

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm concrete			Pay Item No. (BOQ)	2H- 150401			
Quantity Item	Form for trench			Unit	m ²			
Calculation Procedure Applied <div style="margin-top: 10px;"> 1. Calculation of depth 2. Calculation of both inside area and outside area 3. Calculation of volume : Area times length </div>								
References, Calculation Base and Revisions <div style="margin-top: 20px;"> See the item of excavation and disposal of 300mm without cover. (2H-¹²#01) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m ³)	Vcs (m ³)	Vbf (m ³)	Compct (m ²)	Form (m ²)	Re-bar (kg)	Concrete (m ³)	Est. up. Based (m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.8	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.8	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	60	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	60.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm concrete			Pay Item No. (BOQ)	2H- 50 402			
Quantity Item	Concrete for trench			Unit	m ³			
Calculation Procedure Applied <div style="margin-top: 10px;"> 1. Calculation of sectional area (by the average height) 2. Calculation of volume : sectional area times length </div>								
References, Calculation Base and Revisions <div style="margin-top: 20px;"> See the item of excavation and disposal of 300mm without cover. (2H-¹²#01) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Kaila Gaura			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m ³)	Vcs (m ³)	Vbf (m ³)	Compct (m ²)	Form (m ²)	Re-bar (kg)	Concrete (m ³)	Est. SP. Board (m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300	21100	210	16.6

Concrete cover

1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	5.489	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
Total								2902		2070	173	695	4420	9150	55300	574	45.8

Grating cover

1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4

No cover

1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
Total								355		453	26.6	170	696	1520	8670	95.3	8.2

Concrete cover

1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220	15800	147	12.1

Grating cover

1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	38	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

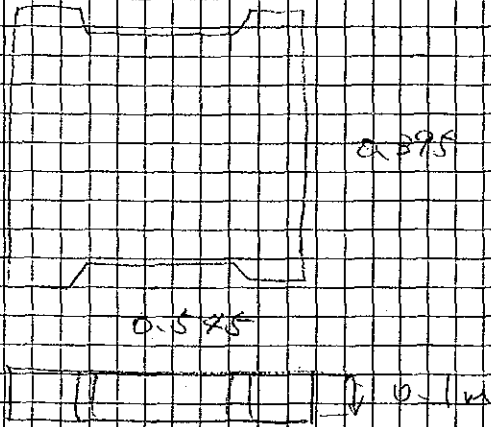
QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench, 450mm concrete			Pay Item No. (BOQ)	2H-150403			
Quantity Item	Elastic board			Unit	m ²			
Calculation Procedure Applied 1. Calculation of sectional area (by the average height) 2. Calculation of number (by every 10m) 3. Calculation of area : sectional area times number								
References, Calculation Base and Revisions See the item of excavation and disposal of 300mm without cover. (2H-12-#01)								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Kaila Garcia	11/11		Mr. Inoma		Mr. Ando		
1								
2								
3								

Trench集計

No cover										franch=AT									
		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Ompct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Est. 1/10 (m2)		
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27		
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29		
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4		
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32		
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4		
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94		
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35		
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58		
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26		
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43		
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3		
Total										723	65.7	222	1640	3300	21100	210	16.6		
Concrete cover																			
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09		
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56		
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68		
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68		
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35		
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89		
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35		
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38		
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27		
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14		
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18		
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5		
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64		
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34		
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59		
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01		
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32		
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32		
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18		
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95		
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31		
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31		
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37		
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86		
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39		
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.8	274.6	550	3,520	34.9	2.75		
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	178.9	9.86	77.9	293.4	885	3,150	40.9	3.43		
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88		
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74		
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02		
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31		
Total										2070	173	695	4420	9150	55300	574	45.8		
Grating cover																			
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99		
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95		
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27		
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27		
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91		
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95		
Total										182	18.2	50.2	438	864	5870	55.6	4.4		
No cover																			
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11		
Total										453	26.6	170	696	1520	8670	95.3	8.2		
Concrete cover																			
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93		
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95		
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05		
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05		
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06		
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02		
Total										598	47.8	173	1130	2220	15800	147	12.1		
Grating cover																			
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72		
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65		
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68		
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65		
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		
11																			

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm concrete			Pay Item No. (BOQ)	2H- 150404 ¹²			
Quantity Item	Form for concrete cover			Unit	m ²			
Calculation Procedure Applied <div style="font-family: cursive; padding: 10px;"> Area of form for concrete cover was computed based on the drawing. </div>								
References, Calculation Base and Revisions <div style="font-family: cursive; padding: 10px;"> See the item of excavation and disposal of 300 mm without cover. (2H-12¹²01) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Trench 450 mm concrete cover	Calc. Index No.	
Subject	Form for concrete cover	Page No.	Rev.

