	QUANTITY CALCULATION C	OVER SHEET	
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole 1500 mm grating	Pay Item No. (BOQ)	21 1005
Quantity Item	Coner Angle	Unit	2H-1005

Weight of corner angle was computed by multiplying unit weight by the length.

See the item of excavation and disposal of 1500 mm concrete cover. (2H-0901)

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	QUANTITY CALCULATION COVER SHEET												
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001										
Work Section Title	Mornolo 1500mm shating	Pay Item No. (BOQ)	24-100601										
Quantity Item	Form for Manhole	Unit	m ² .										

Area of form for monhole was computed by combining inside with outside.

References, Calculation Base and Revisions

See the item of excavation and disposal of

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Conc	orete cover													Manhole
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-	AM-1	(m)	(m) 1,9	(m) 5.522	(m) 2,444	(m) 3.478	(m3) 49.6	(m3) 0.55	(m3) 0.37	(m3) { 42,4	(m2) 26.7	(m2) 38.47	(kg) 846	(m3) 3.16
2	CM-I	1.2	1.9	5,562	3.399	2,563	27.4	0,55	0.37	21.9	17.7	28,59	623	2,42
3	CM-2	1.2	1.9	5.537	3.343	2,594	28	0,55	0.37	22,4	18	28.92	831	2.44
4	CM-3	1.2	1.9	5.437	3,303	2.534	26,8	0.55	0.37	21.3	17.5	28.27	616	2.4
5	CM-4	1.2	1.9	5.437	3,229	2.608	28,3	0.55	0.37	22.7	18.1	29.07	634	2,45 2.5
- 6 7	CM-4-1 CM-5	1.2	1.9	5.537 5.637	3,269 3,189	2,668 2.848	29.5 33.4	0.55	0.37	23.8 27.3	18.7 20.3	29,72 31,66	649 693	2.65
	CM-5-1	1.2	1.9	5,637	3,205	2,832	33.1	0.55 0.55	0.37	27.1	20,2	31,49	689	2,64
9	CM-6	1.2	1.9	5,637	3.055	2.982	36.5	0.55	0.37	30.2	21.6	33.11	725	2.76
10	CM-7	1.2	1.9	5.857	2.691	3.566	52,2	0.55	0.37	44.8	27.7	39.42	867	3.23
11	CM8-1	1,2	1,9	5.507	2.755	3.152	40.7	0.55	0,37	34.1	23,3	34.95	766	2.9
12	CM8-1-1	1.2	1.9	5.592	2.819	3,173	41.3	0,55	0,37	34.6	23,5	35,17	772	2,91
13	CM-8-2	1.2	1.9	5.507	2.795	3,112	39.7	0,55	0.37	33.2	22.9	34.51	757 773	2.86
-14 15	CM-8-2-1 CM-8-3	1.2	1.9	5.602 5.507	2.821 2.258	3.181 3.649	41.5 54.7	0,55 0,55	0.37 0.37	34.8 47.2	23.6 28.8	35.28 40.31	887	2.92 3.3
16	CM-8-4	1.2	1.9	5.507	2.895	3.012	37.3	0.55	0.37	30.9	21.9	33,43	732	2.78
17	DM-1	1.2	1.9	6.25	4.797	1,853	15.4	0,55	0,37	11.2	11.9	20.92	, 451	1.84
18	DM-2	1.2	1,9	5.5	3.147	2.753	31,3	0.55	0.37	25.4	19.5	30.64	669	2,57
19	DM-3	1.2	1.9	5.2	3.045	2.555	27.2	0,55	0.37	21.7	17.6	28.5	621	2,41
20	DM-4	1.2	1.9	5.34	3.125	2.615	28,4	0.55	0,37	22.8	18.2	29.15	636 655	2.46
21	DM-4-1 DM-5	1.2	1.9	5.34 5.34	3.047 2.865	2,693 2.875	30.1 34.1	0,55 0.55	0,37	24.3 28	18.9 20,6	29.99 31.95	699	2,52 2,67
23	DM-5-1	1.2	1.9	5,34	2,887	2,853	33.6	0.55	0.37	27.5	20,4	31.72	694	2.65
24	DM-7-1	1.2	1.9	5.17	2,683	2,887	34.3	0.55	0.37	28,2	20.7	32.08	702	2.68
25	DM-8-1	1.2	1.9	4.625	2,7	2.325	22.9	0.55	0.37	17.8	15,7	26.01	565	2,23
26	DM-9-1	1,2	1,9	5.01	2.546	2,864	33,8	0.55	0.37	27.7	20.5	31.84	696	2.66
27	DM-9-2	1.2	1,9	5.01	2.564	2,846	33.4	0,55	0.37	27.3	20.3	31.84	692	2.65
28	EM-1	1.2	1.9	6.06	3,897	2.563	27.4	0.55	0,37	21.9	17.7	28.59	623	2.42
30	EM-2 EM-2-1	1.2	1.9	5,97 5.97	3,799 3.808	2,571 2,562	27.6 27.4	0,55 0,55	0.37 0.37	21.9	17.8 17.7	28.67 28.57	625 623	2,43 2,42
31	EM-3	1,2	1.9	5.59	3,39	2,362	28.1	0.55	0.37	22.5	18	28.98	. 632	2,42
32	EM-4-2	1.2	1.9	5.43	3.972	1.858	15,5	0.55	0.37	11.2	11.9	20.97	452	1,85
33	EM-4-3	1.2	1,9	6,14	4.687	1,853	15.4	0,55	0.37	11.2	11.9	20,92	451	1.84
