> $0.040$ H*t2/2         -         +         H2           m <sup>3</sup> $0.040$ H*t2/2         -         +         H2         -           m <sup>3</sup> $0.011$ b1*h1/2         -         +         H2         -           m <sup>3</sup> $0.110$ t5*W4         -         -         -         -           m <sup>3</sup> $0.110$ t6*W4         -         -         -           m <sup>3</sup> $0.110$ t6*W4         -         -         -           M <sup>3</sup> $0.10$ $0.70$ $2.00$ </td <td>B       h       H       H1       H2       W         0.30       0.50       0.80       2.00       -       0.90         t       t1       t2       t3       t4       t5         0.30       0.30       0.10       -       -       0.10         Unit       Quantity       -       -       0.10         m³       1.100       W4*(H+t5+t6)       h1*(1+0.5)*b         m³       0.034       h1*(1+0.5)*b       -         m³       0.040       H*t2/2         m³       0.040       H*t2/2         m³       0.650       (W4+W)/2*H-B         m³       0.110       t5*W4         m³       0.110       t5*W4         m³       0.110       t5*W4         m³       0.110       t6*W4</td> <td>B         h         H         H1         H2         W         W1           0.30         0.50         0.80         2.00         -         0.90         -           t         t1         t2         t3         t4         t5         t6           0.30         0.30         0.10         -         -         0.10         0.10           Unit         Quantity         Equation         W4*(H+t5+t6)         m3         0.034         h1*(1+0.5)*b           m³         0.034         h1*(1+0.5)*b         -         h*B/2         -         h*B/2           m³         0.040         H*t2/2         -         h*B/2         -         h*b/2           m³         0.650         (W4+W)/2*H-B*h         -         n*b/2         -         -           m³         0.650         (W4+W)/2*H-B*h         -         -         -         -           m³         0.110         t5*W4         -         -         -         -         -           m³         0.110         t6*W4         -         -         -         -         -           m³         0.110         t6*W4         -         -         -         -</td> <td>B         h         H         H1         H2         W         W1         W2           <math>0.30</math> <math>0.50</math> <math>0.80</math> <math>2.00</math>         -         <math>0.90</math>         -         -           t         t1         t2         t3         t4         t5         t6         17           <math>0.30</math> <math>0.30</math> <math>0.10</math>         -         -         <math>0.10</math> <math>0.10</math>         -           Unit         Quantity         Equation         Equation         -         0.10         <math>-</math>           m<sup>3</sup> <math>0.034</math>         h1*(1+0.5)*b         -         h*B/2         -         -           m<sup>3</sup> <math>0.040</math>         H*t2/2         -         -         h*B/2         -           m<sup>3</sup> <math>0.040</math>         H*t2/2         -</td> <td>B         h         H         H1         H2         W         W1         W2         W3           <math>0.30</math> <math>0.50</math> <math>0.80</math> <math>2.00</math>         -         <math>0.90</math>         -         -         -           t         t1         t2         t3         t4         t5         t6         17         h1           <math>0.30</math> <math>0.30</math> <math>0.10</math>         -         -         <math>0.10</math> <math>0.10</math>         -         <math>0.15</math>           Unit         Quantity          Equation         Equation          <math>0.15</math>           m<sup>3</sup> <math>0.034</math>         h1*(1+0.5)*b         -         <math>h^*B/2</math> <math>h^*B/2</math>           m<sup>3</sup> <math>0.040</math>         H*t2/2          <math>h^*H/2</math> <math>H^*H/2</math> <math>H^*H/2</math>           m<sup>3</sup> <math>0.011</math> <math>b1*h1/2</math> <math>H^*H/2</math> <math>H^*H/2</math> <math>H^*H/2</math>           m<sup>3</sup> <math>0.110</math> <math>t5*W4</math> <math>f6*W4</math> <math>H^*W/2*H-B*h</math> <math>H^* W/2</math>           m<sup>3</sup> <math>0.110</math> <math>f6*W4</math> <math>I^*W/2</math> <math>W/2</math> <math>W/2</math> <math>W/2</math> <math>0.30</math> <math>0.40</math> <math>0.70</math> <math>2.00</math> <math>0.990</math></td> <td>B         h         H         H1         H2         W         W1         W2         W3         W4           0.30         0.50         0.80         2.00         -         0.90         -         -         1.10           t         t1         t2         t3         t4         t5         t6         t7         h1         b           0.30         0.30         0.10         -         -         0.10         0.10         -         0.15         0.15           Unit         Quantity         -         Equation         -         0.15         0.15           m<sup>3</sup>         0.034         h1*(1+0.5)*b         -</td>	B       h       H       H1       H2       W         0.30       0.50       0.80       2.00       -       0.90         t       t1       t2       t3       t4       t5         0.30       0.30       0.10       -       -       0.10         Unit       Quantity       -       -       0.10         m³       1.100       W4*(H+t5+t6)       h1*(1+0.5)*b         m³       0.034       h1*(1+0.5)*b       -         m³       0.040       H*t2/2         m³       0.040       H*t2/2         m³       0.650       (W4+W)/2*H-B         m³       0.110       t5*W4         m³       0.110       t5*W4         m³       0.110       t5*W4         m³       0.110       t6*W4	B         h         H         H1         H2         W         W1           0.30         0.50         0.80         2.00         -         0.90         -           t         t1         t2         t3         t4         t5         t6           0.30         0.30         0.10         -         -         0.10         0.10           Unit         Quantity         Equation         W4*(H+t5+t6)         m3         0.034         h1*(1+0.5)*b           m³         0.034         h1*(1+0.5)*b         -         h*B/2         -         h*B/2           m³         0.040         H*t2/2         -         h*B/2         -         h*b/2           m³         0.650         (W4+W)/2*H-B*h         -         n*b/2         -         -           m³         0.650         (W4+W)/2*H-B*h         -         -         -         -           m³         0.110         t5*W4         -         -         -         -         -           m³         0.110         t6*W4         -         -         -         -         -           m³         0.110         t6*W4         -         -         -         -	B         h         H         H1         H2         W         W1         W2 $0.30$ $0.50$ $0.80$ $2.00$ - $0.90$ -         -           t         t1         t2         t3         t4         t5         t6         17 $0.30$ $0.30$ $0.10$ -         - $0.10$ $0.10$ -           Unit         Quantity         Equation         Equation         -         0.10 $-$ m <sup>3</sup> $0.034$ h1*(1+0.5)*b         -         h*B/2         -         -           m <sup>3</sup> $0.040$ H*t2/2         -         -         h*B/2         -           m <sup>3</sup> $0.040$ H*t2/2         -	B         h         H         H1         H2         W         W1         W2         W3 $0.30$ $0.50$ $0.80$ $2.00$ - $0.90$ -         -         -           t         t1         t2         t3         t4         t5         t6         17         h1 $0.30$ $0.30$ $0.10$ -         - $0.10$ $0.10$ - $0.15$ Unit         Quantity          Equation         Equation $0.15$ m <sup>3</sup> $0.034$ h1*(1+0.5)*b         - $h^*B/2$ $h^*B/2$ m <sup>3</sup> $0.040$ H*t2/2 $h^*H/2$ $H^*H/2$ $H^*H/2$ m <sup>3</sup> $0.011$ $b1*h1/2$ $H^*H/2$ $H^*H/2$ $H^*H/2$ m <sup>3</sup> $0.110$ $t5*W4$ $f6*W4$ $H^*W/2*H-B*h$ $H^* W/2$ m <sup>3</sup> $0.110$ $f6*W4$ $I^*W/2$ $W/2$ $W/2$ $W/2$ $0.30$ $0.40$ $0.70$ $2.00$ $0.990$	B         h         H         H1         H2         W         W1         W2         W3         W4           0.30         0.50         0.80         2.00         -         0.90         -         -         1.10           t         t1         t2         t3         t4         t5         t6         t7         h1         b           0.30         0.30         0.10         -         -         0.10         0.10         -         0.15         0.15           Unit         Quantity         -         Equation         -         0.15         0.15           m <sup>3</sup> 0.034         h1*(1+0.5)*b         -

Protection Works Page 22

## Cost of Protection Works (1/8, unit : Nu./m)

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Туре	PAI	Q(1/s)=	270	~	540
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	15.340	30.61	470	E-1
Backfill	m3	1.156	15.38	18	F-3
Embankment	m3	0.011	34.56	0	1.5
Wet Masonry	m3	2.162	917.08	1.983	C-6
Dry Masonry	m3	4 200	206.60	868	E-9
Plain Concrete		2 2 5 6	1483.75	3,347	C-4
Gravel	m3	(1.656	206.60	136	E-9
Others	L.S			1.364	
Transportation	LS			1.228	
Total				9.413	
Time of the second second second second second second second second second second second second second second s	PA2	Q(l/s)=	144		288
Туре	Unit	Quantity	Unit Price	Amount	Remark
Description		14.066	30.61	431	the second second second second second second second second second second second second second second second s
Excavation	<u>m3</u>		15.38		E-3
Backtill	<u>m3-</u>	0.961	34.56		E-5
Embankment	<u>m3</u>	0.011		1,501	
Wet Masonry	<u>m3</u>	1.637	917.08 206.60		E-9
Dry Masonry	<u>m3</u>	4.200	and the second s	3.300	
Plain Concrete	rn3	2.224	1483.75		Construction of the local division of the lo
Gravel	<u>m3</u>	0.624	206.60	the second second second second second second second second second second second second second second second s	E-9
Others	L.S			1.249	
Transportation	LS			1,124	
Total				8.616	
		an a de la companya d	ant works the last strategy with the failed and the		
Туре	PA3	Q(l/s)=	75	~	150
Desemption	Unit	Quantity	Unit Price	Amount	Remark
					115 1 1
Excavation		13 2 3 9	30.61	405	1
Excavation Backfill	<u>m3</u> m3	13.239 0.900	15.38	14	E-3
Excavation Backfill Embankment	m3 m3 m3	13.239 0.900 0.011	15.38 34.56	14	E-3 E-5
Excavation Backfill Embankment	<u>m3</u> m3	13.239 0.900 0.011 1.400	15.38 34.56 917.08	14 0 1.284	E-3 E-5 C-6
Excavation	m3 m3 m3	13,239 0,900 0,011 1,400 4,200	15.38 34.56 917.08 206.60	14 0 1.284 868	E-3 E-5 C-6 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry	m3 m3 m3 m3	13,239 0,900 0,011 1,400 4,200 2,190	15.38 34.56 917.08 206.60 1483.75	14 0 1.284 868 3.249	E-3 E-5 C-6 E-9 C-4
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m3 m3 m3 m3 m3 m3	13,239 0,900 0,011 1,400 4,200	15.38 34.56 917.08 206.60	14 0 1.284 868 3.249 122	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel	m3 m3 m3 m3 m3 m3 m3	13,239 0,900 0,011 1,400 4,200 2,190	15.38 34.56 917.08 206.60 1483.75	14 0 1.284 868 3.249 122 1.188	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel	m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	13,239 0,900 0,011 1,400 4,200 2,190	15.38 34.56 917.08 206.60 1483.75	14 0 1.284 868 3.249 122 1.188 1.070	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wei Masonry Dry Masonry Plain Concrete Gravel Others	m3 m3 m3 m3 m3 m3 m3 m3 LS	13,239 0,900 0,011 1,400 4,200 2,190	15.38 34.56 917.08 206.60 1483.75	14 0 1.284 868 3.249 122 1.188	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation	m3 m3 m3 m3 m3 m3 m3 m3 LS	13,239 0,900 0,011 1,400 4,200 2,190	15.38 34.56 917.08 206.60 1483.75	14 0 1.284 868 3.249 122 1.188 1.070	E-3 E-5 C-6 E-9 C-1 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total	m3 m3 m3 m3 m3 m3 m3 L.S L.S	13,239 0,900 0,011 1,400 4,200 2,190 0,590	15.38 34.56 917.08 206.60 1483.75 206.60	14 0 1.284 868 3.249 122 1.188 1.070	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total Type	m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4	13 239 (1.900)	15.38 34.56 917.08 206.60 1483.75 206.60 60	14 0 1.284 868 3.249 122 1.188 1.070 8.201	E-3 E-5 C-6 E-9 C-1 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description	m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit	13 239 (0.900) (0.011) 1.400 2.190 (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.900) (0.	15.38 34.56 917.08 206.60 1483.75 206.60	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398	E-3 E-5 C-6 E-9 C-4 E-9 120 Remark E-1
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit m3	13 239 (6.900) (6.011) 1.400 2.190 (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.011) (0.00) (0.010)	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 60 Unit Price	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13	E-3 E-5 C-6 E-9 C-4 E-9 I20 Remark E-1 E-3
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total Total Description Excavation Backfill	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit m3 m3	13 239 (6.900 (6.011) 1.400 2.190 (0.590 (0.590) Quantity 12.990 (0.841)	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13	E-3 E-5 C-6 E-9 C-4 E-9 120 Remark E-1
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.590) (0.841) (0.011)	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13	E-3 E-5 C-6 E-9 C-4 E-9 I20 Remark E-1 E-3 E-5
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment Wet Masonry	m3 m3 m3 m3 m3 m3 m3 m3 L.S L.S L.S PA4 Unit m3 m3 m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 0.590 0.590 Q(Us)= Quantity 12.990 0.841 0.011 1.257	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 1483.75 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13 0 1,153	E-3 E-5 C-6 E-9 C-1 E-9 A B Remark E-1 E-3 E-5 C-6
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment Wet Masonry Dry Masonry	m3 m3 m3 m3 m3 m3 m3 m3 L.S L.S L.S PA4 Unit m3 m3 m3 m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 0.590 0.590 Q(Us)= Quantity 12.990 0.841 0.011 1.257 4.200	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13 0 0 1,153 865	E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9 C-4 E-9 C-4 E-9 C-4 E-9 E-9 E-5 C-6 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS LS PA4 Unit m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 (0.590) 	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Artiount 398 13 0 0 1.153 865 3.243	E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9 Remark E-1 E-3 E-5 C-6 E-9 C-4
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 0.590 0.590 Q(Us)= Quantity 12.990 0.841 0.011 1.257 4.200	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13 0 0 1,153 865 3.243 121	E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9 E-9 E-1 E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total Total Total Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others	m3 m3 m3 m3 m3 m3 m3 m3 LS LS PA4 Unit m3 m3 m3 m3 m3 m3 m3 LS	13 239 (0.900) (0.011) 1.400 4.200 2.190 (0.590) 	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ ~ Amount 398 13 0 0 1,153 865 3.243 12 1.155	E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9 Remark E-1 E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others Transportation Total <b>Type</b> Description Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel	m3 m3 m3 m3 m3 m3 m3 m3 LS LS LS PA4 Unit m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	13 239 (0.900) (0.011) 1.400 4.200 2.190 (0.590) 	15.38 34.56 917.08 206.60 1483.75 206.60 206.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 0 1.284 868 3.249 122 1.188 1.070 8.201 ~ Amount 398 13 0 0 1.153 865 3.243 121	E-3 E-5 C-6 E-9 C-4 E-9 C-4 E-9 Remark E-1 E-3 E-5 C-6 E-9 C-4 E-9