$L = 645 \text{ m}$ $N = 645 \div 0.4 = 1613$  side $(0.395 \times 2 + 0.195 \times 4 + 0.0225 \times 4 + 0.135 \times 2) \times 0.1$ $= 0.154 \text{ m}^2$ bottom $0.395 \times 0.595 - (0.135 + 0.175) \times 0.02$ $= 0.21 \text{ m}^2$ $A = (0.154 + 0.21) \times 1613$ $= 588 \text{ m}^2$	References/ Notes
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Prepared by		Checked by	
	/ /200		/ /200

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm concrete			Pay Item No. (BOQ)	2H - 15 0405			
Quantity Item	Reinforcement for concrete cover			Unit	kg			
Calculation Procedure Applied <div style="margin-left: 40px;"> 1. Calculation of unit weight (Excel) 2. Calculation of weight : unit weight times length </div>								
References. Calculation Base and Revisions <div style="margin-left: 40px;"> See the item of excavation and disposal of 300 mm without cover. (2H - ¹²#01) </div>								
Rev	Prepared		No. of	Checked		Reviewed		Superseded
	by	Date	Pages	by	Date	by	Date	by Calc No.
0	Kala Garcia	1/1		Mr. Inuma		Mr. Ando		
1								
2								
3								

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450 mm concrete	Pay Item No. (BOQ)	2H- 150 406
Quantity Item	Concrete for concrete cover	Unit	m ³

Calculation Procedure Applied

Concrete volume for concrete cover was computed based on the drawing.

References, Calculation Base and Revisions

See the item of excavation and disposal of
300 mm without cover. (2H-¹²~~150~~1)

Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm concrete			Pay Item No. (BOQ)	2H- 18 0501			
Quantity Item	Backfill sand			Unit	m ³			
Calculation Procedure Applied <p style="font-size: 1.2em; margin-top: 20px;">Volume of backfill sand was computed by deduction of crushed stone and trench from the excavation volume.</p>								
References, Calculation Base and Revisions <p style="font-size: 1.2em; margin-top: 20px;">See the item of excavation and disposal of 300mm without cover. (2H-¹²#01)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Yola Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