34	EM-4-4	1.2	1.9	6.25	4.797	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
	Total						1,090	18.7	12.6	883	662	1,040	22,600	87.0
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<u>Солс</u> 1	AM-2	1.5	2.2	5.522	2,406	3.516	58,8	0.73	0.49	48.1	29.5	47.5	932	3,97
2	AM-3	1.5	2,2	5.332	2.328	3.404	55.2	0.73	0.49	44.8	28.2	46,02	903	3.86
3	AM-5-1	1,5	2,2	5,132	2,158	3.374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.83
4	AM-6-1	1.5	2.2	4.928	1.982	3.346	53,4	0.73	0.49	43.1	27.6	45.25	887	3.8
5	AM-6-2	1.5	2.2	4.928	2,007	3,321	52.6	0,73	0.49	42.4	27.3	44,92	881	3.78
- <u>6</u> 7	AM-7-1 BM-4	1.5 1.5	2.2	4.711 4.711	1.797 1.395	3.314 3.716	52.4 65.5	0.73	0.49	42.2 54.2	27.2 31.8	44.83 50.14	879 985	3.77 4.17
8	BM-5-1	1.5	2.2	4.711	1.373	3.738	66,3	0.73	0.49	55	32.1	50.43	991	4.19
9	CM-11-1	1.5	2.2	5.132	2.379	3,153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
10	CM-12-1	1.5	2.2	4.928	2.247	3,081	45.6	0.73	0.49	36	24.7	41.75	817	3.54
11	CM-13-1	1.5	2.2	4.711	1.44	3.671	84	0,73	0.49	52.8	31.3	49.54	973	4.13
12	CM-8 CM-9	1.5	2,2	5.507	2.62	3.287	51.6	0.73	0.49	41.5	26.9	44.47	872	3.75
14	DM-10	1.5 1.5	2.2	5.332 4.844	2,55 2,084	3.182 3.16	48.5 47.8	0.73 0.73	0.49 0.49	38.7 38	25.8 25,5	43,09 42,8	844 838	3.64 3.62
	DM-6	1.5	2.2	4,825	2.836	2.189	24.7	0.73	0.49	17.6	16.1	29.98	581	2.66
_16	DM-7	1,5	2.2	5.17	2.885	2.905	40.8	0.73	0.49	31.7	22.9	39.43	770	3,37
17	DM-8	1.5	2.2	5.119	2.519	3	43.4	0.73	0.49	34.1	23.8	40,68	795	3.46
18	DM-9	1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7	20,6	36.46	711	3.14
19 20	EM-4-1	1.5	2.2	5.33 5.33	3.114	2,616 2,424	33.7	0.73	0.49	25.4	20	35.62 33.08	694 643	- 3,08 2.89
21	EM-5	1.5	2.2	5.22	3.306 2.979	2,641	29.5 34.3	0,73 0.73	0.49 0.49	21.7 25.9	18.2 20.2	35.95	700	3.11
	EM-5-1	1.5	2.2	5.22	3.001	2,619	33.8	0.73	0.49	25.5	20	35.66	695	3.08
	EM-5-2	1.5	2,2	5.22	3.011	2.609	33.6	0.73	0.49	25.3	19.9	35.52	692	3.07
24	EM-6	1.5	2.2	4.89	2,669	2.621	33,9	0.73	0,49	25.6	20.1	35,68	695	3,09
	Total						1,110	17.6	11,8	880	600	1,000	19,600	85
Grati	ng cover			:										
1	AM-4	1.5	2.2	5,332	2.28	3.452	56.7	0.73	0.49	46.1	28.8	46.65	915	3.91
	AM-5	1.5	2.2	5,132	2.109	3.423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.88
3	AM-6 BM-1	1.5 1.5	2,2	4.928 5.332	1.934	3.394 3.851	54.9 70.4	0.73 0.73	0.49 0.49	44.5 58.7	28.1 33.4	45.89 51.92	900 1021	3.85 4.3
- <u></u> -	BM-1-1	1.5	2.2	5,332	1.929	3.803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.28
6	BM-2	1.5	2.2	5,132	1.71	3.822	69.3	0.73	0.49	57.7	33.1	51.54	1013	4.27
7	BM-2-1	1.5	2.2	5.132	1.758	3.774	67.6	0.73	0.49	56.2	32.5	50.9	1001	4.23
8	BM-3	1.5	2.2	4.928	1.534	3.794	68.3	0.73	0.49	56,8	32,7	51.17	1006	4.25
9	BM-3-1	1.5	2,2	4,928	1,582	3.746	66,6	0.73	0.49	55.2	32.2	50.53	993	4.2
10	CM-10 CM-11	1.5 1.5	2.2	5,332 5,132	2,502	3.23	49,9	0.73	0.49	39.9	26.3 26	43.72 43.34	856 849	3.69
	CM-12	1.5	2,2	4.928	2,199	3.129	49 46.9	0.73 0.73	0.49 0.49	39.1	25.2	42.39	830	3.59
	Total T						730	8.8	5.9	600	360	576	11,300	49
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	separator AM-7	1.5	2.2	4.711	0.993	4,118	93,4	1,09	0.73	68.2	41.7	73.89	1504	9.30
1		1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9,30
1 2	BM~5		2,2	4.711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
1	BM-5 CM-13	1.5		1-777										
2		1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
2 3	CM-13						93.4		3,0	68.2 273	41.7 167		1504 6,020	9,30