## Cost of Protection Works (2/8, unit : Nu./m)

Type	PA5	Q(Vs)=	36	~	72
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	12.574	30.61	385	E-1
Backfill	m3	0.784	15.38	12	
Embankment	m3	0.011	34.56	- 0	E-3
Wet Masonry	m3	1.088	917.08	998	C-6
Dry Masonry	m3 -	4.200	206.60	868	E-9
Plain Concrete	in3	2.172	1483.75	3.223	<u>(-4</u>
Gravel	m3	0.572	206.60	118	E-9
Dihers	LS			1.121	
Transponation	LS			1.009	
Total	<u> </u>			7.733	
total ·					
and and the second second second second second second second second second second second second second second s			24	a a construction of the second second second second second second second second second second second second se	-48
Туре	PA6	Q(l/s)=	Unit Price	Amount	Remark
Description	Unit	Quantity		<u>Amoun</u> 378	the second second second second second second second second second second second second second second second se
Excavation	m3	12.346	30.61		E-1 E-3
Backtill	<u>m3</u>	0.729	15.38		E-5
Embankment	<u>m3</u>	0.011	34.56	874	
Wet Masonry	<u>m3</u>	0.953	917.08		
Drv Masonry	m3	4.200	206.60	868	
Plain Concrete	m3	2.168	1483.75	3.217	NAMES OF TAXABLE PARTY OF TAXABLE PARTY.
Gravel	<u>m3</u>	() 568	206.60	and the second second second second second second second second second second second second second second second	E-9
Others	1.5			1.(193	
Transportation	L.S			984	
Total				7.542	· · · · · · · · · · · · · · · · · · ·
					WARDING COMPANY
Туре	PA7	Q(1/s)=	27	~	54
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3 .	12.399	30.61		E-1
Backfill	m3	0.784	15.38		E-3
Embankment	m3	0.011	34.56		E-5
Wet Masonry	m3	1.058	917.08	and the second sec	C-6
Drv Masonn	m3	4.200	206.60		E-9
Plain Concrete	m3	2 162	1483.75	3,208	C-4
Gravel	m3	0.562	206.60	116	E-9
Others	LS			1.11	
Transportation	LS			1,000	1
Total				7,664	
	<u>,</u>				
нана на селото на селото на селото на селото на селото на селото на селото на селото на селото на селото на село Транта на селото на селото на селото на селото на селото на селото на селото на селото на селото на селото на с	PA8	Q(l/s)=	18		36
Туре		Quantity	Unit Price	Amount	Remark
Description	Unit	la <u>serve</u> de la constante de la const	30.61	And the second sec	E-1
Excavation	<u>m3</u>	12.176	15.38		E-3
Backfill	<u>m3</u>	0.729		and the second se	E-5
Embankment	<u>m3</u>	0.011	34.56		C-6
Wet Masonry	<u>m3</u>	0.923	917.08		And the second designed and the second designed as the second design
Dry Masonry	3	4 200	206.60		E-9
Plain Concrete	1 m3	2.158	1483.75	3,202	
Gravel	m3	0.558	206.60	And the second sec	E-9
Others	L.S			1.083	
Transportation	LS			975	
Total				7,474	

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## Cost of Protection Works (3/8, unit : Nu./m)

Турс	PB1	Q(1/s)=	270		540
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	6.140	30.61	188	E-1
Backfill	m3	1.156	15.38	- 18	E-3
Embankment	in3	0.011	34.56	U	E-5
Wet Masonry	m3	2.162	917.08	1,983	C-6
Drv Masonry	m3	1.200	206.60	248	
Plain Concrete	m3	0.256	1483.75	380	
Gravel	m3	0.256	206.60	and the second sec	E-9
Others	LS		200.00	574	
	L.S L.S			517	· · · · · · · · · · · · · · · · · · ·
Transportation	L.3 .			3.960	
Total	┨╾─╍╌┙┥				
an sa mangangan sa sa sa sa sa sa sa sa sa sa sa sa sa				an an an an an an an an an an an an an a	100
Туре	PB2		144		288
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	4.866	30,61	149	the second second second second second second second second second second second second second second second se
Backfill	m3	0.961	15.38		E-3
Embankment	m3	0.011	34.56		E-5
Wet Masoniv	m3	1.637	917.08	1.501	
Dry Masonry	m3	1.200	206.60	248	
Plain Concrete	m3	0.224	1483.75	332	C-4
Gravel	m3	0.224	206.60	- 46	E-9
Others	LS			458	·
Transportation			· · · · · · · · · · · · · · · · · · ·	413	
Total				3,163	
10(4)					
	PB3		75	and a second second second second second second second second second second second second second second second	150
Туре		Q(I/s)=	Unit Price	Amount	Remark
Description	Unit	Quantity	30.61		E-1
Excavation	m3	4.039	and the second se		E-3
Backfill	m3	0.900	15.38		E-5
Embankment	m3	0011	34.56		
Wet Masonn	<u>m3</u>	1.400	917.08		
Dry Masonry	<u>. m3</u>	1,200	206.60		F-9
Plain Concrete	m3	0.190	1483.75		(1
Gravel	m3	0 190	2(16.60	میں <u>ش</u> میدہ <u>سمب موجود ک</u> ریں	E-9
Others	LS			398	
Transportation	LS			358	}
Transportation Total	LS			2.747	
Total			60		120
Total Type	PB4	Q(l/s)=	60 Unit Price	2.747	120 Remark
Tota) Type Description	PB4 Unit	Q(l/s)= Quantity	Unit Price	2.747 ~ Amount	Remark
Total Type Description Excavation	PB4 Unit m3	Q(l/s)= Quantity 3.790	Unit Price 30.61	2.747 ~ Amount 116	Remark L-1
Total Type Description Excavation Backfill	PB4 Unit m3 m3	Q(l/s)= Quantity 3.790 0.841	Unit Price 30.61 15.38	2.747 ~ Amount 146	Remark L-1 E-3
Total Type Description Excavation Backfill Embankment	PB4 Unit m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011	Unit Price 30.61 15.38 34.56	2.747 ~ Amount 136 13	Remark E-1 E-3 E-5
Total Type Description Excavation Backfill Embankment Wet Masony	PB4 Unit m3 m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011 1.257	Unit Price 30.61 15.38 34.56 917.08	2.747 ~ Amount 136 13 0 1,153	Remark E-1 E-3 E-5 C-6
Total Type Description Excavation Backfill Embankment Wet Masonry Dry Masonry	PB4 Unit m3 m3 m3 m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011 1.257 1.260	Unit Price 30.61 15.38 34.56 917.08 206.60	2.747 ~ Amount 146 13 0 1,153 248	Remark E-1 E-3 E-5 C-6 E-9
Total Type Description Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	PB4 Uoit m3 m3 m3 m3 m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011 1.257 1.200 0.186	Unit Price 30.61 15.38 34.56 917.08 206.60 1483.75	2.747 ~ Amount 146 13 0 1,153 248 276	Remark E-1 E-3 E-5 C-6 E-9 C-4
Total Type Description Excavation Backfill Embankment Wet Masony Dry Masony Plain Concrete Gravel	PB4 Unit m3 m3 m3 m3 m3 m3 m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011 1.257 1.260	Unit Price 30.61 15.38 34.56 917.08 206.60	2.747 ~ Amount 136 13 0 1,153 248 276 38	Remark E-1 E-3 E-5 C-6 E-9 C-4 E-9
Total Type Description Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others	PB4 Unit m3 m3 m3 m3 m3 m3 m3 m3 LS	Q(l/s)= Quantity 3.790 0.841 0.011 1.257 1.200 0.186	Unit Price 30.61 15.38 34.56 917.08 206.60 1483.75	2.747 ~ Amount 136 13 00 1,153 248 276 38 276 38	Remark E-1 E-3 E-5 C-6 E-9 C-4 E-9
Total Type Description Excavation Backfill Embankment Wet Masony Dry Masony Plain Concrete Gravel	PB4 Unit m3 m3 m3 m3 m3 m3 m3 m3 m3	Q(l/s)= Quantity 3.790 0.841 0.011 1.257 1.200 0.186	Unit Price 30.61 15.38 34.56 917.08 206.60 1483.75	2.747 ~ Amount 136 13 0 1,153 248 276 38	Remark [:-1 E-3 E-5 C-6 E-9 C-4 E-9

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Protection Works Page 25

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# Cost of Protection Works (4/8, unit : Nu./m)

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Туре	PB5	Q(l/s)=	36	· ~	72
Description	Unit	Quantity	Unit Price	Amount	Remark
xcavation	m3	3,374	30.61	103	E-1
Backfill	m3	0.784	15.38	12	E-3
Embankment	m3	0.011	34.56	Ū.	E-5
Vet Masonry	m3	1.088	917.08	998	<u>C-6</u>
Dry Masonry	m3	1.200	206.60	248	E-9
Plain Concrete	m3	0.172	1483.75	255	
	m3	0.172	206.60	36	E-9
Gravel	L.S	0.112		330	
Others	LS			.297	
Transportation				2,280	
Total					
		<u></u>			48
Туре	PB6	Q(l/s)=	24	~ · · · · · · · · · · · · · · · · · · ·	Remark
Description	Unit	Quantity	Unit Price	Amount	E-I
xcavation	<u>m3</u>	3.146	30.61		E-1 E-3
Backtill		0.729	15.38		
Embankment	m3	0.011	34.56	· · · · · · · · · · · · · · · · · · ·	E-5
Wet Masonry	m3	0,953	917.08	· · · · · · · · · · · · · · · · · · ·	<u>C-6</u>
Dry Masonry	m3	1.200	206.60		E-9
Plain Concrete	m3	0.168	1483.75		<u>C-4</u>
Grave	m3	0.168	206.60	the second second second second second second second second second second second second second second second s	E-9
Others	LS			303	
Transportation	LS			272	
Total				2,089	
Туре	PB7	Q(l/s)=	27	~	54
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	3.199	30.61		E-1
	m3	0.784	15.38		E-3
Backtill		0.011	34.56		E-5
Embankment	<u>m3</u>	1.058	917.08		C-6
Wet Masonry	m3	1.200	206.60		E-9
Dry Masonry	<u>m3</u>	and the second s	1483.75		C-4
Plain Concrete	m3	0.162	and the second sec		E-9
Gravel		0.162	206.60	the second second second second second second second second second second second second second second second s	
Others	LS			320	
Transportation	LS			288	
Total				2,211	
				a state in the second second second second second second second second second second second second second second	1
Туре	PB8	Q(l/s)=	18	~	36
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	2.976	30.61		E-1
Backtill	m3	(1.729	15.38		E-3
Embankment	m3	0.011	34.56	And the subscription of th	E-3
Wet Masonry	m3	0.923	917.08	the second second second second second second second second second second second second second second second se	C-6
THEFT THROUGH	m3	1.200	206.60		8 E-9
Da: Macono:		0.158	1483.75		C-4
Dry Masonry Plain Constant			1.00.10		
Plain Concrete	m3		206.60	1	GE-9
Plain Concrete Gravel	m3	0.158	206.60		E-9
Plain Concrete Gravel Others	m3 L.S		206.60	29	1
Plain Concrete Gravel	m3		206.60		1

## Cost of Protection Works (5/8, unit : Nu./m)

Туре	PC1	Q(l/s)=	270	~	540
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	11.404	30.61	349	E-1
Backtill	m3	0.070	15.38	1	E-3
Embankment	m3	0.011	34.56	Ò	E-5
Wet Masonry	m3	1.210	917.08	1,110	C-6
Drv Masonry	m3	3.000]	206.60	620	E-9
Plain Concrete	m3	2.170	1483.75	3.220	C-4
Gravel	m3	0.570	206,60	118	E-9
Dihers	LS			1.084	
Fransportation	LS			975	
Total			· ·	7.476	
Туре	PC2	Q(l/s)=	144	and a second second second second second second second second second second second second second second second	288
Description	Unit	Quantity	Unit Price	Amount	Remark
	m3	10.864	30.61	333	
Excavation	m3 m3	0.055	15.38	and the second data with the s	E-3
Backfill		0.035	34.56	and the second se	E-5
Embankment	<u>m3</u>	0.955	917.08	876	and the second se
Wet Masonry	<u>m3</u>	A REAL PROPERTY AND ADDRESS OF AD	206.60	620	
Dry Masonry	<u>m3</u>	3 (00)		3,190	
Plain Concrete	<u>m3</u>	2.150	1483.75	3.190 114	
Gravel	m3	0.550	206.60	the second second second second second second second second second second second second second second second s	E-9
Others	LS			1.027	
fransportation	LS			924	
Total				7,084	
				y ya galayek ya Yaka yina Kasarika ya Ya	\$ 70
Туре	PC3	Q(l/s)=	75	~	150
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	10.499	30.61	321	11
Backtill	m3 -	0.050	15.38		
mbankment	<u>m3</u>	0.011	34.56		E-5
Vet Masonry	m3	0.800	917.(18		C-6
Dry Masonry	M3	3. (KK)	206.60	620	
Plain Concrete		2 120	1483.75	3,146	the second second second second second second second second second second second second second second second s
Gravel		0.520	206.60	the second second second second second second second second second second second second second second second s	F:-9
Dihers	LS			986	L
ransportation	LS			887	
Total				6.802	
Туре	PC4	Q(l/s)=	60		120
		( American)	Unit Price	Amount	Remark
Description	Unit	Quantity	and a stand of the local data and the stand of the stand		1 m 1
	m3	<u>Quantity</u> 10.404	30.61	318	
Excavation			30.61 15.38	1	E-3
Excavation Backfill	m3	10.404	30.61	<u> </u>	E-3 E-5
Excavation Backtill Embankment	m3 m3	10.404 0.045	30.61 15.38	1 0 674	E-3 E-5 C-6
Excavation Backfill Embankment Wet Masonry	m3 m3 m3 m3	10.404 0.045 0.011 0.735	30.61 15.38 34.56	1 0 674	E-3 E-5
Excavation Backfill Embankment Wet Masonry Dry Masonry	m3 m3 m3 m3 m3 m3	10.404 0.045 0.011 0.735 3.000	30.61 15.38 34.56 917.08	1 0 674	E-3 E-5 C-6 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete	m3 m3 m3 m3 m3 m3 m3	10.404 0.045 0.011 0.735 3.000 2.120	30.61 15.38 34.56 917.08 206.60 1483.75	1 0 674 620 3,146	E-3 E-5 C-6 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Dravel	m3 m3 m3 m3 m3 m3 m3 m3	10.404 0.045 0.011 0.735 3.000	30.61 15.38 34.56 917.08 206.60	1 0 674 620 3,146 107	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel Others	m3 m3 m3 m3 m3 m3 m3 LS	10.404 0.045 0.011 0.735 3.000 2.120	30.61 15.38 34.56 917.08 206.60 1483.75	1 0 674 620 3,146 107 973	E-3 E-5 C-6 E-9 C-4 E-9
Excavation Backfill Embankment Wet Masonry Dry Masonry Plain Concrete Gravel	m3 m3 m3 m3 m3 m3 m3 m3	10.404 0.045 0.011 0.735 3.000 2.120	30.61 15.38 34.56 917.08 206.60 1483.75	1 0 674 620 3,146 107	E-3 E-5 C-6 E-9 C-4 E-9