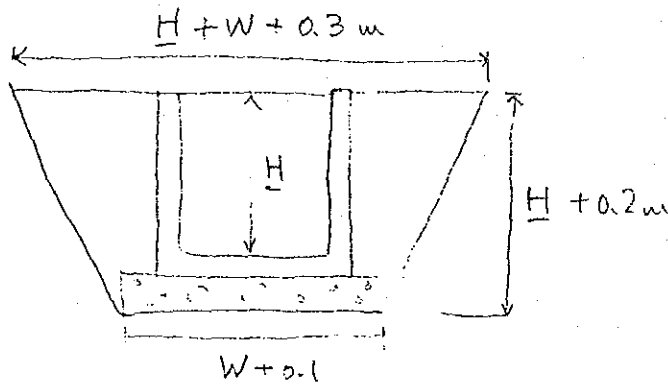
Trench集計

No cover																			
		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	L_{ac}	V_{ex}	V_{cs}	V_{bf}	$Cmpot$	$Form$	$Re-bar$	$Concrete$	$Excav$	$Base$	
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m ³)	(m ³)	(m ³)	(m ²)	(m ²)	(kg)	(m ³)	(m ²)		
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,830	16.1	1.27		
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29		
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4		
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32		
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.9	5.56	18.53	138.3	279	1,780	17.7	1.4		
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94		
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.66	16.89	136.2	270	1,780	17.3	1.35		
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58		
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26		
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43		
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	18.6	1.3		
Total								1110		723	65.7	222	1640	3300	21100	210	16.6		
Concrete cover																			
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.8	4.44	13.79	109.2	218	1,430	13.9	1.09		
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56		
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68		
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68		
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35		
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89		
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35		
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38		
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27		
10	DU-1	0.3	0.5	6.05	5.65	5.499	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14		
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18		
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5		
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64		
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34		
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59		
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01		
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32		
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32		
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18		
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95		
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31		
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31		
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37		
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86		
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39		
26	EU-6	0.3	0.5	5.84	5.44	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.76		
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43		
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88		
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74		
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02		
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31		
Total								2902		2070	173	695	4420	9150	55300	574	45.8		
Grating cover																			
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99		
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95		
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27		
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27		
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91		
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95		
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4		
No cover																			
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11		
Total								355		453	26.6	170	696	1520	8670	95.3	8.2		
Concrete cover																			
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93		
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95		
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05		
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05		
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06		
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02		
Total								645		598	47.8	173	1130	2220	15800	147	12.1		
Grating cover																			
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72		
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	38	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65		
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68		
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2		

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm concrete	Pay Item No. (BOQ)	2H- 15 0502
Quantity Item	Compaction	Unit	m ²

Calculation Procedure Applied



Compaction area was
computed by multiplying
($H + 0.3$) by the length.

References, Calculation Base and Revisions

See the item of excavation and disposal of
300mm without cover. ($2H - \frac{12}{101}$)

Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench 集計

No cover		W _{inner}	W _{outer}	G	Y _{in}	Y _{out}	H	L	Lao	Vex	Ves	Vbf	Cmpot	Form	Re-bar	Concrete	Est. High Based
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m ³)	(m ³)	(m ³)	(m ²)	(m ²)	(kg)	(m ³)	(m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	5.489	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	27.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.856	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.668	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
Total								2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
Total								355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	66	65	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4											

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm grating	Pay Item No. (BOQ)	2H- 18 01
Quantity Item	Excavation and Disposal	Unit	m ³

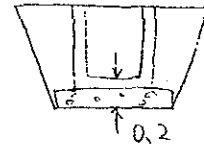
Calculation Procedure Applied

Average of inlet level and outlet level

$$H = \text{Ground level} - \text{Average level} + 0.2$$

Calculation of area : slope 1:2

Calculation of volume : Area times length



References, Calculation Base and Revisions

See the item of excavation and disposal of
300 mm without cover. (2H-¹²~~01~~)

Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Hr. Inoma		Hr. Ando		
1								
2								
3								

No cover										Trench集計								
		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vos (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Exc. (m3)	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253		1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258		1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279		1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263		1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279		1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387		2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270		1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315		1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251		1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485		3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259		1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300		21100	210	16.6
Concrete cover																		
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218		1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111		760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	184.6	335		2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135		950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69		500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178		1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69		500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75		500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253		1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627		2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435		2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99		950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128		860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468		3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318		2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202		1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264		1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264		1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435		2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590		3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462		2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62		420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.87	128	274		1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172		1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78		520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550		3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685		3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575		2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547		3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404		2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62		420	4	0.31
Total								2902		2070	173	695	4420	9150		55300	574	45.8
Grating cover																		
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197		1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190		1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53		380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53		380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181		1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190		1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864		5870	55.6	4.4
No cover																		
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514		8,670	95.3	8.11
Total								355		453	26.6	170	696	1520		8670	95.3	8.2
Concrete cover																		
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355		2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358		2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377		2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377		2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.78	283.1	564		3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188		1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220		15800	147	12.1
Grating cover																		
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132		980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118		880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125		930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220		1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220		1,620	14.7	1.2
6	BU-3-1	0.45	0.6															

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm grating	Pay Item No. (BOQ)	2H - #602
Quantity Item	Crushed stone for foundation	Unit	m ³

Calculation Procedure Applied

1. Calculation of area : thickness 0.1m, width
2. Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of
300mm without cover. (2H - #01)

Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

No cover		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Ompct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Unit Price (m2)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,830	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	6.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.607	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.08	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	166.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	5.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
Total								2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	189.16	696	1514	8,670	95.3	8.11
Total								355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	38	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,		