	QUANTITY CALCULATION COVER SHEET												
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001										
Work Section Title	Manhole 1500 mm grating	Pay Item No. (BOQ)	2H-100602										
Quantity Item	Concrete for manhale	Unit											

Height = Ground Level - Bottom Level + 0.15 (m)

Volume of concrete for manhole was computed by outer volume minus inner volume.





Top view

side viou

References. Calculation Base and Revisions

See the item of excavation and disposal of 1500 mm concrete cover. (2H-0901)

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Conce	ete cover						*		•					Manhole_3
1	7	W	a	GL	B.L.	h	Vex	Ves	Vlc	Vof	Cmpct	Form	Re-bar	Concrete
Ĺ		(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m3)	(m2)	(nt2)	(kg)	(m3)
	AM-1	1,2	1.9	5.522	2.444	3.478	49.6	0.55	0.37	42,4	26.7	38.47	846	3,16
	CM-1	1.2	1.9	5.562	3,399	2,563	27.4	0.55	0.37	21.9	17.7	28,59	623	2,12
3 9	CM-2	1.2	1.9	5,537	3,343	2,594	28	0.55	0.37	22.4	18	28,92	831	2.44
	CM-3	1.2	1.9	5.437	3.303	2,534	26,8	0.55	0,37	21.3	17.5	28.27	616	2.4
	CM-4	1.2	1.9	5.437	3.229	2.808	28,3	0.55	0.37	22.7	18.1	29.07	634	2.45
	CM-4-1	1.2	1.9	5,537	3,269	2,668	29.5	0.55	0.37	23.8	18.7	29.72	649	2.5
	CM-5	1.2	1.9	5.637	3,189	2.848	33.4	0.55	0.37	27.3	20,3	31.66	693	2.65
	CM-5-1	1.2	1.9	5,637	3.205	2,832	33.1	0.55	0.37	27.1	20,2	31.49	689	2.64
	CM-6	1.2	1,9	5.637	3,055	2,982	36.5	0,55	0.37	30.2	21.6	33.11	725	2,76
	CM-7	1.2	1.9	5.857	2.691	3,566	52.2	0,55	0.37	44.8	27.7	39.42	867	3,23
	CM8-1	1,2	1.9	5,507	2.755	3.152	40.7	0.55	0.37	34.1	23.3	34.95	766	2.9
	CM8-1-1	1,2	1.9	5,592	2.819	3.173	41.3	0.55	0.37	34.6	23.5	35.17	772	2.91
	CM-8-2	1,2	1,9	5.507	2,795	3,112	39.7	0.55	0.37	33.2	22.9	34.51 35.26	<u>757</u> 773	2,86 2,92
	CM-8-2-1	1.2	1.9	5,602	2.821	3,181	41.5	0.55 0.55	0.37	34.8 47.2	23.6 28.6	40.31	887	3.3
	CM-8-3	1.2	1.9	5,507	2.258	3,649 3,012	54.7 37.3	0.55	0.37	30.9	21,9	33.43	732	2.78
	CM-8-4	1.2	1.9	5.507	2.895 4.797	1,853	15.4	0.55	0.37	11:2	11.9	20.92	451	1.84
	DM-1 DM-2	1.2	1.9	6.25 5.5	3.147	2,753	31.3	0.55	0.37	25,4	19,5	30.64	669	2.57
	DM-3	1.2	1.9	5.2	3,045	2,555	27.2	0.55	0.37	21.7	17,6	28,5	621	2,41
	DM-4	1.2	1.9	5,34	3,125	2.615	28.4	0.55	0.37	22.8	18,2	29.15	636	2.46
	DM-4-1	1.2	1.9	5,34	3.047	2.693	30.1	0.55	0.37	24.3	18.9	29.99	655	2.52
	DM-5	1.2	1.9	5,34	2.865	2.875	34.1	0.55	0.37	28	20,6	31.95	699	2.67
	DM-5-1	1.2	1.9	5,34	2.887	2,853	33.6	0.55	0.37	27.5	20,4	31.72	694	2.65
	DM-7-1	1,2	1.9	5.17	2.683	2.887	34.3	0.55	0.37	28.2	20.7	32.08	702	2.68
	DM-8-1	1.2	1.9	4.625	2.7	2.325	22.9	0.55	0.37	17.8	15.7	26.01	565	2.23
	DM-9-1	1.2	1.9	5.01	2.546	2.864	33,8	0.55	0.37	27.7	20.5	31.84	696	2.68.
	DM-9-2	1.2	1.9	5.01	2.564	2.846	33.4	0.55	0.37	27.3	20.3	31,64	692	2.65
	EM-1	1.2	1,9	6,06	3.897	2,583	27.4	0.55	0,37	21.9	17.7	28.59	623	2.42
29 E	EM-2	1.2	1.9	5.97	3.799	2,571	27.6	0.55	0.37	22	17.8	28.67	625	2.43
30 E	M-2-1	1.2	1.8	5.97	3.808	2.562	27.4	0.55	0.37	21.9	17.7	28.57	623	2.42
31 E	M-3	1.2	1.9	5.59	3,39	2.6	28.1	0,55	0,37	22.5	18	28,98	632	2.45
32 E	M-4-2	1.2	1.9	5.43	3.972	1.858	15.5	0,55	0,37	11.2	11.9	20,97	452	1.85
	EM-4-3	1.2	1.9	6,14	4.687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
34 8	EM-4-4	1.2	1.9	6.25	4.797	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
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1 1	Total						1,090	18.7	12.6	883	662	1,040	22,600	87.0
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	ete cover			5.500	0.400	0.516	500	0.72	0.40	40.4	29.5	47.5	932	3,97