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## Cost of Protection Works (6/8, unit : Nu./m)

Туре	PC5	Q(l/s) =	36	~	72
Description	Unit	Quantity	Unit Price	Amount	Remark
xcavation	m3	10.234	30.61	313	
ackfill	m3	0.040	15.38		Ē-3
mbankment	m3	0.011	34.56	A REAL PROPERTY AND INCOME.	E-3
Vet Masonry	m3	0.640	917.08	587	
Dry Masonry	m3	3.000	206.60	620	
lain Concrete	m3	2.110	1483.75	3,131	
Gravel	m3	0.510	206.60	105	E-9
Dihers	LS		the second second second second second second second second second second second second second second second se	951	
fransportation	LS			856	
Total				6.565	
(Otsi	}				· · · · · · · · · · · · · · · · · · ·
There of the second second second second second second second second second second second second second second	PC6	Q(1/s)=	24		-18
Туре		Quantity	Unit Price	Amount	Remark
Description	Unit	10.144	30.61	311	and the second s
Excavation	<u>m3</u>	0.035	15.38		E-3
Backfill	<u>m3</u>	0.011	34.56		E-5
Embankment	m3	0.575	917.08		<u>C-6</u>
Wet Masonry	<u>m3</u>	the second second second second second second second second second second second second second second second se	206.60		E-9
Dry Masonry	<u>m3</u>	3.000	1483.75	3,131	
Plain Concrete	<u>m3</u>	2.110	206.60		E-9
Gravel	<u>m3</u>	0.510	200.00	939	the support of the su
Others	<u>1.S</u>			845	
Transportation	LS			6,479	the second data was not second as a second data was a second data was a second data was a second data was a se
Total	<u></u>			0,479	
and the second second second second second second second second second second second second second second secon					54
Туре	PC7	Q(1/s)=	27	~	Remark
Description	Unit	Quantity	Unit Price	Amount 311	
Excavation	<u>m3</u>	10.159	30.61		E-3
Backfill	<u>m3</u>	0.(14()	15.38		E-5
Embankment	<u>m3</u>	0.011	34.56		
Wei Masonry	m3	0.610	917.08		C-6
Dry Masonry	<u>m3</u>	3.000	206.60		E-9
Plain Concrete	: m3 :	2.100	1483.75	3.116	the sum of the second state of the second stat
Gravel	m3	0.500	206.60	And the second design of the second design of the second design of the second design of the second design of the	E-9
Others	LS			942	the second second second second second second second second second second second second second second second se
Transportation	L.S			848	
Total				6,500	
				and the state of the state of the state of the state of the state of the state of the state of the state of the	
Туре	PC8	Q(l/s)=	18	~	36
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	10.074	30.61		E-1
Backfill	m3	0.035	15.38		E-3
Embankment	m3	0.011	34 56		E-5
Wet Masonry	m3	0.545	917.08	5(K	) C-6
Dry Masonry	m3	3,000	206.60	620	) E-9
Plain Concrete	in3	2.100	1483.75		5 C-4
Gravel		0.500	206.60		E-9
	LS			93(	
Othore	1: L.J.	1			and the second s
Others	10	· · ·	I	83	/  ·
Others Transportation Total	LS			6,41	

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Protection Works Page 28

## Cost of Protection Works (7/8, unit : Nu./m)

PD1	O(I/s)=	270	~	540
and the second s		the second second second second second second second second second second second second second second second s	Amount	Remark
		30.61		
	CALLER CONTRACTOR OF STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, ST	15.38		E-3
	The summary is a local state of the sum of t	34.56		
	And the owner of the owner of the owner of the owner of the owner of the owner of the owner of the owner of the	917.08		
	And the Party of t	1483.75		
	NAMES AND ADDRESS OF TAXABLE PARTY OF TAXABLE PARTY.	206.60	37	E-9
			310	
			279	
			2,142	
				· · · · · · · · · · · · · · · · · · ·
		ACCORD DISCOUNTS AND ADDRESS		288
PD2		Contraction of the second second second second second second second second second second second second second s	~	Remark
Unit		the second second second second second second second second second second second second second second second s		and the second sec
3	the second second second second second second second second second second second second second second second se	and the second s		and the second se
<u>m3</u>				E-3
m3	0.011			E-5
m3	the second second second second second second second second second second second second second second second se	and the second data was a second data was a second data was a second data was a second data was a second data w		and the second se
m3	NAMES OF TAXABLE PARTY OF TAXABLE PARTY.		i contra de la con	and the second s
LS	0.160	206.60	the second second second second second second second second second second second second second second second se	<u>E-9</u>
L.S				
LS			the second second second second second second second second second second second second second second second s	
			1,729	
PD3	O(1/s)=	75		150
	Quantity	Unit Price	Amount	Remark
n3	1.419	30.61		E-1
m3	0.050	15.38		E-3
m <sup>3</sup>	0.011	34 56		E-5
m3	0.850	917.08	the second second second second second second second second second second second second second second second s	C-6
m3	0.130	1483.75		
LS	0.130	206.60		I. 9
LS			ستحصيب مرجن مستوجرون وساست محمد	
LS				the second second second second second second second second second second second second second second second s
11			1.44	l <b> </b>
				<u> </u>
PD4	Q(l/s)=	60	~	120
Unit	Quantity		Amount	Remark
m3	1.314	30.61		1 E-1
m3	0.045	15.38		1 E-3
The subscription of the su	0.011	34.56		() E-5
m3				5 C-6
m3 m3	(1.780	917.08		
	(1.780 (1.130	1483.75	19	3 C-4
m3	(1.780		19	3 (C-4 7 E-9
m3 m3	(1.780 (1.130	1483.75	19 2 19	3 C-4 7 E-9 5
m3 m3 L.S	(1.780 (1.130	1483.75	19 2 19 19 17	3 C-4 7 E-9 5 6
m3 m3 L.S L.S	(1.780 (1.130	1483.75	19 2 19	3 C-4 7 E-9 5 6
	Unit m3 m3 m3 m3 m3 L.S L.S L.S U.S Unit m3 m3 m3 m3 m3 m3 L.S L.S L.S L.S L.S L.S L.S L.S L.S L.S	Unit         Quantity           m3         2.364           m3         0.070           m3         0.011           m3         0.011           m3         0.011           m3         0.180           m3         0.180           L.S         1.80           L.S         1.80           M3         0.180           L.S         1.794           M3         0.055           m3         0.0011           m3         0.0055           m3         0.0011           m3         0.0100           m3         0.0110           m3         0.055           m3         0.0100           m3         0.051           m3         0.160           L.S         0.160           L.S         0.160           L.S         0.130           m3         0.011           m3         0.030           m3         0.130           L.S         1.30           L.S         1.314	Unit         Quantity         Unit Price           m3         2.364         30.61           m3         0.070         15.38           m3         0.011         34.36           m3         0.180         1483.75           m3         0.180         1483.75           m3         0.180         206.60           L.S	Unit         Quantity         Unit Prece         Amount           m3         2.364         30.61         72           m3         0.070         15.38         1           m3         0.011         34.56         0           m3         0.011         34.56         0           m3         0.180         1483.75         267           m3         0.180         1483.75         267           m3         0.180         206.60         37           L.S

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## Cost of Protection Works (8/8, unit : Nu./m)

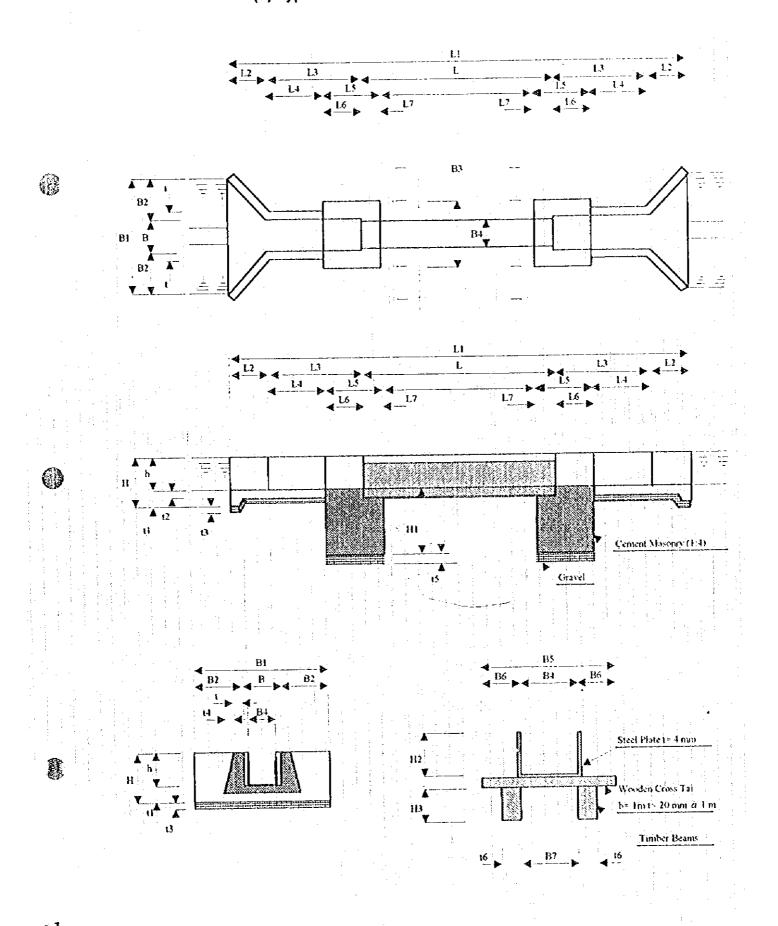
Туре	PD5	Q(l/s)=	36		72
Description	Unit	Quantity	Unit Price	Amount	Remark
xcavation	m3	1.134	30.61	35 1	
ackfill	m3	0.040	15.38		E-3
mbankment	m3	0.011	34.56		E-3
Vet Masonry	m3	0.680	917.08	624	C-6
And Designed Address of the Address	m3	0.120	1483.75	178	C-4
lain Concrete		0.120	206.60	25	E-9
iravel	1.5			172	
)thers	LS			155	
ransportation	<u> </u>			1.190	
Total					
·					
	atomatic bring	$(\lambda/l)_{\alpha}$	24	ACCOUNT OF A DESCRIPTION OF A DESCRIPTIO	48
Туре	PD6	Q(1/s)=	Unit Price	Amount	Remark
Description	Unit	Quantity			E-I
xcavation	<u>m3</u>	1.034	30.61		E-3
Backfill	<u>m3</u>	0.035	15 38		E-5
mbankment	<u>m3 :</u>	0.011	34.56	559	
Wet Masonry	m3	0.610	917.08		the second second second second second second second second second second second second second second second se
Plain Concrete	m3	0.120	1483.75	178	
Gravel	L.S	0.120	206.60	the state of the s	E-9
Others	L.S			159	
Transportation	L.S			143	
Total				1.097	
<u></u>					
		e - 1			and the second second second second second second second second second second second second second second secon
Туре	PD7	Q(1/s)=	24	~	-48
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	1.059	30.61		E-1
Backfill	in3	0.040	15.38	1	E-3
Embankment	m3	0.011	34,56	()	E-5
Wet Masonry	m3	0.650	917.08	596	C-6
Plain Concrete	m3	0.110	1483.75	163	C-4
	L.S	0.110	206.60	the second second second second second second second second second second second second second second second se	E-9
Gravel	L.S	0.110		163	
Others					
Transportation	<u>l.s</u>			1.125	the same of the same state of
Total					
					<b> </b>
and a subscription of the state of the subscription of the state of the subscription of the subscription of the			10		36
Туре	PD8	Q(1/s)=	18	~	Remark
Description	Unit	Quantity	Unit Price	Amount	and the second se
Excavation	<u>m3</u>	0.964	30.61		E-1
Backfill	<u>m3</u>	0.035	15.38		E-3
Embonkment	m3	0.011	34.56		Ē-5
Wet Masonry	m3	0.580	917.08		2 C-6
Plain Concrete	m3	0.110	1483.75		RC-4
and the second	LS	0.110	206.60	A second s	3 E-9
Uravel	LS			:15	and the second state of th
Gravel Others	1 1.5				a 1
Others	the second second second second second second second second second second second second second second second se			13	
	L.S L.S			13	