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H- 1603			
Quantity Item	Reinforcement			Unit	kg 6			
Calculation Procedure Applied <div style="margin-left: 40px;"> 1. Calculation of weight of reinforcement per 1m 2. Calculation of weight : unit weight times length </div>								
References, Calculation Base and Revisions <div style="margin-left: 40px;"> See the item of excavation and disposal of 300mm without cover, (2H-¹²#01) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Marla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{cover}	W _{outer}	G	Y _{in}	Y _{out}	H	L	Lac	Vex	Ves	Vbf	Compct	Form	Re-bar	Concrete	Exc. (m ³)
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m ³)	(m ³)	(m ³)	(m ²)	(m ²)	(kg)	(m ³)	(m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6

Concrete cover

1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.8	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-1-1	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	675	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8

Grating cover

1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.09	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4

No cover

1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2

Concrete cover

1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1

Grating cover

1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H- 180 401			
Quantity Item	Form for trench			Unit	m ²			
Calculation Procedure Applied								
<ol style="list-style-type: none"> 1. Calculation of depth 2. Calculation of both inside area and outside area 3. Calculation of volume : Area times <u>length</u> 								
References, Calculation Base and Revisions								
<p>See the item of excavation and disposal of 300mm without cover. (2H-¹²1801)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Hr. Jovma		Hr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{inner} (m)	W _{cover} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vos (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Clear Board (m2)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.845	90	89	63.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,880	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.858	45	44	28.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	18.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	18.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	18.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.84	5.44	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.84	5.44	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.852	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65														

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H-160402			
Quantity Item	Concrete for trench			Unit	m ³			
Calculation Procedure Applied <div style="margin-top: 10px;"> 1. Calculation of sectional area (by the average height) 2. Calculation of volume : sectional area times length </div>								
References, Calculation Base and Revisions <div style="margin-top: 10px;"> See the item of excavation and disposal of 300 mm without cover. (2H-1201) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Hr. Inoma		Hr. Ando		
1								
2								
3								

No cover

Trench集計

		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m ³)	Vcs (m ³)	Vbf (m ³)	Cmpct (m ²)	Form (m ²)	Re-bar (kg)	Concrete (m ³)	Est high Board (m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	258	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	180	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746											

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench, 450mm excavating			Pay Item No. (BOQ)	2H- #60403			
Quantity Item	Elastic board			Unit	m ²			
Calculation Procedure Applied								
<ol style="list-style-type: none"> 1. Calculation of sectional area (by the average height) 2. Calculation of number (by every 10m) 3. Calculation of area : sectional area times number 								
References, Calculation Base and Revisions								
<p style="text-align: center;">See the item of excavation and disposal of 300 mm without cover. (2H-¹²#01)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inomg		Mr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m ³)	Vcs (m ³)	Vbf (m ³)	Cmpct (m ²)	Form (m ²)	Re-bar (kg)	Concrete (m ³)	Est. C/S, B/S (m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.826	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6

Concrete cover

1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	184.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.858	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	18.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8

Grating cover

1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4

No cover

1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2

Concrete cover

1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	584	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1

Grating cover

1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.788	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H-#60454			
Quantity Item	Grating cover			Unit	Nos			
Calculation Procedure Applied <p style="margin-left: 40px;">Number of grating cover was computed on the assumption that the length was 1m.</p>								
References, Calculation Base and Revisions <p style="margin-left: 40px;">See the item of excavation and disposal of 300mm without cover. (2H-¹²#01)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

[illegible]

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H-#60501			
Quantity Item	Backfill sand			Unit	m ³			
<u>Calculation Procedure Applied</u> <p style="font-size: 1.2em; margin-top: 10px;">Volume of backfill sand was computed by deduction of crushed stone and trench from the excavation volume.</p>								
<u>References, Calculation Base and Revisions</u> <p style="font-size: 1.2em; margin-top: 10px;">See the item of excavation and disposal of 300mm without cover. (2H-#101¹²)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

No cover

		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vex (m ³)	Vcs (m ³)	Vbf (m ³)	Compct (m ²)	Form (m ²)	Re-bar (kg)	Concrete (m ³)	Unit Price (m ²)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300	21100	210	16.6

Concrete cover

1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	85	84	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	5.489	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	218.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	218.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.68	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.84	5.44	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.588	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
Total								2902		2070	173	695	4420	9150	55300	574	45.8