	AM-2	1.5	2.2	5.522	2.406	3.516 3.404	58.8 55.2	0.73 0.73	0.49 0.49	48.1 44.8	28.2	46.02	903	3.86
	AM-3 AM-5-1	1.5	2.2	5.332 5.132	2,328	3.374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.83
	AM-6-1	1.5	2,2		2.158 1.982	3,346	53.4	0.73	0.49	43.1	27.6	45.25	887	3,8
	AM-6-2	1.5	2,2	4.928 4.928	2.007	3.321	52.6	0.73	0.49	42.4	27.3	44.92	881	3.78
	AM-7-1	1.5	2,2	4.711	1.797	3.314	52.4	0.73	0.49	42.2	27.2	44.83	879	3.77
	3M-4	1.5	2.2	4.711	1.395	3.716	65.5	0.73	0,49	54.2	31.8	50.14	985	4.17
	BM-5-1	1.5	2.2	4.711	1.373	3,738	66.3	0.73	0.49	55	32,1	50.43	991	4,19
	CM-11-1	1.5	2.2	5.132	2.379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
	CM-12-1	1.5	2.2	4.928	2.247	3.081	45.6	0.73	0.49	36	24.7	41.75	817	3.54
	CM-13-1	1.5	2,2	4.711	1.44	3.671	64	0.73	6.49	52.8	31.3	49.54	973	4.13
	CM-8	1.5	2.2	5,507	2.62	3.287	51.6	0.73	0.49	41.5	28.9	44.47	872	3.75
	CM-9	1.5	2.2	5.332	2.55	3.182	48.5	0.73	0.49	38.7	25.8	43.09	844	3.64
	DM-10	1.5	2.2	4.844	2.084	3.16	47.8	0.73	0.49	38	25.5	42.8	838	3.62
15 E	DM-6.	1.5	2.2	4,625	2.836	2,189	24,7	0.73	0.49	17.6	16.1	29.98	581	2.66
	DM-7	1.5	2.2	5.17	2.665	2,905	40.8	0.73	0.49	31.7	22.9	39.43	770	3,37
	9-MC	1.5	2,2	5.119	2.519	3	43.4	0.73	0.49	34.1	23.8	40.68	795	3.46
)M-9	1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7	20.6	36.46	711	3.14
	M-4	1.5	2.2	5.33	3.114	2.616	33.7	0.73	0.49	25.4	20	35.62	694	3.08
	M-4-1	1.5	2.2	5,33	3.306	2,424	29.5	0.73	0.49	21.7	18.2	33.08	643	2.89
	M-5	1.5	2.2	5,22	2.979	2,841	34.3	0.73	0.49	25.9	20.2	35.95	700	3.11
	M-5-1	1.5	2.2	5,22	3.001	2,619	33.8	0.73	0.49	25.5	20 19.9	35.86 35.52	695 692	3.08
23 E	EM-5-2	1.5	2.2	5.22	3.011	2,609	33.6 33.9	0.73 0.73	0.49	25.3 25.6	20.1	35,68	695	3.09
14 E	-W-0	1.5	2,2	4.89	2.669	2.621	33.3	J. 13	0.43	23.0	40.1	33,00	000	0.03
1	Fotal						1,110	17.6	11.8	880	600	1,000	19,600	85
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Grating	g cover													
	AM-4	1.5	2,2	5,332	2.28	3.452	56.7	0.73	0.49	46.1	28.8	46.65	915	3.91
	M-5	1,5	2.2	5.132	2.109	3,423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.88
	\M-6	1,5	2.2	4.928	1.934	3.394	54.9	0.73	0.49	44.5	28,1	45.89	900	3.85
4 E	1-ME	1.5	2.2	5.332	1.881	3,851	70.4	0.73	0.49	58.7	33.4	51.92	1021	4.3
5 €	3M-1-1	1.5	2.2	5.332	1,929	3,803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.26
	3M-2	1.5	2.2	5.132	1.71	3.822	69.3	0.73	0.49	57.7	33,1	51.54	1013	4.27
	3M-2-1	1.5	2.2	5,132	1,758	3.774	67.6	0.73	0.49	56.2	32.5	50.9	1001	4.23
	3M-3	1.5	2.2	4,928	1,534	3.794	68.3	0.73	0.49	56.8	32.7	51,17	1006	4.25
	3M-3-1	1.5	2.2	4.928	1,582	3.746	66.6	0.73	0.49	55.2	32.2	50.53	993	4.2
	CM-10	1.5	2.2	5.332	2,502	3.23	49,9	0.73	0.49	39.9	26.3	43.72	856	3.69
	CM-11	1.5		5.132	2.331	3.201	49	0.73	0.49	39.1	26	43.34	849	3.66
12 (CM-12	1.5	2,2	4.928	2.199	3.129	46.9	0.73	0.49	37.2	25.2	42,39	830	3.59
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1 7	fotal					· ł	730	8,8	5.9	600	360	576	11,300	49
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	AM-7	1.5	2,2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
	3M-5	1.5	2,2	4.711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
	2M-13	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
	OM-11	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
	<u> </u>	1.0			0.550	7.110	33.7	1.03	0.70			10.03	1304	
	Total						380	4.4	3.0	273	167	296	6,020	38
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	QUANTITY CALCULATION C	OVER SHEET	
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole 1500mm shating	Pay Item No. (BOQ)	2H-100603
Quantity Item	grating cover	Unit	Nos