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Protection Works Page 30

(7) Typical Structure of Steel Flume Aqueduct



Steel Flume Aqueduct Page 1

## Dimensions of Steel Flume Aqueduct

	Code	SF	A1	0=	216		. 540	(I/s)	an an an an an an an an an an an an an a	0040573-740			
B4	H2	B	BI	B2	B3	B5	B6	B7	L	LI	L2	L3	L4
0.90	1.00	1.00	3.40		1.80	1.10	0.10	1.00	6.00	16.00	1.50	3.50	2.00
LS	L6	L7	h	Н	HI	H3	t	tl	12	13	t4 :	15	16
1.90	1.50	0.40	1.10	1.70	3.00	0.60	0.30	0.60	0.30	0.15	0,10	0.20	0,30
Туре	Code	SF	A2	Q≃	105		263	(l/s)					and the of the second second second second second second second second second second second second second second
84	H2	В	B1	B2	B3	B5	B6	<b>B</b> 7	L	LI	L2	L3	L+
0.70	0.70	0.80	2.50	0.90	1.60	0.90	0.10	0.80	6.00	.14.00	1.20	2.80	1.60
1.5	L6	L7	h	H	HI	H3	l	11	t2	13	(4	15	16
1.60	1.20	0.40	0.80	1.40	3.00	0.60	0.30	0.60	0.30	0.15	0,10	0.20	0.30
Туре	Code	SF	A3	Q=	60	~	150	(l/s)				a and a second second second second second second second second second second second second second second secon	
B4	H2	В	BI	B2	B3	B5	B6	B7	L	LI	L2	L3	L4
0.50	0.60	0.60	2.20	0.80	1.40	0.70	0.10	0.60	6.00	12.00	0.90	2.10	1.20
L5	L6	L7	h	Н	HÌ	H3	t	tl -	t2	t.	: (4	· 15	16
1.30	0.90	0.40	0.70	1.30	3.00	0.50	0.30	0.60	0.30	0.15	0.10	0.20	0.20
Туре	Code	SF	A4	Q=	45	~	113	(I/s)					
B4	H2	В	Bl	B2	B3	B5	B6	B7	L	LI	L2	L3	L4
0.50	0.50	0.60	1.90	0.70	1.40	0.70	0.10	0.60	6.00	12.00	0,90	2.10	1.20
L5	1.6	L7	h	H	HI	H3	t I	tl	12	13	14	15	16
1.30	0.90	0.40	0.60	1.20	3.00	0.50	0.30	0.60	0.30	0.15	0.10	0.20	0.20
Турс	Code	SF.	A5	Q=	30	~	75	(l/s)					
B4	H2	В	Bl	B2	B3	B5	B6	B7	L	LI	L2	L3	1 L4
0.50	0.40	0.60	1.60	0.60	1.40	0.70	0.10	0.60	6.00	12.00	0.90	2.10	1.20
L5	L6	L7	h	Н	HI	H3	1	tl	12	t3	14	15	16
1.30	0.90	0.40	0.50	1.10	3.00	0.50	0.30	0.60	0.30	0.15	+0.10	0.20	0.20
Туре	Code	SF.	A6	Q=	24	~	60	(l/s)	an ago at contac	1			: .
B4	H2	В	BI	B2	B3	B5	B6	B7	L	LI	L2	L3	L4
0.40	0.30	0.50	1.30	0.50	1.30	0.60	0.10	0.50	6.00	11.00	0.75	1 75	1.00
LS:	L6	L7	h	Н	HI	H3	t	tl	12	13	14	t5	t6
1.15	0.75	0.40	0.40	1.00	3.00	0.40	0.30	0.60	0.30	0.15	0.10	0.20	0.20
Туре		SF		Q≃	12	~	30	(l/s)					
84	H2	В	B1	B2	B3	BS	B6	B7	L	LI	L2	L3.	L1
0.40	0.30	0.50	1.30	0.50	1.30	0.60	0.10	0.50	6.00	11.00	0.75	1.75	- 1.00
LS	L6.	L7_	h	H	HI	H3	1	U U	· 12	6	t4	15	16
1.15	0.75	0.40	0,40	1.00	3.00	0,40	0.30	0.60	0,30	0.15	0.10	0.20	0.20

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Steel Flume Aqueduct Page 2

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BQ of Steel Flume Aqueduct (1/7)

		SEA1	-		2	=0	216	ł	240	(I/s)			
adit					Dime	Dimensions					1 1 1 2 1		
Τα	Н	B		B2	B3	B5	86 B	B7	۲. ۲	L1	L12	51	7
040	1.00	1 000	3.40	1.20	1-80	1.10	0.10	1.00	6.00	16.00	1.50	3.50	2.00
51	۲ę	-1	-	H	IH	113	t -	t1	ü	9	7	ŝ	2
06 1	1.50	0010	1.10	1,70	3.00	09'0	0.30 ~	0.60	0.30	0.15	0.10	0.20	0.30
l(cn)	Unit	Ouantity						Equation			s T		
		20.520			H1*L5*B3*2	3*2					• •		
CNCIVILION		087 7			(B+2*I)*()	(B+2*1)*(h+12)*L4/2*2	2*2						
	, m	6.105		-	(B1+B)/2*	(B1+B)/2*L2*(H+(3)/2*2	)/2*2		•	:			
Total	'n	31.105								· . ·			
Backfill	Ē	0.863			{+*!!*(L4+(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>0.5</sup> )*2	+(B2 <sup>2</sup> +L2 <sup>3</sup>	(; ;)*2				. ,	•	
Cement Masonry	E.	19.656			1-1H+SJ)	(L5*H1-L7*H3)*B3*2	2						
Wet Masonn	E	5.120			((B+t*2+t	((B+t*2+t4)*(h+t2)-B*h)*L4*2	B*h)*L4*	7					
	a a	402.1			((1+(+) <sup>-</sup> n <sup>-</sup> (2*(B1+B	(104 744 ) )/2*L2+(1)	2+1+/2)*((	((+(+) <sup>+</sup> 11 <sup>+</sup> (=+ +++)					
Total	B	12.049			· · · ·								
Gavel	8	1.830			3)*t-1)*tJ	3+(+)+[-2*	((B1+B+2	[]*(L4*(B+t4)+L2*((B1+B+2*t)/2+t4))*2	2	•	· ·	:	
	, m	898.1			(5*L5*B3*2	<b>*</b>						:	
Totat	a	3.198									• •		
Steel Plate (t=4)	Έ	17.400			(B4+H2*2)*I	2)*L							
Timber Beam	8	2.160			16*H3*L*2	5					· ·		
Wooden Cross Tai (t=20)	u.	0,660			B5*0.2*1*(L/2)	1*(L/2)		-	. •			•	
		-											Ì

Steel Flume Aqueduct Page 3

BQ of Steel Flume Aqueduct (2/7)

Type		05.02				,							
					Dime	Dimensions							
B4	H2	8	BI	B2	B3	BS	98	B7	<b>ר</b>	- F1	L2.	ะา	4
0.70	0.70	0.800	2.50	0.00	1.60	0.00	010	08.0	00.9	00 11	1.20	2.80	1.60
ς γ <b>η</b>	97	1.17	h	H	HI	H3	1.	11	12	13- 1	141	· 15	10
1.60	1.20	0010	0.80	L.40.	3.00	0.60	0.30	0.60	0.30	0.15	0.10	0.20	0.30
Item	Unit	Quantity						Equation					
	2 												
Excivation	<b>.</b> E	15.360			H:*L5*B3*2	2*5	•			:			
	'n.	2.464	·		(B+2*t)*(h+t2)*L4/2*2	וו+ו_)*בו+ו	2*2						
	, E	3.069			(B1+B)/2*L2*(H+t3)/2*2	'L2*(H+t3	)/2*2			•			
Total	Ē	20.893		• .						•			
•			· . ·	1		and a state of a state of the s		·: 	2 				
Backfill	Ê	961-0			(4*h*(L4+(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>(1,5</sup> )*2	-(B2 <sup>2</sup> +L2 <sup>-</sup>	)''`) <b>*</b> 2			:			
Cement Masonry	<b>,</b> a	14.592			(LS*H1-L7*H3)*B3*2	7*H3)*B3	*2		· · · · · · · · · · · · · · · · · · ·			· .	
												-1	
Wet Masonry	, E	3.232			((B+1*2+t4)*(h+12)-B*h)*L4*2	+)*(\h+12)-	B*h)*L4*	6		•			
	м,	3.360		•	(1+(+)*H*(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>(1,5</sup> *2*2	(B2 <sup>2</sup> +L2 <sup>7</sup> )	2*2*5		:				
	<b>H</b>	1.119			(2*(B1+B)/2*L2+((2+(4/2)*(11-(2)*B1*2	1/2*L2+(12	2+(4/2)*(()	1-(2)*B1*2					
Total	<b>е</b>	7.711			•	-	••••						
Gravel	Ē	1.170			(3*(L4*(B+i4)+L2*((B1+B+2*()/2+(4))*2	+14)+L2*(	((81+B+2	*()/2+(4))*	53				
	ся П	1.024			15*L5*B3*2	*2		. •					
Total	<b>.</b>	2.194						:					
•								. •			•	. •	
Steel Plate (t=4)	2 E	12.600			(B4+H2*2)*L	) <b>1</b>	- - -			•			
Timber Beam	Ē	2.160			16*H3*L*2	2		:		- - -			
Wooden Cross Tai (t=20)	Ē	0+5-0			B5*0.2*1*(L/2)	*(L/2)	. •				•		

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Steel Flume Aqueduct Page 4

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# BQ of Steel Flume Aqueduct (3/7)

	1. A. 1. A.	5.E.				Ę	07	į	150	(3/4)			
Type		SFAJ	2			>	3			1001			
	-				Dime	Dimensions	4						
÷#	H2	8	81	. B2	B;	B5	BG	B7	<u>ر</u>	- []	<b>L</b> 2	ដ	3
0.50	0.60	0.600	2 20	0.80	01-1	0.70	01.0	09'0	- ()()	12.00	06.0	2.10	1.20
LS LS	- <b>F</b> 6	L7	II	н : н	HI	113	- <b>1</b>	5	2	ŝ	1	S	<u>ي</u>
1.30	06.0	00110	0.70	- 1.30	3.00	0.50	0.30	0.60	0.30	0.15	0.10	0.20	0.20
ltem	Unit	Quantity						Equation					
Ricescration		10.920		•	H1*L5*B3*2	2				:			
	m,	077.1			(B+2*t)*(h+(2)*L1/2*2	+(2)*L1/	2*2			:			
	, ui	1.827			(B1+B)/2*L2*(H+G)/2*2	L2*(H+t3	)/2*2		· .				
Totai	í.	14,187			•								
Backfill	E E	0.337			t1*h*(L1+(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>0</sup> <sup>5</sup> )*2	(B2*+L2 <sup>2</sup>	, ,)*2	. *					
Cement Masonry	E	10.360			(L5*H1-L7*H3)*B3*2	**H3)*B3	2 2 2		· · · · · · · · · · · · · · · · · · ·				
Wet Masoury	"u	2.112			((B+1*2+14)*(h+12)-B*h)*L4*2	()*()+12)	B*h)*L4*	7				,	:
	m	2.505			((+(+)*H*(B2 <sup>-</sup> +L2 <sup>-</sup> ) <sup>(1 : *</sup> 2*2	B2 <sup>2</sup> +L2 <sup>3</sup> )	<sup>15</sup> *2*2			:	•		
	, E	01810			(2*(B1+B)/2*L2+(12+(4/2)*(11-(2)*B1*2	/2*L2+(1)	(1) <mark>*(1</mark> /1/2)	-(2)*B1*	2	•			
Total	Î.	2.457								· ·.			
Gravel	ົຄ	0.738			t_*(L+*(B+t+)+L2*((B1+B+2*t)/2+t+))*2	+(1)+L2*	((B1+B+2	*()/2+14))	2	· · ·			
		0.728			\[S*L5*B3*2	çı	1	*. * : :					
Total	ัธ	1.466				· . · . · . ·							
Steel Plate (1=4)	Έ	10.200			(B4+H2*2)*I	J.		:					·
Timber Beam	Ē	1.200			(6*H3*L*2	~							
Wooden Cross Tai (1=20)	, m	0.420			B5*().2*1*(L/2)	•(L/2)							
		:	: : :				1		-	,			

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BQ of Steel Flume Aqueduct (4/7)

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		•											Ĩ
					Dime	Dimensions			:				
B	H2	8	18	- B2	83	BS	B6	B7	ר ר	n	112	L3	L4
0.50	0.50	0.600	1.00	0.70	0†1	0.70	0.10	0,60	6.00	12.00	0.90	2.10	1.20
	ŗ	17 1	=	π	IH	EH.	1	11	- 12	C S	Ŀ	S	2
1.30	0.00	001.0	0.60	1.20	3.00	0.50	0.30	0.60	0.30	0 15	0.10	0.20	0.20
item	Unit	Quantity						Equation					
	1	10.970			H1*L5*B3*2	;*2							
CNCaVaulou		1 296			(B+2*t)*(h+t2)*L4/2*2	1+(2)+L4/	2*2	•		:			
	E.	1.519			(B1+B)/2*L2*(H+(3)/2*2	1-2*(11+13	1)/2*2						
Total	E	13.735					•						
Backfill	Ē	0.281			t1*h*(L++(B2 <sup>2</sup> +L2 <sup>2</sup> )" <sup>5</sup> )*2	-(82 <sup>2</sup> +L2 <sup>2</sup>	;)" \$)*2	·		·			
Cement Masonry	'n	10.360			(LS*H1-L7*H3)*B3*2	7*H3)*B3	*2			·			
Wet Masonry	B.	t+6.1			((8+1*2+1	4)*(ln+t2)	((B+t*2+t4)*(h+t2)-B*h)*L4*2	2			:		
	Ē	2.189			((+(4))*H*(82 <sup>2</sup> +L2 <sup>2</sup> ) <sup>0.5</sup> *2*2 	(B2 <sup>2</sup> +L2 <sup>2</sup> ) \\7*1 2+0	) <sup>45</sup> *2*2 2+14/27*(1	((+(+)*H*(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>0.5</sup> *2*2 ^*/D1_D/D*(?+(?+(1/)*((1_17)*R1*2	2 -	:			
Total	E 6	127.0	;		2 2 2	// Tre			•				
1061				* *						•			
Gravel	e.	0.698			13*(L4*(E	3+14)+L2*	*((B1+B+2	t3*(L4*(B+t4)+L2*((B1+B+2*()/2+t4))*2	7	:			
ž	a i	0.728	:		15*L5*B3 <sup>*</sup> 2	7		•.					
1 0131		074.1			:								
Steel Plate (t=4)	u,	9.000			(B4+H2*2)*L	2)*L	•						
Timber Beam	т. Т.	1.200	: : :		16*H3*L*2	21							
Wooden Cross Tai (1=20)	Ē	0.420			B5*0,2*1*(L/2)	*(L/2)				:			

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Steel Flume Aqueduct Page 6

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BQ of Steel Flume Aqueduct (5/7)

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Trees		SFA5	5			=0	30	2	- 75	(s/l)			
					Dime	Dimensions							
Γď	H2	8	B1	B2	.83	BS	B6	B7	۲	ГI	1.2	۲	3
0.50	010	0.600	1.60.	0.60	1.40	0.70	0.10	0.60	6.00	12.00	0,00	2.10	1 20
~	۶ <u>۱</u>	L7	=	H -	111	113		- 	2	ی ک	Ŧ	<u></u>	9
1.30	0, 0	Ľ	0.50	-1.10	3.00	0.50	0.30	0.60	0.30	0.15	0.10	0.20	0.20
ltem	Unit	Quantity						Equation					
		10.920	- n -		H1*L5*B3*2	*2		•		· · :			
	E	i. 152			(B+2*t)*(h+t2)*L4/2*2	1+(2)*L4/2	:*2	:			•		
	e,	1.238			(B1+B)/2*L2*(H+(3)/2*2	·L2*(H+G	)/2*2	:					
Total	, m	13.310			•	•		•					
Backfill	e.	0.228			(1*h*h*(L++(82 <sup>2</sup> +L2 <sup>2</sup> )" <sup>5</sup> )*2	-(82 <sup>2</sup> +L2 <sup>2</sup> )	,'' <sup>\$</sup> )*2	. :i					
Centent Masonry	Ē	10.360			(LS*H1-L	(L/S*H1-L7*H3)*B3*2	*2	· · · ·					
Wet Masonry	m,	1.776			((B+1*2+1	t)*(l1+12)-	((B+t*2+t4)*(h+t2)-B*h)*L4*2	7		: · · ·		·	·
	u .	106.1			H+(1)+))	((+(+)*H*(B2-+L2-)''*2*2 \^*/P1+P\/?*!	((+(+)*H*(B2-+L2-)``*2*2 \0*/P1+P\/0*[_0+(+2/2)*((]-(2)*8[*2	-12\*81*2					
Total	E 8	0.005	  					<b>.</b>					t
•	<b>E</b>	0.657			(3*(L4*(E	3+14)+L2*	[3*(L4*(B+(4)+L2*((B1+B+2*t)/2+t4)))*2	*()/2+14))*	2	-		:	
	1	0.728			:5*L5+B3*2	*2	х 1.			•	: '		
Total	Ē	1 3%5									•		
Steel Plate (t=4)	E	7 800			(B4+112*2)*L	2)*L			v -				
Timber Beam	Ē	1.200			16*H3*L*2	<b>*</b> 2				:			
Wooden Cross Tai (1=20)	'n	0.420			B5*0,2*1*(L/2)	1*(L/2)							
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Steel Flume Anneduct Page 7