Grating cover

1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.656	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4

No cover

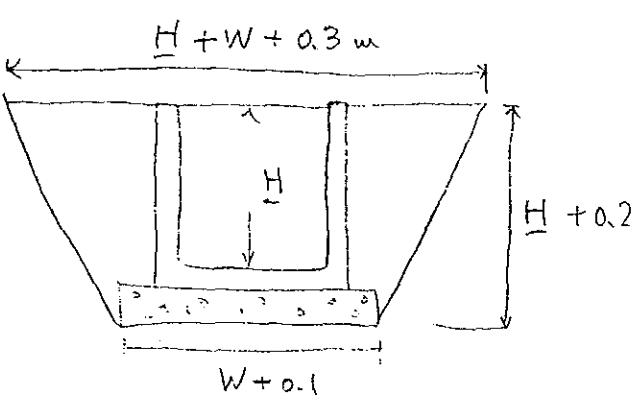
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
Total								355		453	26.6	170	696	1520	8670	95.3	8.2

Concrete cover

1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220	15800	147	12.1

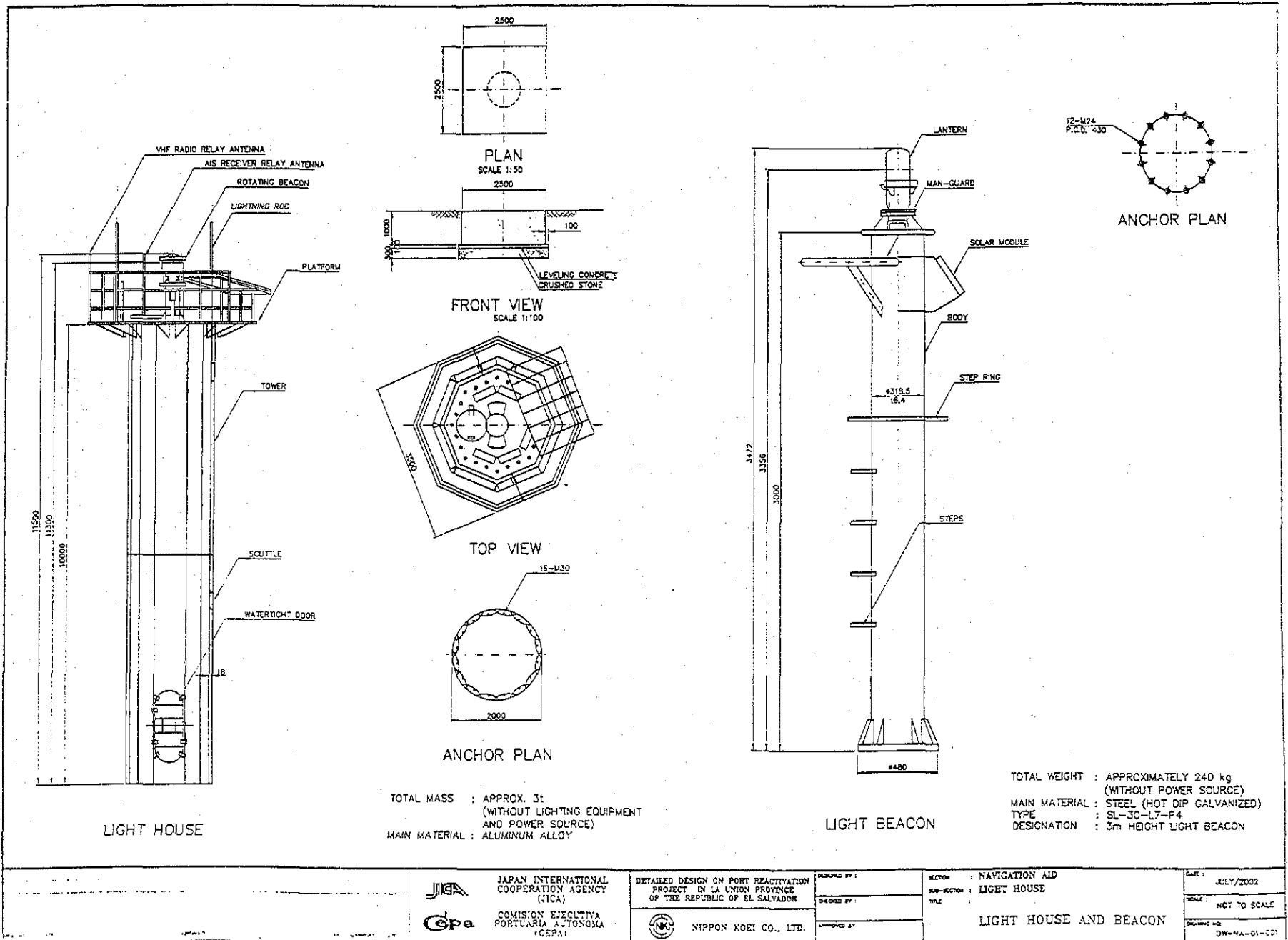
Grating cover

Grating cover																					
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72				
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65				
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68				
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65				
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2				
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24				
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65				
	Total							650		567	48.0	155	1110	2160	16000	145	11.8				

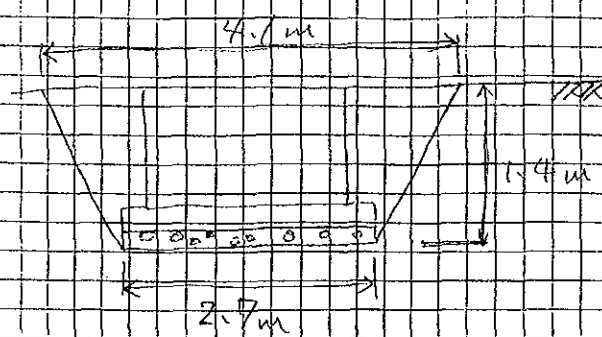
QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Trench 450mm grating			Pay Item No. (BOQ)	2H-160502			
Quantity Item	Compaction			Unit	m ²			
Calculation Procedure Applied								
				<p>Compaction area was computed by multiplying (H + 0.3) by the length.</p>				
References, Calculation Base and Revisions								
<p>See the item of excavation and disposal of 300mm without cover. (2H - 1201)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded
	by	Date		by	Date	by	Date	by Calc No.
0	Kato Goro			Mr. Inuma		Mr. Ando		
1								
2								
3								

No cover										Trench集計							
		W _{inner} (m)	W _{outer} (m)	G (m)	Y _{in} (m)	Y _{out} (m)	H (m)	L (m)	Lac (m)	Vox (m3)	Vos (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Unit cost (¥/m2)
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
Total								1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	5.489	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.284	0.778	178	177	136.2	10.62	47.88	279.4	590	3,380	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.567	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
Total								2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.833	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