Grating cover was computed.

References, Calculation Base and Revisions

See the Item of excavation and disposal of 1500 mm concrete cover.

(2H-0901)

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	QUANTITY CALCULATION C		
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole 1500 mm grating	Pay Item No. (BOQ)	2H-100701
Quantity Item	Bockfill sand	Unit	m ³

Volume of backfill sand was computed by deduction of crushed stone, lean concrete and manhole from the excavation volume.

References. Calculation Base and Revisions

See the item of excavation and disposal of 1500mm concrete cover. (24-0901)

Rev	Prep	ared	No. of	Chec	ked	Revi	ewed	Superseded
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Conc	rete cover													Manhole
		₩	a	G.L.	B,L,	h	Vex	Vos	VIo	Vbf	Cmpct	Form	Re-bar	Concrete
ļ		(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)
1	<u>AM-1</u>	1,2	1.9	5.522	2.444	3.478	49.6	0.55	0,37	42.4	26.7	38.47	846	3,16
2	CM-1	1.2	1.9	5,562	3,399	2,583	27.4	0,55	0.37	21.9	17.7	28.59	623	2,42
3	CM-2	1.2	1.9	6.537	3,343	2,594	28	0.55	0.37	22,4	18	28,92	631	2.44
1_1_	CM-3	1,2	1.9	5.437	3,303	2,534	26,8	0,55	0.37	21.3	17,5	28,27	616	2.4
5	CM-4	1.2	1.9	5.437	3.229	2,608	28.3	0,55	0.37	22,7	18.1	29,07	634	2.45
ß	CM-4-1	1.2	1.9	5.537	3.269	2.668	29.5	0.55	0,37	23,8	18.7	29.72	649	2.[
7	CM-5	1.2	1.9	5.637	3,189	2.848	33.4	0.55	0.37	27.3	20.3	31.66	693	2,65
8	CM-5-1	1.2	1.9	5.637	3.205	2,832	33.1	0.55	0.37	27.1	20,2	31.49	889	2,64
9	CM-6	1.2	1.9	5.637	3,055	2,982	36,5	0.55	0.37	30.2	21,6	33,11	725	2,76
10	CM-7	1.2	1.9	5,857	2,691	3,566	52.2	0.55	0.37	44.8	27.7	39,42	867	3,23
11	CM8-1	1.2	1.9	5,507	2.755	3,152	40.7	0.55	0.37	34.1	23.3	34.95	766	2,9
12	CM8-1-1	1.2	1.9	5,592	2.819	3.173	41.3	0.55	0.37	34.6	23.5	35.17	772	2.91
13	CM-8~2	1.2	1.9	5.507	2.795	3.112	39.7	0.55	0.37	33.2	22.9	34.51	757	2,86
14	CM-8-2-1	1.2	1.9	5,602	2.821	3.181	41.5	0.55	0.37	34.8	23.6	35.26	773	2 92
15	CM-8-3	1.2	1.9	5.507	2,258	3.649	54.7	0,55	0.37	47.2	28.6	40.31	887	2,92 3,3
		1,2	1.9	5.507	2.895	3.012	37.3	0,55	0.37	30.9	21.9	33.43	732	2.78
16	CM-8-4				4.797	1.853	15.4		0.37			20.92	451	1.84
17	DM-1	1.2	1.9	6,25				0.55		11,2	11.9			
18	DM-2	1.2	1.9	5.5	3,147	2.753	31,3	0.55	0.37	25,4	19.5	30.64	669	2.57
19	DM-3	1.2	1.9	5,2	3.045	2,555	27,2	0,55	0.37	21.7	17.6	28.5	621	2.41
20	DM~4	1.2	1.9	5,34	3.125	2,815	28,4	0.55	0.37	22.8	18.2	29.15	636	2.40
21	DM-4-1	1,2	1.9	5,34	3,047	2,693	30.1	0.55	0.37	24.3	18.9	29.99	655	2,52
22	DM-5	1.2	1.9	5,34	2.865	2,875	34.1	0.55	0.37	28	20.6	31,95	699	2.67
23	DM~5~1	1.2	1.9	5.34	2.887	2.853	33.6	0.55	0.37	27.5	20.4	31.72	694	2.65
24	DM-7-1	1.2	1.9	5.17	2,883	2.887	34.3	0.55	0.37	28.2	20.7	32.08	702	2.68
25	DM-8-1	1.2	1.9	4.625	2.7	2.325	22,9	0,55	0.37	17.8	15,7	26.01	585	2,23
26	DM-9-1	1,2	1.9	5.01	2,546	2,864	33,8	0,55	0.37	27.7	20.5	31.84	696	2,66
27	DM-9-2	1.2	- 1.9	5,01	2,564	2,846	33,4	0.55	0.37	27.3	20.3	31.64	692	2.65
28	EM-1	1.2	1.9	6,06	3.897	2,583	27.4	0,55	0.37	21.9	17.7	28.59	623	2.42
29	EM-2	1.2	1.9	5.97	3.799	2,571	27.6	0.55	0.37	22	17.8	28.67	825	2.43
30	EM-2-1	1.2	1.9	5.97	3.808	2.562	27.4	0.55	0.37	21.9	17.7	28,57	623	2,42
31			1.9	5.59	3,39	2.502	28,1	0,55	0.37	22.5	18	28,98	632	2,45
	EM-3 EM-4-2	1,2			3,39	1.858	15.5	0.55			11.9	20.97	452	1,85
32		1.2	1.9	5.43					0.37	11.2				
33	EM-4-3	1.2	1.9	6.14	4.687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
34	EM-4-4	1.2	1.9	6.25	4.797	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
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ļ	Total						1,090	18.7	12.6	883	662	1,040	22,600	87.0
	100	1												