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BQ of Steel Flume Aqueduct (6/7)

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f	Type		SFA6	9) ()			an <b>- −</b> 0		2	00	(8/8)			
						Dime	Dimensions							
ੇ ਨੇ		H2	8	81	82	83	B5	- B6 -	87 -		L1	1.2	5	Ľ
0,40	<b></b>	0.30	0.500	1.30	05.0	1.30	0.60	010	0.50	6.00	11.00	0.75	1.75	90.1 1
LS		۲6 د	1.7	11	H	HH	H3		Ξ	2	9	Ŧ	S	2
s 1,15		6.75	00+100	0.40	1.00	3:00	010	0.30	0.60	0.30	0.15	0.10	0.20	0.20
Item		Unit	Quantity						Equation					
			.						· .			1		
Excivation		"m	8.970			H1*L5*B3*2	3*2	· ·	- 1			• • • •		
		m	0.770			(B+2*t)*(	(B+2*t)*(h+(2)*L+/2*2	2*2				.*		
· · · ·		, u	0,776	- 		(B1+B)/2	(B1+B)/2*L2*(H+t3)/2*2	:)/2*2	· · · ·		• • •			
Total		, u	10.516					· · ·			:	•		
Backfill		ſe	0.152			++7)*4*+1	14*h*(L4+(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>0.5</sup> )*2	)''5)*2			•	· · · · ·	•	·
Centent Masonry		'n	8.554			7-1H*S7)	(L5*H1-L7*H3) <b>*</b> B3 <b>*</b> 2	2		-				
Wet Masonry		n,	1.280			((B+l*2+l	((B+t*2+t4)*(h+t2)-B*h)*L4*2	B*h)*L4*	2			•		
• •		Ш	1.442			*H*(+)+))	((+(+)*H*(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>11,5</sup> *2*2	<sup>5*2*2</sup>						
-		Ē	0.476			(2*(B1+B	;)/2+L2+(t)	2+(4/2)*(()	(2*(B1+B)/2*L2+(t2+t4/2)*(t1-t2)*B1*2			1 - 1. 1		
Total		E	×											
Gravel		Ē	0.473			(13*(L4*(E	3+(+)+L2*	((B1+B+2	;3*(L4*(B+t4)+L2*((B1+B+2*t)/2+t4))*2	5				
		, un	0.59%	3 		(5*L5*B3*2	:*2	· · ·				·		
Total		Ē	1.071						•		:			·
Steel Plate (1=4)		л.	6.000			(B4+H2*2)*L	2)*L						-	
Timber Beam	:	n s	0.96.0			16*H3*L*2	*2		- 					
Wooden Cross Tai (1=20)	i (1=2())	, m	0.360			B5+0.2+1+(L/2)	*(L/2)	• • • • •						
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BQ of Steel Flume Aqueduct (7/7)			

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Type		SFA7	V7			= 0	- 12	1	Û£	(l/s)			
			••••		Dime	Dimensions							
84	Ĥ	8	BI	- B2	B3	B5	B6	87		1	12	5	3
0.40	0.30	0.500	1.30	0.50	1.30	0.60	- 0,10	0.50	6.00	11.00	0.75	1.75	60.1
L5	3	17	н 1 1	Н	1H	H3	t	1	12	(3	72	5	3
1.15	0.75	0.400	- 01-0 -	1.00	3.00	0.40	0,30	0.60	0.30	0.15	0.10	0.20	0.20
l(cm	Unit	Quantity						Equation					
		10 C			6#20#9  #(11	, (*		· · ·	·				
Excivation	E	0.770			(B+2*1)*(h+12)*L4/2*2	י+נ2)*L-4/	*2	:		·			
	: E	0.776			(B1+B)/2*L,2*(H+13)/2*2	L.2*(H+t3	)/2*2						
Total	E	10.516				* • • •							
Backfill	E	0.152			(+*)\*(L++(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>11</sup> 5)*2	(B2 <sup>2</sup> +L2 <sup>2</sup>	,'' <sup>*</sup> )*2						
Centent Masonry	Ē	\$,554			(L5*H1-L7*H3)*B3*2	7*H3)*B3	*2						
Wet Masonry	5 	1.280	4		((B+(*2+(4))*(h+12)-B*h)*L4*2	4)*(h+i2)-	B*h)*L4*	5					
•	, a	1.442			(1+1+1)*H*(B2 <sup>2</sup> +L2 <sup>2</sup> ) <sup>11,5</sup> *2*2	(B2 <sup>2</sup> +L2 <sup>2</sup> )	2+2+3		•				
	m.	947.0			(2*(B1+B)	)/2*L2+(()	:+(1/2)*(1	(2*(B1+B)/2*L2+((2+(4/2)*((1-(2)*B1*2					
Total	m,	3.198			•								
Gravel	'n	- 0,473			(3*(L4*(B	:+(+)+[-2*	((B1+B+2	(3*(L4*(B+14)+L2*((B1+B+2*1)/2+14))*2	2	·			
	e	0.598			(5*L5*B3*2	7							
Total	Ē	1.70.1									·		
Steel Plate (t=4)	<b>'</b> a	6.000			(B4+H2*2)*L	J+[							
Timber Beam	Ē	0.960			16*H3*L*2	7							
Wooden Cross Tai (1=20).	Ê	0.360			B5*0.2*1*(L/2)	*(U/2)		•					

Steel Flume Aqueduct Page 9

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## Construction Cost of Steel Flume Aqueduct (Nu/m) (1/3)

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Type	SFA1	Q(l/s)=	216	~	540
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	31.105	30.61	952	
Backfill	m3	0.863	15.38		E-3
Cement Masonry	m3	19.656	818.54	16.089	C-7
Wet Masonry	m3	12.049	917.08	11,050	C-6
Gravel	m3	3.198	206.60	661	E-9
Steel Plate (t=4)	m2	17,400	55.13	959	M-2
Timber Beam	m3	2.160	4512,18	9.716	T-2
Wooden Cross Tai (t=20)	m3	0.660	4626.63	3.054	T-3
Others	LS			8,505	a ann an tha ann an tha ann an tha ann an tha an tha ann an tha ann an tha ann an tha ann an tha ann an tha ann
Transportation	LS			7.654	and the second distance of the second distanc
Total	<u> </u>			58,684	
10(a)					
For Im				9,781	
FOI IIII					
Туре	SFA2	Q(l/s)=	105	~	263
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	20.893	30.61	640	E-1
Backfill	m3	0,496	15,38		E-3
Cement Masonry	m3	14.592	818.54	11,944	C-7
Wet Masonry	 m3	7.711	917.08	7.072	C-6
Gravel	m3	2.194	206.60		E-9
Steel Plate (t=4)	m2	12.600	55.13	· · · · · · · · · · · · · · · · · · ·	M-2
Timber Beam	m3	2.160	4512.18	9,746	the second second second second second second second second second second second second second second second se
Wooden Cross Tai (1=20)	m3	0.540	4626.63	2,498	the same start in the same start in the same start is the same start is the same start is the same start is the
Others	LS	0.040	4020.03	6.611	
and the second second second second second second second second second second second second second second second	L.S L.S			5.950	
Transportation	L.3			45,617	
Total					
				7.603	
For Im	<u> </u>			1.003	
and the second second second second second second second second second second second second second second second				~	150
Туре	SFA3	Q(I/s)=	60		
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	14.187	30.61	434	NAME AND ADDRESS OF TAXABLE PARTY.
Backfill	m3	0.337	15.38		E-3
Cement Masonry	<u>m3</u>	10.360	818.54	8,480	
Wet Masonry	<u>m3</u>	5.457	917.08	5,004	
Gravel	m3	1.466	206.60	the second second second second second second second second second second second second second second second s	E-9
Steel Plate (1=4)	m2	10.200	55 13	The second second second second second second second second second second second second second second second s	M-2
Timber Beam	m3	1.200	4512.18	5.415	
Wooden Cross Tai (t=20)	m3	0.420	4626.63	1,943	
Others	L.S			4.429	a la construction de la construc
Transportation	L.S			3.986	and the second s
Total				30,562	
For 1m				5,094	
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Steel Flume Aqueduct Page 10

## Construction Cost of Steel Flume Aqueduct (Nu/m) (2/3)

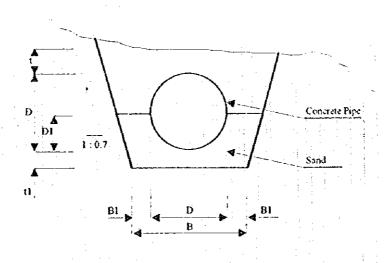
Туре	SFA4	Q(l/s)=	45	~	113
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	13.735	30.61	4201	CONTRACTOR OF A DESCRIPTION OF A DESCRIP
Backfill	m3	0.281	15.38		E-3
Cement Masonry	m3	10,360	818.54	8,480	
Vet Masonry	m3	4.870	917.08	4,466	
Gravel	m3 -	1.426	206.60	295	
Steel Plate (t=4)	m2	9.000	55,13	496	
limber Beam	m3	1.200	4512.18	5,415	
Vooden Cross Tai (1=20)	m3	0.420	4626.63	1.943	T-3
Others	LS			4,304	
Fransportation	LS		a at a statistic of the second second second second second second second second second second second second se	3.873	-
Total		And the supervision of the super		29.696	· .
For Im				4,949	
			<u>(</u>		
an an an an an an an an an an an an an a	SFA5	Q(1/s)=	30	~	75
Туре	Unit	Quantity	Unit Price	Amount	Remark
Description		13.310	30.61	407	
Excavation	<u>m3</u>	0.228	15.38		E-3
Backfill	m3		818.54	8,480	
Cement Masonry	m3	10.360	917,08	3,955	
Wet Masonry	m3	4.313		286	the second second second second second second second second second second second second second second second s
Gravel	<u>m3</u>	1.385	206.60	and the second sec	M-2
Steel Plate (t=4)	<u>m2</u>	7.800	and the second se	5.415	
Timber Beam	m3	1.200	4512.18	1.943	and the second sec
Wooden Cross Tai (t=20)	- m3 -	0.420	4626.63		1-3
Others	LS	· · · · · · · · · · · · · · · · · · ·		4.184	
Transportation	LS			3.766	
Total				28.870	
			1		
For Im				4.812	
				ang managana dan Salaya Salaya ang mang mang dan Salaya ang mang dan salaya sa	
Туре	SFA6	Q(l/s)=	24	~	60
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	10.516	30.61	322	E-1
Backfill	m3	0.152	15.38		E-3
Cement Masonry	m3	8.554	818.54	7,002	C-7
Wet Masonry	m3	3.198	917.08	2,933	
Gravel	m3	1.071	206.60	-221	E-9
Steel Plate (t=4)	in2	6.000	55.13	331	M-2
Timber Beam	m3	0,960	4512.18	4,332	and the second se
Wooden Cross Tai (1=20)	m3	0.360	4626.63	1.666	
	LS	0007		3.362	Construction of the local days
Others				3.025	
Transportation	LS			23.195	· · · · · · · · · · · · · · · · · · ·
Total				2	· · · · · · · · · · · · · · · · · · ·
	1	1	<u> </u>		
For 1m		11		3,860	

## Construction Cost of Steel Flume Aqueduct (Nu/m) (3/3)

Туре	SFA7	Q(l/s)=	12	~	30
Description	Unit	Quantity	Unit Price	Amount	Remark
Excavation	m3	10,516	30.61	322	E-1
Backfill	m3	0.152	15.38	2	E-3
Cement Masonry	m3	8.554	818.54	7,002	<b>C-</b> 7
Wet Masonry	m3	3.198	917.08	2,933	C-6
Gravel	m3	1.071	206.60	221	E-9
Steel Plate (t=4)	m2	6.000	55.13	331	M-2
Timber Beam	<b>m</b> 3	0.960	4512.18	4,332	T-2
Wooden Cross Tai (t=20)	m3	0.360	4626.63	1,666	T-3
Others	L.S			3.362	
Transportation	L.S		n 740 mil in The Market The Source on the Same Court Court of Same	3.025	
Total				23,195	
				ang a ra mana sherar cana ang da baya	
For 1m			iliate having offer a sear baseles on measure promo	3.866	
				an an faith an an an an an an an an an an an an an	

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Steel Flume Aqueduct Page 12



Dimensions (m)

Type Code	D	DI	В	B1	t	11	Canal Capacity	(l/s)	Remark
PPC1	1.20	0.60	2.20	0.50	0.30	0.30	283 ~	566	
PPC2	0.90	0.45	1.90	0.50	0.30	0.20	159 ~	319	
PPC3	0.70	0.35	1.70	0.50	.0.30	0.20	96 ~	193	
PPC4	0.50	0.25	1.50	0.50	0.30	0.20	49 ~	98	
PPC5	0.40	0.20	1.40	0.50	0.30	0.20	31 ~	63	
PPC6	0.30	0.15	1.30	0.50	0.30	0.15	18 ~	35	

Pipe Canal Works Page 1

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## BQ of Pipe Canal Works (for 1 m)