Total								308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
Total								355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
Total								645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118</			

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Light house			Pay Item No. (BOQ)	2J - 0101			
Quantity Item	Excavation of foundation.			Unit	m ³			
Calculation Procedure Applied <p style="margin-top: 10px;">Excavation volume for foundation was computed based on the drawing.</p>								
References, Calculation Base and Revisions <p style="margin-top: 10px;">DW - NA - 00 - 001</p> <p style="margin-top: 10px;">DW - NA - 01 - 001</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Yoshi Ganso			Mr. Inuma		Mr. Ando		
1								
2								
3								



Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Light house	Calc. Index No.	
Subject	Excavation of foundation	Page No.	Rev.

 $V = \frac{1}{3} \times 4.1^3 - \frac{1}{3} \times 2.7^3$ $= 16.4$ $\approx 16.5 \text{ m}^3$	References/ Notes
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Prepared by	Checked by
/ /200	/ /200

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Light House			Pay Item No. (BOQ)	2I-0102			
Quantity Item	Crushed stone			Unit	m ³			
Calculation Procedure Applied <p style="margin-top: 10px;">Volume of crushed stone was computed based on the drawing.</p>								
References, Calculation Base and Revisions <p style="margin-top: 10px;">See the item of excavation and disposal of light house. (2I-01)</p>								
Rev	Prepared		No. of	Checked		Reviewed		Superseded
	by	Date	Pages	by	Date	by	Date	by Calc No.
0	Karla Gorio			Mr. Inuma		Mr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Light House	Calc. Index No.	
Subject	Crushed stone	Page No.	Rev.
			References/ Notes
$V = 2.7 \times 2.7 \times 0.3$ $= 2.187$ $\approx \boxed{2.2} \text{ m}^3$			
		Prepared by	Checked by
		/ /200	/ /200

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Light House	Pay Item No. (BOQ)	2I-0103
Quantity Item	Leveling concrete	Unit	m ³

Calculation Procedure Applied

Volume of leveling concrete was computed based on the drawing.