	rete cover													
1_1_	AM-2	1.5	2.2	5,522	2.406	3.516	58.8	0,73	0,49	48.1	29,5	47,5	932	3,97
2	АМ-Э	1.5	2,2	5.332	2,328	3,404	55,2	0.73	0.49	44.8	28.2	46.02	903	3.86 3.83
3_	AM-5-1	1.5	2.2	5.132	2.158	3.374	54.2	0.73	0.49	43.8	27.9	45,62	895	3.83
4	AM-6-1	1.5	2.2	4,928	1.982	3.346	53,4	0.73	0.49	43.1	27.6	45,25	887	3.8
5	AM-6-2	1.5	2,2	4.928	2.007	3,321	52,6	0.73	0.49	42.4	27.3	44.92	188	3.78
6	AM-7-1	1.5	2.2	4.711	1.797	3.314	52.4	0.73	0.49	42.2	27.2	44.83	879	3.77
7	BM-4	1.5	2.2	4.711	1.395	3,716	65.5	0.73	0.49	54.2	31.8	50.14	985	4.17
8	BM-5-1	1,5	2.2	4.711	1.373	3.738	66.3	0,73	0,49	55	32.1	50.43	991	4.19
9	CM-11-1	1.5	2.2	5,132	2,379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
10	CM-12-1	1.5	2.2	4.928	2,247	3.081	45.6	0.73	0.49	36	24.7	41.75	817	3.54
11	CM-13-1	1.5	2,2	4.711	1.44	3.671	64	0.73	0.49	52.8	31.3	49,54	973	4.13
12	CM-8	1.5	2,2	5.507	2,62	3.287	51.6	0.73	0.49	41.5	26.9	44.47	872	3.75
			2.2	5,332	2.55	3,182		0.73	0.49			43.09	844	3.64
13	CM-9	1.5					48.5			38.7	25.8			3.62
14	DM-10	1.5	2.2	4.844	2.084	3.16	47.8	0.73	0.49	38	25.5	42.8	838	
15	DM-6	1.5	2.2	4.625	2.836	2,189	24.7	0.73	0.49	17.6	16.1	29,98	581	2.66
16	DM-7	1.5	2.2	5.17	2,665	2.905	40.8	0.73	0.49	31.7	22.9	39,43	770	3.37
17	DM-8	1.5	2.2	5,119	2,519	3	43,4	0.73	0,49	34.1	23.8	40.68	795	3.46
18	DM-9	1.5	2.2	5.019	2,739	2.68	35,2	0.73	0.49	26.7	20.6	36,46	711	3.14
19	EM-4	1.5	2.2	5.33	3.114	2,616	33.7	0.73	0.49	25.4	20	35.62	694	. 3.08
20	EM-4-1	1.5	2.2	5.33	3,306	2.424	29,5	0.73	0.49	21.7	18.2	33.08	643	2,89
21	EM-5	1.5	2.2	5.22	2.979	2.641	34.3	0.73	0.49	25.9	20.2	35.95	700	3.11
22	EM-5-1	1.5	2.2	5.22	3.001	2,619	33,8	0.73	0.49	25.5	20	35.66	695	3.08
	EM-5-2	1.5	2.2	5.22	3.011	2.809	33,6	0,73	0,49	25.3	19.9	35,52	892	3.07
	EM-6	1.5		4.89	2.869	2.621	33.9	0.73	0.49	25,6	20.1	35,68	695	3.09
	Total	l		-			1,110	17.6	11.8	880	600	1,000	19,600	85
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Gratic	ng cover	I										,		
	AM-4	1.5	2.2	5,332	2,28	3,452	56.7	0.73	0.49	46.1	28.8	46.65	915	3.91
	AM-5	1.5	2.2	5.132	2.109	3.423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.88
				4.928		3,394							900	3.85
	AM-6	1.5	2,2		1.934		54.9	0.73	0.49	44.5	28.1	45.89		
	BM-1	1.5	2.2	5.332	1.881	3,851	70.4	0.73	0.49	58.7	33.4	51.92	1021	4.3
	BM-1-1	1.5	2.2	5.332	1.929	3,803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.26
6	BM-2	1.5	2,2	5,132	1.71	3,822	69.3	0.73	0.49	57.7	33.1	51.54	1013	4.27
	BM-2-1	1.5	2.2	5.132	1.758	3.774	67.6	0.73	0.49	56.2	32,5	50.9	1001	4.23
	BM-3	1.5	2.2	4.928	1.534	3.794	68.3	0.73	0.49	56.8	32.7	51.17	1006	4.25
9	BM-3-1	1.5	2.2	4.928	1.582	3.746	66.6	0.73	0.49	55.2	32,2	50.53	993	4.2
	CM-10	1.5		5.332	2,502	3.23	49,9	0.73	0.49	39.9	26.3	43.72	856	3.69
11	CM-11	1.5		5,132	2.331	3.201	49	0.73	0.49	39.1	26	43.34	849	3.66
	CM-12	1.5		4.928	2.199	3.129	46.9	0.73	0.49	37.2	25.2	42.39	830	
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_	Total	 					730	8.8	5,9	600	360	576	11,300	49
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	AM-7	1.5		4.711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
2	BM-5	1.5		4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
3_	CM-13	1.5		4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
4	DM-11	1.5	2,2	4.711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9,30
		L^-												
	Total						380	4.4	3,0	273	167	296	6,020	38
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	QUANTITY CALCULATION C	OVER SHEET	
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhoie 1500mm grating	Pay Item No. (BOQ)	24-100702
Quantity Item	Compartion	Unit	My