	(1/s)	566	~	283	Q=	Cl	PPC	A REAL PROPERTY OF A REAL PROPER	Туре
· ·	<u> </u>	1	B1	В	D1	D		sions	Dimer
	0.30	030	0.50	2.20	0.60	1.20	· · ·	:	
		and a state of the second second second second second second second second second second second second second s	ion	Equa			Quantity	Unit	Item
			+ti)	t+t1))*(D+	(B+0.7*(D		6.228	m³	Excavation
			n -	++1\)*(D]+	(B+0.7*(D)		2.264	3	
4			,		-3.14*D <sup>2</sup> /4/			m <sup>3</sup>	Sand
				<b>4</b>	-3.14.17.14		-0.565	ni <sup>3</sup>	
	;						1.699	' m³	Total
;				Saud .					
х.				-Sana	Excavation		4.529	m m	Backfill
			im	1,200	D=		1	m	Concrete Pipe
	(l/s)	319	ar ann an thair a stade	120	~~~~~			en de Antonesia	
	11	MARK DEPOSITE AND DEPOSITE AND AND		159	Q=	STREET, STREET	PP	Same and same	Туре
А.	0.20	<u>t</u> 0.30	B1	B	Dl	D		nsions	Dime
	V.49	0.50	0.50	1.90	0.45	0.90			
				Equa			Quantity	Unit	Item
					1010 24/0				
ant a	1. 		(+11)	+1+11))*(D+	(B+0.7*(D		4.032	m	Excavation
		de la tre							
			<b>(1)</b>	l+(l))*(D1+			1.6485	m³	Sand
			1.1.1	/2	~+3.14*D <sup>2</sup> /4		-0.318	m <sup>3</sup>	
							1.330	m	Total
		1 1 1 1						_	
N. N.				-Sand	Excavation		2.702	m³	Backfill
		· · ·	mmi	000	<b>D</b> -				
			11111	900	D=			m	Concrete Pipe
	(l/s)	193	~	96	Q=	iC3	 		Туре
	t1	T i	Bl	В		<u> </u>		neio-c	A REAL PROPERTY OF THE REAL PR
	0.20	0.30	0.50	1.70	0.35	0.70		nsions	
				Equ		<b> </b>	Quantity	Unit	
						<u></u>	Quantity	<u> </u>	ltem
			1+11)	)+ <b>(+(1))</b> *(D	/8±0.7*/F		3.048	m <sup>3</sup>	
					_ (0+0.7-(L		5.048	m	Excavation
	1		++13	)]+t1))*(DI	(R+0.7*/F		1 1202	3	<b>C</b> . 1
					· · ·		1.4595	m <sup>3</sup>	Sand
				HZ ·	-3.14*D <sup>2</sup> /		-0.192		
•	. [ ]		• • •				1.267	m <sup>3</sup>	Total
				n-Sand	Excavatio		1.781	m³	Backfill
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1.1.1.1	1			Marine Research
			mm		D				Concrete Pipe

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15.8.2 Kit	Туре		PPC	C4	Q=	49	-	98	([/5]
1	THE REPORT OF THE PARTY OF THE	nsions	,	D	D1	B	BI		<u>tl</u>
		:	ľ	0.50	0.25	1.30	0.50	0.30	0.20
alada karin di	Item	Unit	Quantity	1		Equa	ition		وروار المراجع والمراجع والم
and an inclusion in any	A SHORE OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER		Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos						
Excav	ration	m³	2.200		(B+0.7*(D-	+1+(1))*(D+	(+t])		
Sand		m'	1.2705	i	(B+0.7*(D	1+t1))*(D1-	H1)		
		m <sup>3</sup>	-0.098		-3.14*D <sup>2</sup> /4	12			
	Total	m <sup>3</sup>	1.172					ч. н <sup>а</sup> т.,	
			· .					;	
Backi	G11	m <sup>3</sup>	1.028		Excavation	-Sand			
Davki								1. 	· · · · ·
Cónci	rete Pipe	m	1		D=	500	៣៣	- 1 1	
Conci	icie i ipe		. 1						
	Туре		PP	C5	Q=	31		63	(l/s)
	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	nsions		D	DI	B	Bl	l	tl
ļ				0.40	0.20	1.40	0.50	0,30	0.20
	Item	Unit	Quantity			Equ	ation		
						,			
Exca	vation	m <sup>3</sup>	1.827		(B+0.7*(D	+t+t1))*(D	+t+t1)	n An an an Anna an	
L.vu	(allon								94.19 20
Sand		m <sup>3</sup>	1.176		(B+0.7*(D	1+11))*(D1	+(1)		n in the
Janu		m <sup>3</sup>	-0.063	1	-3.14*D <sup>2</sup> /4		<b>-</b>	ant an the	
11	Tatal	m <sup>3</sup>	1.113				·		
	Total	m	1.113	· · ·		449 - 1964 - 1965 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 -			
Back	<b>C</b> 11	m <sup>3</sup>	0.714		Excavation	Sand			
I Back	J111	10	0.71+		Excavation	1-5400	int tra		n n a star The star
- Suck						1			
	nato Dino	m			D=	400	mm	· · · ·	
	rete Pipe	m	]		D=	400	mm		
		m	] PP	 C6			mm	35	(1/s)
	Туре		) PP	C6	Q=	18		35 1 1	(l/s) t1
	Туре	m	J PP	D	Q= D1	18 ] B	BI	1	t ti
	Type Dime	ensions			Q=	18 B 1.30	B1 0.50		t ti
	Туре		PP Quantity	D	Q= D1	18 B 1.30	BI	1	tl
	Type Dime Item	ensions Unit	Quantity	D 0.30	Q= D1 0.15	18 B 1.30 Equ	BI 0.50 ation	1	t ti
	Type Dime	ensions		D 0.30	Q= D1 0.15	18 B 1.30	BI 0.50 ation	1	<u>u</u>
Conc 	Type Dimo Item	cnsions Unit m <sup>3</sup>	Quantity 1.369	D 0.30	Q= D1 0.15 (B+0.7*(D	18 B 1.30 Equ	B1 0.50 ation +(+11)	1	u
	Type Dimo Item	ensions Unit m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D	18 B 1.30 Equ ++1+11))*(D 01+11))*(D1	B1 0.50 ation +(+11)	1	u
Conc	Type Dimo Item Nation	ensions Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035	D 0.30	Q= D1 0.15 (B+0.7*(D	18 B 1.30 Equ ++1+11))*(D 01+11))*(D1	B1 0.50 ation +(+11)	1	<u>u</u>
Conc	Type Dimo Item	ensions Unit m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D	18 B 1.30 Equ ++1+11))*(D 01+11))*(D1	B1 0.50 ation +(+11)	1	t ti
Conc Exca Sand	Type Dime Item Nation	ensions Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4	18 B 1.30 Equ ++1+11))*(D 01+11))*(D 1/2	B1 0.50 ation +(+11)	1	t ti
Conc 	Type Dime Item Nation	ensions Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D	18 B 1.30 Equ ++1+11))*(D 01+11))*(D 1/2	B1 0.50 ation +(+11)	1	<u>u</u>
Conc Exca Sand Back	Type Dimo Item wation I Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4 Excavation	18 B 1.30 Equ ()+(+(+)))*(D) ()(+(1)))*(D) ()(2) ()(2) ()(2) ()(3)	B1 0.50 attion +(+t1) +t1)	1	t ti
Conc Exca Sand Back	Type Dime Item Nation	ensions Unit m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4	18 B 1.30 Equ ()+(+(+)))*(D) ()(+(1)))*(D) ()(2) ()(2) ()(2) ()(3)	B1 0.50 ation +(+11)	1	t ti
Conc Exca Sand Back	Type Dimo Item wation I Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4 Excavation	18 B 1.30 Equ ()+(+(+)))*(D) ()(+(1)))*(D) ()(2) ()(2) ()(2) ()(3)	B1 0.50 attion +(+t1) +t1)	1	t ti
Conc Exca Sand Back	Type Dimo Item wation I Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4 Excavation	18 B 1.30 Equ ()+(+(+)))*(D) ()(+(1)))*(D) ()(2) ()(2) ()(2) ()(3)	B1 0.50 attion +(+t1) +t1)	1	t ti
Conc Exca Sand Back	Type Dimo Item wation I Total	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 1.369 0.9815 -0.035 0.946	D 0.30	Q= D1 0.15 (B+0.7*(D (B+0.7*(D -3.14*D <sup>2</sup> /4 Excavation	18 B 1.30 Equ ()+(+(+)))*(D) ()(+(1)))*(D) ()(2) ()(2) ()(2) ()(3)	B1 0.50 attion +(+t1) +t1)	1	

Pipe Canal Works Page 3

# BQ of Pipe Canal Works for 1 m (1/2)

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Туре	P	PC1	Q=	283	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	566	(1/s)
Dimension	No. The Actual States	D	DI	В	<u>B1</u>	<u>t</u> :	11
		1.20	0.60	2.20	0,50	0,30	0.30
Item Uni	t Quantity			Equa	tion	an an an an an an an an an an an an an a	
xcavation m <sup>3</sup>	6.22	8	(B+0.7*(D	+t+t1))*(D+	t+il)		
and m <sup>3</sup>	2.26	4	(B+0.7*(D1+t1))*(D1+t1) -3.14*D <sup>2</sup> /4/2				
m³	-0.56		-3.14*D*/4	12			
Total m <sup>3</sup>	1.69	9				:	•
ackfill m <sup>i</sup>	4.52	9	Excavation	n-Sand		•	ı
Concrete Pipe m		1	D=	1,200	nm	· · ·	
Troo		PC2	Q=	159	~	319	(l/s)
Type Dimensior		D	DI	В	BI	l	l tl
Diffectision		0.90	0.15	1.90	0.50	0.30	0.20
Item Un	it Quantity	and and one party of \$254		Equ	ation		
Excavation m	4.03	32 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		)+t+t1))*(D			
Sand m		35		)1+i1))*(DI	+11)		
m	30.3	18	-3.14*D <sup>-</sup> /	4/2			
Total	<sup>3</sup> 1.3	30	and the state			×. • •	
					· · · ·		
Backfill	2.7	02	Excavatio	n-Sand			
	3 2.7	02 1	Excavatio D		) min		
Concrete Pipe n		02 1 PPC3			) mun ~	193	(1/s)
			D Q= D1	= 900 96 B	~   B1	1	t 1
Concrete Pipe n Type		1 PPC3	D Q=	= 900 96 B 1.70	B1 0.50	CONTRACTOR AND A	A DESCRIPTION OF THE OWNER.
Concrete Pipe n Type Dimensio		1 PPC3 0.70	D Q= D1	= 900 96 B	B1 0.50	1	t 1
Concrete Pipe n Type Dimensio Item Ui	ns	1 PPC3 0.70 9	Q= D1 0.35	= 900 96 B 1.70	BI 0.50 uation	1	() () () () () () () () () () () () () (
Concrete Pipe n Type Dimensio Item Ui Excavation n Sand n	ns iit Quantii 1 <sup>3</sup> 3.0 1 <sup>3</sup> 1.45	1 PPC3 0.70 2 48 95	Q= D1 0.35 (B+0.7*( (B+0.7*(	= 900 96 1.70 Equ D+t+11))*(D D1+t1))*(D	B1 0.50 uation	1	t 1
Concrete Pipe n Type Dimensio Item Ui Excavation n Sand n	ns nit Quantit 1 <sup>3</sup> 3.0 1 <sup>3</sup> 1.45 1 <sup>3</sup> -0.1	1 PPC3 0.70 33 48 95 92	Q= D1 0.35 (B+0.7*(	= 900 96 1.70 Equ D+t+11))*(D D1+t1))*(D	B1 0.50 uation	1	t 1
Concrete Pipe n Type Dimensio Item Ui Excavation n Sand n	ns nit Quantit 1 <sup>3</sup> 3.0 1 <sup>3</sup> 1.45 1 <sup>3</sup> -0.1	1 PPC3 0.70 2 48 95	Q= D1 0.35 (B+0.7*( (B+0.7*(	= 900 96 1.70 Equ D+t+11))*(D D1+t1))*(D	B1 0.50 uation	1	t 1
Concrete Pipe n Type Dimensio Item Ui Excavation n Sand n	ns iit Quantii <sup>3</sup> 3.0 <sup>3</sup> 1.45 <sup>3</sup> -0.1 <sup>3</sup> 1.2	1 PPC3 0.70 33 48 95 92	Q= D1 0.35 (B+0.7*( (B+0.7*(	= 900 96 B 1.70 Equ D+t+t1))*(D D1+t1))*(D /4/2	B1 0.50 uation	1	t 1

Pipe Canal Works Page 2

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# BQ of Pipe Canal Works for 1 m (2/2)

Type		PPC	74	Q=	49	-	98	(l/s)
Dime	nsions	EER'S IF MENTED ENTED IN	D	Dl	В	81	1	11
	•	<b>[</b>	0.50	0.25	1,50	0.50	0,30	0,20
liem	Unit	Quantity	and the second second second second second second second second second second second second second second secon	an antone the second states	Equa	nion		
				CARLING COLORIDA COLORI				
Excavation	m <sup>3</sup>	2.200		(B+0.7*(D-	+t+t1))*(D+	(+1)		
Sand	m <sup>3</sup>	1.2705		(B+0.7*(D	l+(l))*(Dl-	+(1)		
	m <sup>3</sup>	-0.098		-3.14*D <sup>2</sup> /4	/2			
Total	m <sup>3</sup>	1.172					•	
rotar		••••=					•	
Backfill	m <sup>3</sup>	1.028	1	Excavation	-Sand			
Dackin		1,010						
Concrete Pipe	ា	1		D=	500	mm	•	
concrete ripe -				· .				
Туре	7. T	PP	C5	Q=	31	~	63	(Vs)
the second second second second second second second second second second second second second second second se	nsions	er an an an an an an an an an an an an an	D	DI	В	BI	1	<u>t1</u>
Dinic			0.40	0.20	1.40	0.50	0.30	0.20
Item	Unit	Quantity	ar an an an an an an an an an an an an an	yde war war song alle fan de seren seren seren seren seren seren seren seren seren seren seren seren seren ser	Equ	ation	:	
								л. Ал с
Excavation	m <sup>3</sup>	1.827	n tan sa sa sa sa sa sa sa sa sa sa sa sa sa	(B+0.7*(D	+t+t1))*(D	+(+(1)		
Lavaration					· 1.4	1 41 J. J. J.		· ·· · ·
Sand	m <sup>3</sup>	1,176		(B+0.7*(D	1+i1))*(D1	+11)		
Sana	m <sup>3</sup>	-0.063	1	-3.14*D*/-	/2			
Total	m <sup>3</sup>	1.113						
10141				•		· · · ·		
Backfill	m <sup>3</sup>	0.714		Excavation	n-Sand			
Dackin			н. 1			1 1		-
Concrete Pipe	m	1	1. A.	D=	40(	) mm		
Concicio i apr							an an an an an an an an an an an an an a	
Туре		PI	°C6	Q=	18	~	35	(l/s)
	ensions	(14.900) - 2000) - 777 - 779 - 7	D	D1	В	B1		
			0.30	0.15	1.30	0.50	0.30	0.15
Item	Unit	Quantity			Eq	uation		
Excavation	m <sup>3</sup>	1.369		(B+0.7*(I	)+(+(1))*(D	)+t+t1)		
					1.			
Sand	m <sup>3</sup>	0.9815	i		)i+il))*(D	(+(l)	•	
	m <sup>3</sup>	-0.03	5	-3.14*D <sup>2</sup> /	4/2		•	
Total	m <sup>3</sup>	0.940	[1] A. A. A. A. A. A. A. A. A. A. A. A. A.					:
				a far ea				. 1
Backfill	m'	0.42	<b>3</b>	Excavatio	on-Sand			
	1							
Concrete Pipe	m		ıl 🦾	D	= 30	0 mm	a da	
a construction of the	1							
		and the second second second second second second second second second second second second second second second	and the second difference of the second differ	and the second second second second second second second second second second second second second second second		1	1 1 4	
						· 1	ta da ana sa	
							the second second second second second second second second second second second second second second second se	
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## Unit Cost of Protection Piping Works (1/2, unit : Nu./m)