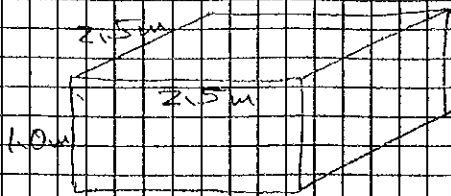
References, Calculation Base and Revisions

See the item of excavation and disposal of
light house. (2I-01)

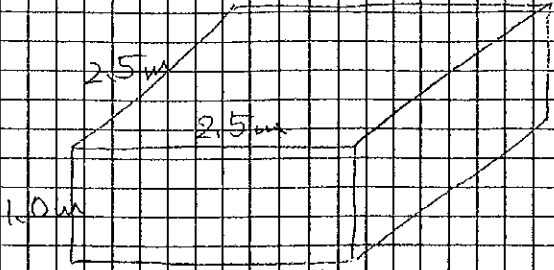
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Kalla Gorio			Mr. Tama		Mr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union		Calc. File No.	
Section	Light House		Calc. Index No.	
Subject	Leveling concrete		Page No.	Rev.
$V = 2.7 \times 2.7 \times 1.0$ $= 0.729$ $\approx \boxed{0.73} \text{ m}^3$			References/ Notes	
Prepared by			Checked by	
/ /200			/ /200	

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Light House			Pay Item No. (BOQ)	2J-0104			
Quantity Item	Form of foundation			Unit	m ²			
Calculation Procedure Applied <p style="font-size: 1.2em;">Area of form of foundation was computed based on the drawing.</p>								
References, Calculation Base and Revisions <p style="font-size: 1.2em;">See the item of excavation and disposal of light house. (2J-01)</p>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Mr. Gardo			Mr. Inuma		Mr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Light House	Calc. Index No.	
Subject	Form of foundation	Page No.	Rev.
 $A = 2.5 \times 4 \times 1.0 = 10.0 \text{ m}^2$		References/ Notes	
Prepared by		Checked by	
/ /200		/ /200	

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Light House			Pay Item No. (BOQ)	2I-0105			
Quantity Item	Concrete of foundation			Unit	m ³			
Calculation Procedure Applied <div style="font-family: cursive; font-size: 1.2em; padding: 10px;"> Concrete volume of foundation was computed based on the drawing. </div>								
References, Calculation Base and Revisions								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Light House	Calc. Index No.	
Subject	Concrete of foundation	Page No.	Rev.
		References/Notes	
$V = 2.5 \times 2.5 \times 1.0$ $= 6.25 \text{ m}^3$			
Prepared by		Checked by	
/ /200		/ /200	

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province			Project Code	JC1N004/2N001			
Work Section Title	Light House			Pay Item No. (BOQ)	2I-0106			
Quantity Item	Backfill			Unit	m ³			
Calculation Procedure Applied <div style="border: 1px solid black; padding: 10px; min-height: 150px;"> Backfill volume was computed by deduction of crushed stone, leveling concrete and concrete foundation from the excavation volume. </div>								
References, Calculation Base and Revisions <div style="border: 1px solid black; padding: 10px; min-height: 150px;"> See the item of excavation and disposal of light house. (2I-01) </div>								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	Karla Garcia			Hr. Inuma		Hr. Ando		
1								
2								
3								

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Light House	Calc. Index No.	
Subject	Backfill	Page No.	Rev.

References/ Notes	
Excavation	16.5 m ³
Crushed stone	2.2 m ³
Leveling concrete	0.73 m ³
Concrete foundation	6.25 m ³

Backfill

$$V = 16.5 - 2.2 - 0.73 - 6.25$$

$$= \boxed{7.32} \text{ m}^3$$

Prepared by		Checked by	
	/ /200		/ /200