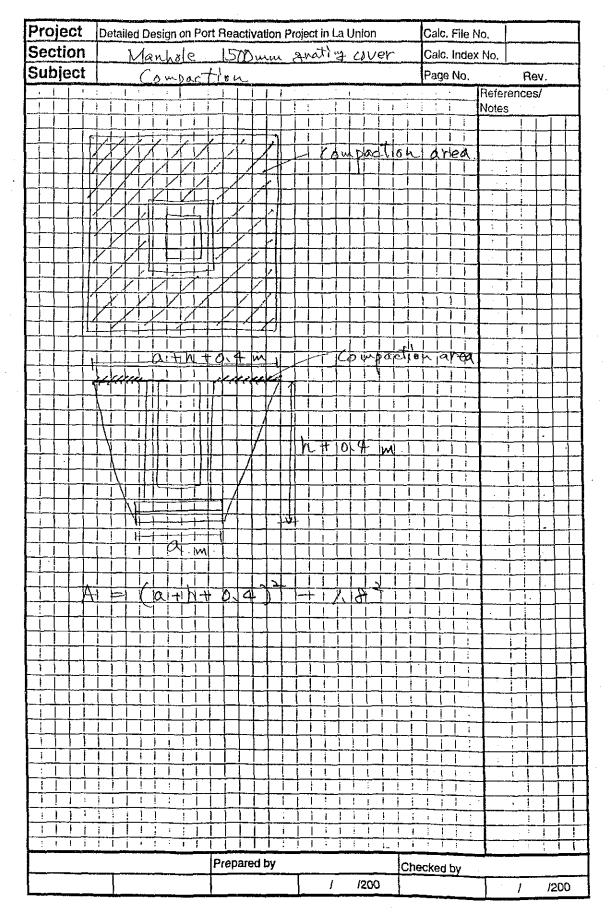
Compaction area was to be the surface of excavation rea.

References, Calculation Base and Revisions

See the Item of excavation and disposal
of 1500 mm concrete cover. (2H-0701)

Rev	Prepa	red	No. of	Chec	ked	Revie	wed	Superseded
	by	Date	Pages	by	Date	by	Date	by Calc No.
0	Korla García 🗜	(Mr. Jauma		Hr. Ando		
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MIPPON KOEI CO.,LTD.