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Туре	PPC1	Q(1/s)=	283		566
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	m3	6.228	30.61	191	E-1
Sand fill	m3	1.699	61.22	104	E-10
Backfill, manual	m3	4.529	15.38	70	E-3
Cncrete pipe placing (D=1.200)	m	1.000	1685.09	1.685	P-1
Others	L.S			410	
Fransportation	L.S			369	
Total				2,828	
Туре	PPC2	Q(l/s)=	159	~	319
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	m3	4.032	30,61	123	E-1
Sand fill	m3.	1.330	61.22	81	E-10
Backfill, manual	m3	2.702	15.38	42	E-3
Concrete pipe placing (D=900)	m	1.000	1136.04	1.136	P-2
Others	L.S			276	
Fransportation	L.S			-249	
Total				1.908	
Туре	PPC3	Q(l/s)=	96	~	193
ltem	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	m3 :	3.048	30.61	93	<u> </u>
Sand fill	m3	1 267	61.22	78	E-10
Backfill, manual	m3	1.781	15.38	. 27	E-3
Concrete pipe placing (D=700)	m	1.000	859.78	860	P-3
Others	LS			212	
Transportation	LS			190	
Total			; <sup>2</sup>	1.460	
			والمترافق والمتنارك والمتحاكم والمتحار		

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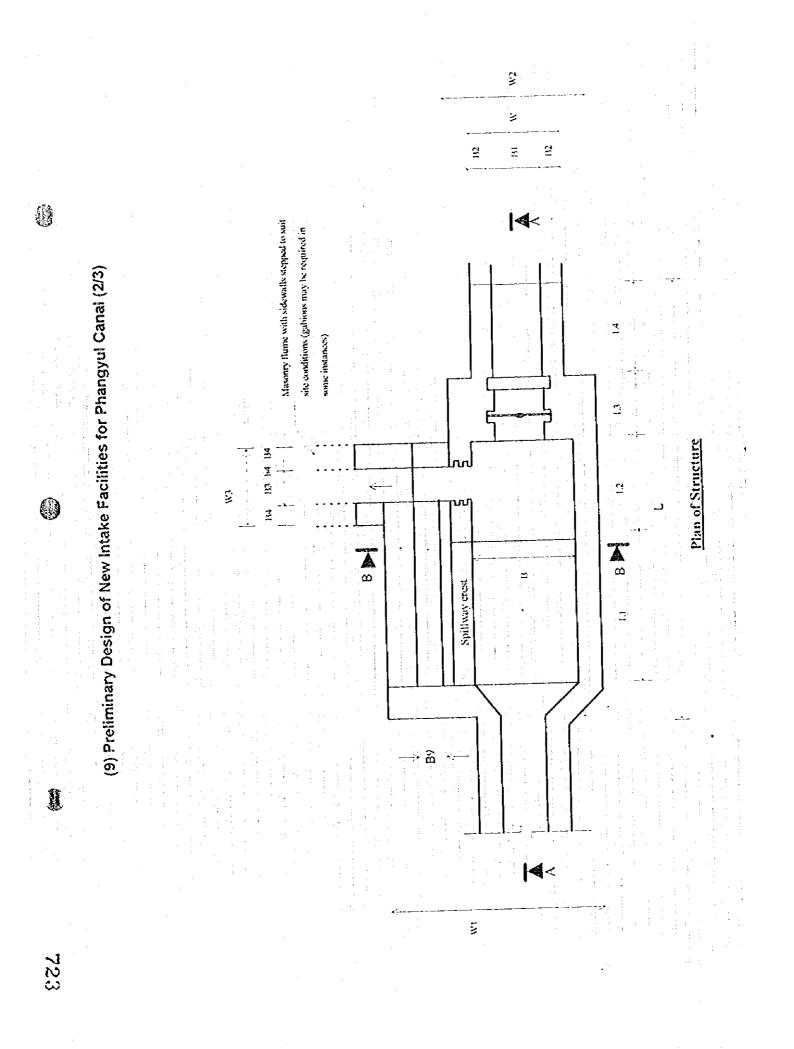
## Unit Cost of Protection Piping Works (2/2, unit : Nu./m)

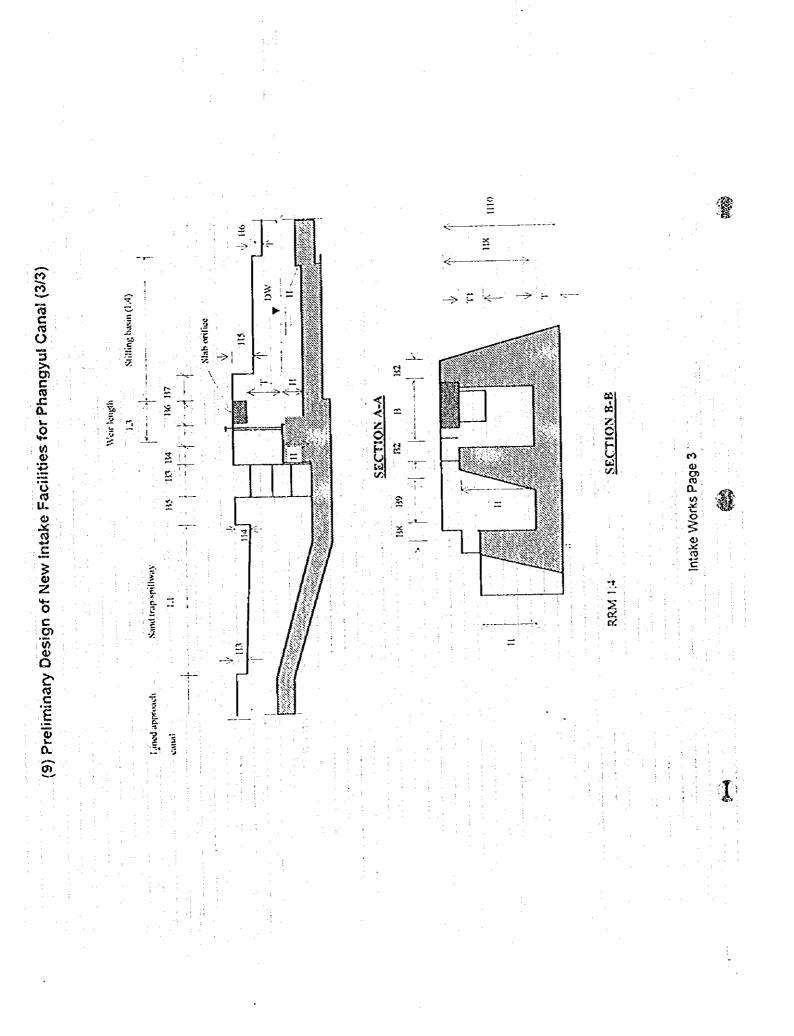
Туре	PPC4	Q(1/s)=	.49	~	98
ltem	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	m3	2.200	30.61	67	E-1
Sand fill	m3	1.172	61.22	72	E-10
Backfill, manual	m3	1.028	15.38	16	E-3
Concrete pipe placing (D=500)	m	1.000	540,00	540	P-4
Dihers	L.S			139	
Fransportation	L.S			125	
Total				959	
n an					
Туре	PPC5	Q(l/s) =	31	~	63
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	<u>m3</u>	1.827	30.61	<u> </u>	E-I
Sand fill	<u>m3</u>	1.113	61.22	68	E-10
Backfill, manual	<u>m3</u>	0.714	15.38	11	E-3 P-5
Concrete pipe placing (D=400) Others	m	1.000	436.03	436	P-3
	L.S			114	
fransportation Total	L.S			103	
Total		*		/88	
Туре	PPC6	Q(1/s)=	18	~	35
Item	Unit	Quantity	Unit Price	Amount	Remark
Excavation, manual	m3	1.369	30.61	42	E-1
Sand fill	m3	0.946	61 22	58	E-10
Backfill, manual	- m3	0.423	15.38	6	E-3
Concrete pipe placing (D=300)	m	1.000	306.49	306	P-6
Dthers	LS			83	
Transportation	LS			74	
Total				570	
	s <u>1</u> 1 1 1				
	사회가 가격 1987년 - 1987년				
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**A** Schematic Layout of Headworks for Water Resources Improvement of Phangyul Canal (C10) (9) Preliminary Design of New Intake Facilities for Phangyul Canal (1/3) Gabions (as required) intake Works Page 1 Ø Intake Structure Flow Temporary canal





Dimensions	Li	L2	L3	LI	L	В	Bl	B2	$R^{-1}$	L	BŞ	- B3
Allensions -	2.000	1.000	0.700	2.300	6.300	1,000	0.300	0.300	0.900	2,000	0.400	0.3(
	<u>2.000</u> B4	B6.	B7	BS	B9	WI	Н	ΗÌ	H2	HS	·H4	· H5 - 0.20
	0.300	0 300	0.500	0.300	0.300	2.200	0.500		0.300	0.150	0.200	0.20
	H7	TI	H8	H9	T2	H10	B10	BII	W2	W3	T3 0.100	
	0,100	0.200	0.900		NAME OF TAXABLE PARTY.	THE OWNER OF THE OWNER OF	0.400	0.350	1.600	0.500	0.100	
tem	Unit	Quantity			Equation							
Excavation	m <sup>3</sup>	7.920			1+L2)*(							
	m³	1.920			*2)*L3*					- 14 A.		
	៣	1.035		(B1+B	2*2)*L4	<b>*</b> (T1+T	2)					
	m <sup>3</sup>	45	1				( 11 g.)					
Total	m <sup>3</sup>	55.875										
10(31				-	1		1					
RRM 1:4	m <sup>3</sup>	0.600		B*(L)	+L2)*T2	2	н <sup>т</sup> .	1 a	: .	-		•
	m	0.180		B9*L1	*T2							
	m <sup>3</sup>	0.207		B}+L4	*T2		· .	· ·				•
	m <sup>3</sup> .	1.260			L1+L2)*	•H10		an an Taonachta				:
	m <sup>3</sup>	1.050			L1+L2)*		2)		÷	•		
		0.840	r		L1+L2)						:	1
	m <sup>3</sup>			W2*L		<b>(</b>					· · · ·	1
	m <sup>3</sup>	0.560	1.1		31)*(L3	+B7)*/F	19+T21*	2	1			
	m <sup>3</sup>	3.120	<b>1</b>	B1*L		. D.) (i		·				<i>.</i> .
	m <sup>3</sup>	0.207			• 12 )*L4*(1	C1+T21			1			:
	m <sup>3</sup>	0.690		(02*2	) L4 (I							:
Total	m <sup>3</sup>	8.71-	• <b>1</b> · · ·									÷
				D/#11	/3*T3	19 (j. 19					an e The states	 
RCC 1:2:4	m <sup>3</sup>	0.01	า โ	. 001 <i>0</i>	(J. 13							
							- - -	·				
Gabion	m³	112.50	0									1 - A
						1 1					:	·ì
Intake gate	pcs		<b>'</b> ]								r	
										<del>ىمۇرىي بىر</del>		ش <del>من</del> من مرد

# BQ of Intake Works for Water Source Improvement of Phangyul Canal

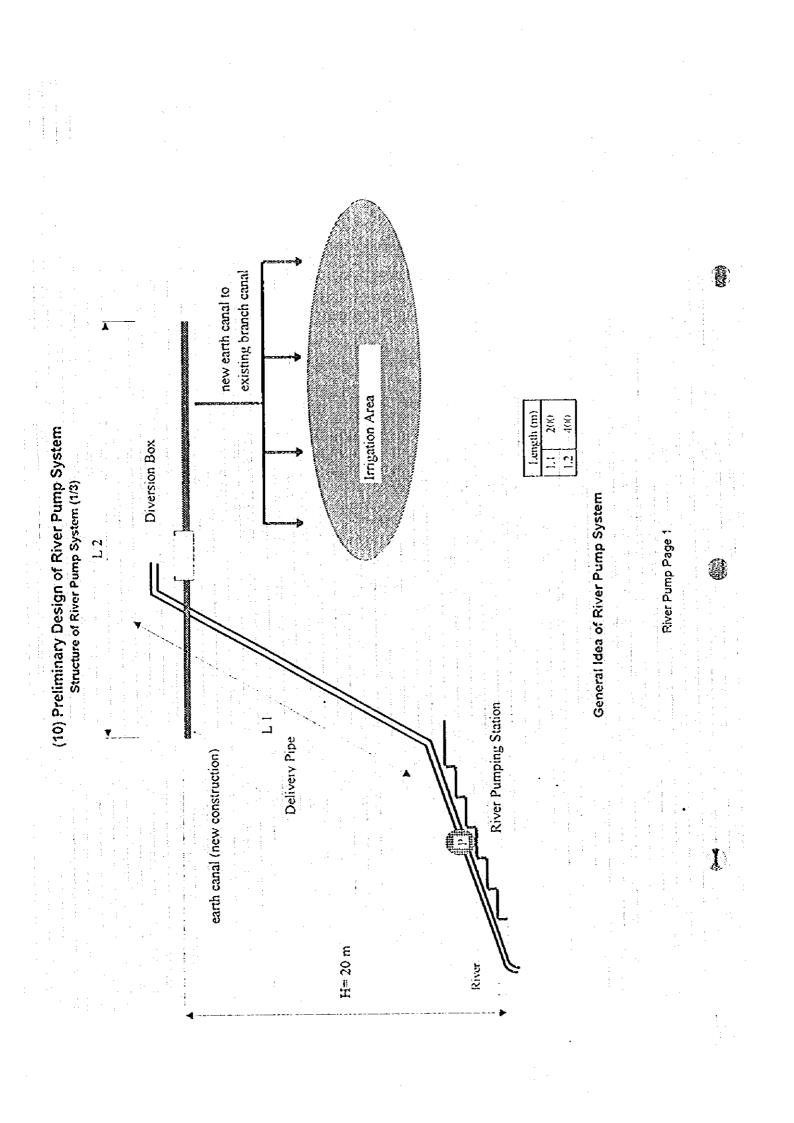
## Cost Estimation of Intake Works

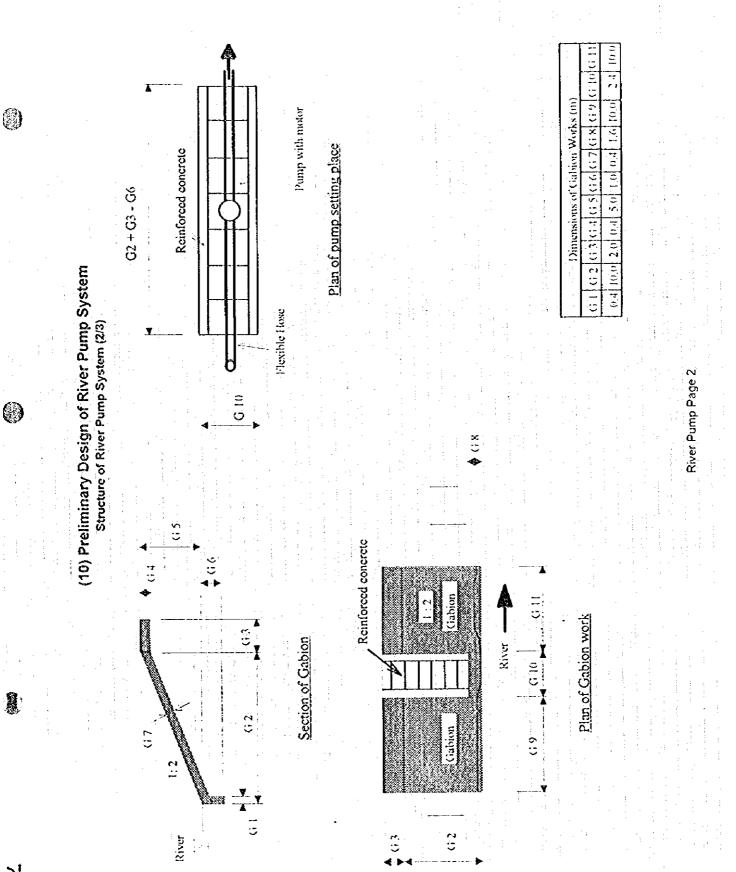
Description	Unit	Quanti	Unit Price	Amount	Remark
Excavation	m <sup>3</sup>	55.88	30.61	1.710	
RRM 1:4	m	8.714	818.54	7.133	
RCC 1:2:4	m <sup>3</sup>	0.015	1330.73	20	
Intake gate	pcs	1	6750.00	6.750	
Gabion	m'	112.5	561.76	63,198	
Others	LS			15.762	
Transportati	LS			11.822	
Total	<u>†</u>			106,395	

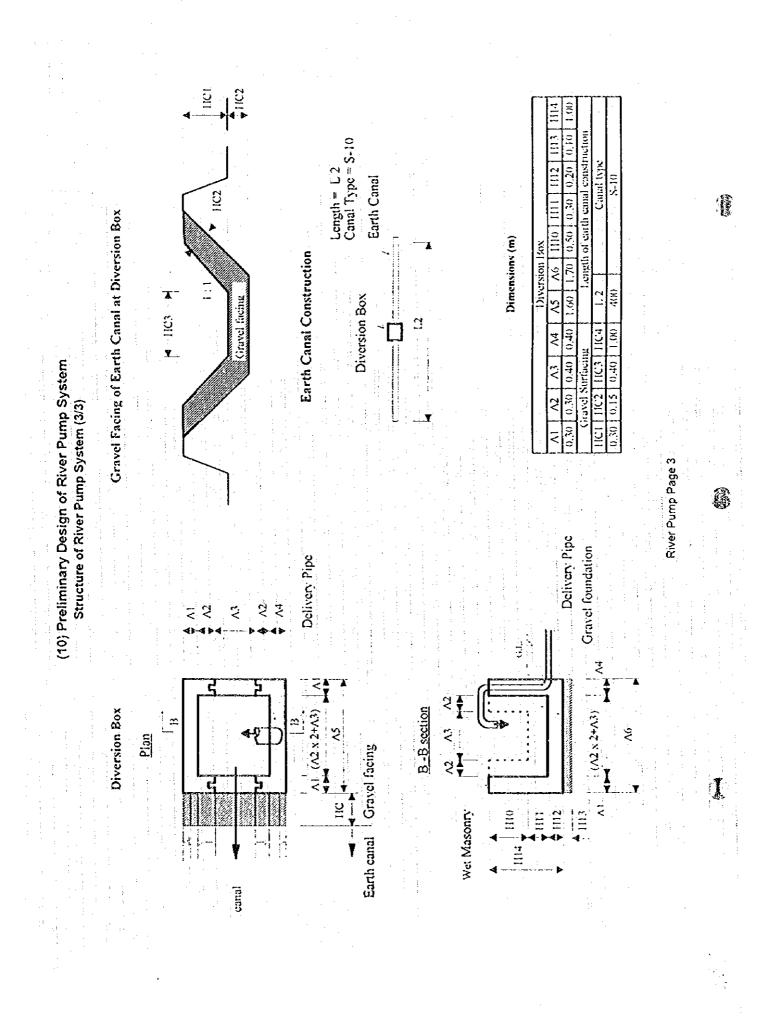
Intake Works Page 4

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## BQ of River Pump System

Descriptio	n	Unit	Quantity	Equations
Civil Works		<u> </u>		
Excavation	(manual) Total	m3 m3 m3	116.5 1.6 118.1	G4*(G2-G3-G6)*(G9-G10-G11) (Pump station A5*A6*(H11-H12-H13) (Diversion Box)
Wet Masonry	10(3)	m3	1.8	A\$*A\$*H14 #A2*2*A3 (*A2*2*A3 (*810-810-810-2*A)*A)*
				(Diversion Box)
Gravel foundation		m3	2.5	0.1*G10*(G2-G3-G8) (Pump station) A5*A6*H13 (Diversion Box)
	Total	m3 m3	0.3	A5*A6*H13 (Diversion Box)
Gravel Surfacing		m2	1.0	(HC1*2-HC3)*HC4 (Diversion Box)
Reinforced concrete	(1:2:4)	m3	10.0	0.4*G10*(G2-G3-G8)
	Total	m3	10.0	
Backfill	(manual)	m3	34.9	Volume of Excavation x 30% (Pump station)
Gabion		m3	106.5	(G2*G4+G3*G4+G3*G6)*(G9+G11)+(G4*(i8+(i1*(i6)*(i10
Delivery pipe works		m	200.0	$\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix} = \begin{bmatrix} 1 $
Earth canal construction		m	400.0	1.2
Power supply facility Electric facility	(for electric	oump) Unit	1.0	distribution line 100m. sub-station, miscellaneous works
Pumping facilities River Pump facility		set	1.0	Volute Pump with motor discharge 15 l see total head 20 m

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River Pump Page 4

## Cost Estimation of River Pump System (1/3)

#### (1) River Pumping Station (electric pump)

Description	Unit	Quantity	Unit Price	Amount	Remarks
Civil Works		· <u></u>			
Excavation (machine)	m3		116.40	0	
Excavation (manual)	m3	118.1	30.61	3,615	
Wet Masonry	m3	1.8	917.08	1.651	
Dry Masonry	m3		313.39	0	
Concrete pipe placing	m3		1,685.09	0	
Backfill (machine)	m3		81.50	0	
Backfill (manual)	m3	34.9	15.38	537	
Sand fill	m3		261.44	0	· · · · ·
Gravel surfacing	m2	1.0	367.96	368	
Gravel foundation	n13	2.5	206.60	516	·
Earth canal construction	m	400.0	24.00	9,600	
Delivery pipe works	in the	200.0	327.16	65,432	d= 100 mm
Reinforced concrete	m3	10.0	1,330.73	13,286	
Gabion	m3	106.5		59,825	
Others	LS				20% of direct cost
Transportation	LS			23,225	15% of direct cost
Transportation					
Temporary works for civil works	LS	1.0		10.451	5° o of civil work cost
Sub-total (Civil works	 & Temporary	works)		219.472	for 20 years
				186 <sup>-</sup>	
(for 1 year)				(10,974)	for 1 year
Electric distribution facility		1.1			
Electric facility	unit	1.0	268,000	268,000	
Others	L.S			53,600	20% of direct cost
Transportation	L.S			· · · · · · · · · · · · · · · · · · ·	15% of direct cost
Sub-total				361.800	for 20 years
(for 1 year)				(18.090)	for Lyear
Pumping facility					
Pump facility (electric)	set	1.0	429,000.00	429,000	
Others	LS			85,800	20° s of direct cost
Transportation	L.S	1.1		64,350	15% of direct cost
Sub-total					for 10 years
(for 1 year)				(57.915)	for Lyear 👘 👘
(10) , (10)	l e si tato				
Total (construction cost)				1.160.422	
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River Pump Page 5

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### Cost Estimation of River Pump System (2/3)

#### (2) River Pumping Station (diesel engine pump)

Description	Unit	Quantity	Unit Price	Amount	Remarks
Civil Works					
Excavation (machine)	m3		116.40	0	
Excavation (manual)	m3	118.1	30.61	3.615	
Wet Masonry	m3	1.8	917.08	1.651	
Dry Masonry	m3		313.39	0	
Concrete pipe placing	m3		1,685.09	0	
Backfill (machine)	m3		81.50	0	
Backfill (manual)	m3	34.9	15.38	537	
Sand fill	m3		264.44	s0 <b>n</b>	
Gravel surfacing	m2	1.0	367.96	368	
Gravel foundation	m3	2.5	206.60	516	
Earth canal construction	m .	400.0	24.00	9,600	
Delivery pipe works	m fa	200.0	327.16	65,432	d= 100 mm
Reinforced concrete	m3	10.0	· · ·	13,286	
Gabion	m3	106.5	561.76	59.825	
Others	LS			30,966	20% of direct cost
Transportation	L.S				15% of direct cost
•••••• <b>•</b> •••••					
Temporary works for civil work	LS	1.0		10.451	5% of civil work cost
Sub-total (Civil work	s & Temporary	works)		219.472	for 20 years
(for 1 year)				(10.974)	for 1 year
amping facility					
Pump facility (diesel)	set	1.0	299,000,00	299,000	
Others	L.S		277.000.00		20% of direct cost
Transportation	L.S L.S				15% of direct cost
Sub-total	1.5			1 A A	for 10 years
300-10101				105.000	
(for 1 year)				(10.365)	for 1 year
(for 1 year)				(40.505)	
Total (construction edge)				523,122	
Total (construction cost)		L	L	<u> </u>	I

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River Puinp Page 6

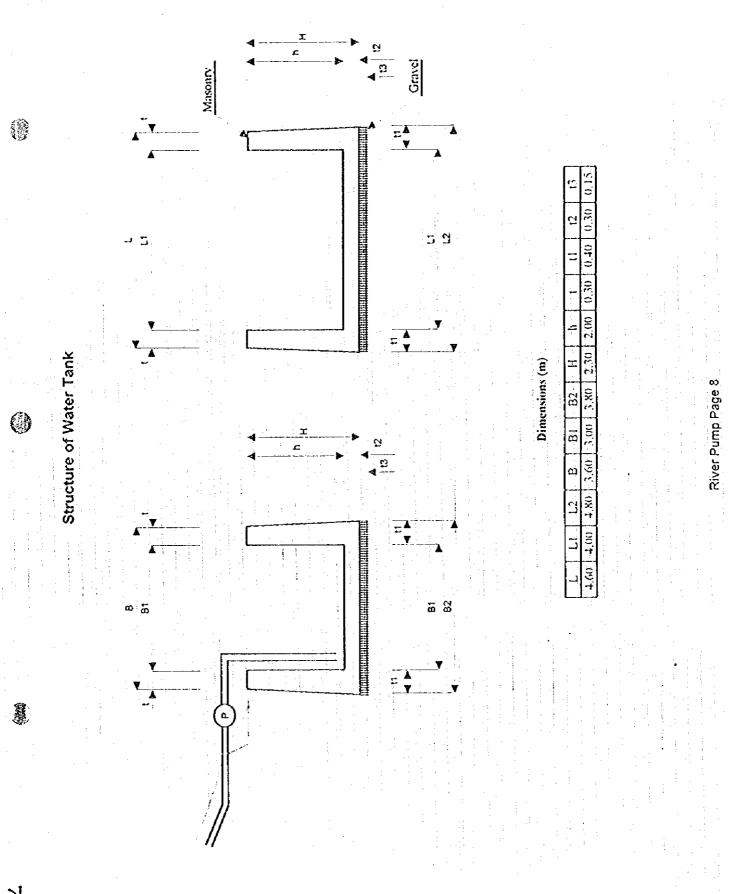
## Cost Estimation of River Pump System (3/3)

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Description	argent to the test of the second states	Unit	Quantity	Unit Price	Amount	Remarks
Annual O/M Cost for	River Pump					
Electric charge		kWh	7.920.0		3,960	for 1 month use year
Spare parts cost etc	c. (A= 5% x Pu	mp price)	0.05	130,000	6,500	for 1 year punip
Technical support	(1 person for	a Sub-area)	1.0	1,200	1,200	for I year Sub-area
Annual O/M Cost for	River Pump	L System with	   Diesel Ge	l merator Pun	jp 1	
Diesel consumptio	n	liter x 24 hrs x 3	2,376	7.83	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	for 1 month use year
Spare parts cost et	<b>C</b> .		0.05		6,500	for 1 year pump
Technical support	(A= 5% x Pu (1 person for	a Sub-area)	1.0	1.200	1.200.	for I year Sub-area
anal Home and an all the formula in the state of the state of the state of the state of the state of the state					<u>L</u>	
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River Pump Page 7



Irrigation Tank for Pumping System Dimensions (m)											
L	LI	L.2	8	81	B2	Н	h	t	11	12	t3
4.6	4.0	4.8	3.6	3.0	3.8	2.3	2.0	0.3	0.4	03	0.15
Item	Unit	Quantity				E	quation	15		**********	1
Excavation	m³	7.020		B*(H+t	(3)*3/4						
Backfill	m³	3,280	ŧ.	((1-1)*]	*(L*2+	B*2)					
Masonry	m³	12.236		(t+t1)/2	*H*(2*	L+2*B	1)				•
÷	m³	3.600		BI*LI*	*t2			2			
Total	m <sup>3</sup>	15.836		• • •						-	
Gravel	៳	2.736	-	L2*B2*	13	· ·				• .	
Piping Work	m	200.000		e 1		1		• •			
Diesel Engine Pump	unit	1.000		Q=15 l/	s. lift=2	0m	•	-			

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### **Bill of Quantities of Water Tank Works**

#### Cost Estimation of Water Tank Work for 1 Unit (unit : Nu.)

m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	Quantity 7.0 3.3	Unit Price 30.61 34.56	Amount 215	Remark
	3.3	21.56	1	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
n <sup>3</sup>		JH.JU	113	
	15.8	917.08	14,523	
n <sup>3</sup>	2.7	206.60	565	
m <sup>i</sup>	200.0	327.16	65.432	
. S			16,170	
S			14,553	
			111,571	for 20 years
			5.579	
.s	· · · · · · · · · · · · · · · · · · ·		299000	for 10 years
ан 1914 - 19			29,900	
			25.112	for 1 year
			60.591	for 1 year
	S ,.S	S	<b>S</b>	S S S S S S S S S S