Description	Concrete cover	····				r							5 .	Manhole,
1 Mart 12 1 6.022 2444 3.478 49.8 0.55 0.97 42.1 28.2 39.6 49.8 319 31		W		GL.	B.L.	h	Vex	Vcs	Vic	Vbf	Cmpct	Form	Re-bar	Concrete
2	1 ΔΜ-1													
Section Sect														2,42
Section Company Comp											18	28,92		2,44
Color	4 CM-3	1.2	1.9	5,437										
College														
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10 10 12 13 13 13 13 13 13 13														
11 CM=1														
12 Chem -1 1.2 1.3 6.592 2.818 3.172 4.13 6.55 6.37 34.66 23.65 35.171 772 2.91 13 Chem -2 1.2 1.3 6.502 2.281 3.111 3.92 6.55 6.37 3.32 2.32 3.451 777 2.91 14 Chem -2 1.2 1.3 6.502 2.281 3.111 3.92 6.55 6.37 3.32 2.32 3.345 3.92 2.29 15 Chem -2 1.2 1.3 6.502 2.281 3.111 4.15 6.55 6.37 3.45 3.35 3.588 7.92 2.29 16 Chem -2 1.2 1.3 6.502 2.281 3.111 4.15 6.55 6.37 3.45 3.35 3.588 7.92 2.29 17 Chem -1 1.2 1.3 5.07 2.885 3.01 5.72 5.02 3.03 5.10 3.34 3.34 3.92 2.29 18 Chem -2 1.2 1.3 5.5 3.141 2.25 3.12 5.50 3.77 3.12 1.10 2.092 4.91 1.84 19 Chem -2 1.2 1.3 5.5 3.141 2.25 3.12 5.50 3.77 3.14 5.15 3.04 6.00 3.04														
13 OM-8-2 12 19 5600 2,975 3112 393 6,55 0,37 334 232 3441 757 2,55 15 OM-6-3 12 19 5,600 2,255 3,640 5,55 0,37 41,2 2,64 40,01 821 3,35 15 15 OM-6-4 12 19 5,600 2,895 3,640 5,65 0,37 41,2 2,64 40,01 821 3,35 15 15 OM-6-4 12 19 5,600 2,895 3,540 5,75 5,55 3,67 41,2 2,64 40,01 821 3,35 15 15 OM-6-4 12 19 5,600 2,895 2,555 2,74 6,55 0,37 41,2 2,64 40,01 821 3,35 18 18 OM-6-2 12 19 5,60 3,147 2,753 3,14 0,95 0,37 24,4 19,5 0,044 40,9 2,75 2,75 0,75														
14 QM-8-2- 1.2 1.9 5.602 2221 3.181 41.5 0.55 0.27 34.8 23.4 35.56 773 225 225 3.181 41.5 0.55 0.27 41.2 23.6 41.0 40.3 3.181 41.5 1.5 0.55 0.27 41.2 23.6 41.0 40.3 3.181 41.5 1.5 0.55 0.27 41.2 23.6 40.3 40.3 40.2 41.1													757	
15 OH-8-3 1.2 1.9 5.007 2258 3.649 54.7 0.55 0.37 41.2 28.6 0.001 857 3.3 1.1 1.1 1.5 1.					2,821				0.37	34.8	23.6	35.26	773	
17 ON- 12 18 625 4797 1853 154 0.55 0.37 112 119 20.02 459 148 180 140 120 130 140 140 15	15 CM-8-3	1.2		5,507	2.258	3,649	54.7							
18 Det 2														
19 Ober 3														
10 10 12 15 15 15 15 15 15 15														
1 Ohe														
22 OM-5														
23 Def S-1 12 1.9 5.34 2.897 2.893 33.8 0.55 0.37 27.5 20.4 31.72 694 2.897 2.44 0.047-1 12 13 6.17 2.683 2.897 32.8 0.55 0.37 27.5 20.7 32.08 702 2.88 2.88 0.048-1 1.2 1.5 4.675 2.7 2.325 2.29 0.55 0.32 11.8 15.7 2.601 555 2.28 0.048-1 1.2 1.5 0.1 2.546 2.884 33.8 0.55 0.37 27.1 20.5 31.8 356 2.68 2.28 2.														
24 DM-7-H 12 13 5,17 2,863 2,861 34.4 0,65 0,31 28.2 20.7 32.08 702 28.8 55 DM-8-H 12 19 5,01 2546 2,864 33.8 0,55 0,37 12.1 20.5 31.84 93.5 22.2 75 DM-9-H 12 19 5,01 2546 2,864 33.8 0,55 0,37 21.2 20.5 31.84 93.5 28.8 75 DM-9-H 12 19 5,01 2546 2,864 33.8 0,55 0,37 21.2 20.5 31.84 93.5 28.8 75 DM-9-H 12 19 5,01 2546 2,864 33.8 0,55 0,37 21.2 20.5 31.84 93.5 24.8 75 DM-9-H 12 19 5,01 2546 2,864 33.8 0,55 0,37 21.2 20.5 31.84 93.5 24.8 75 DM-9-H 12 19 5,01 2546 2,864 3.8 0,55 0,37 21.5 20.3 31.64 28.8 75 DM-9-H 12 19 5,01 2546 23.8 25.9 2.1 24.8 23.8 24.8 75 DM-9-H 12 19 5,01 23.8 25.9 2.1 24.8 23.8 24.8 75 DM-9-H 12 19 5,01 24.8 25.9 2.1 24.8 24.8 75 DM-9-H 12 19 5,04 32.7 1.88 15.5 0.55 0.37 21.5 11.7 20.27 23.2 24.8 75 DM-9-H 12 19 5,04 32.7 1.88 15.5 0.55 0.37 11.2 11.9 20.27 43.1 75 DM-9-H 12 19 5,04 32.7 1.88 15.5 0.55 0.37 11.2 11.9 20.27 43.1 75 DM-9-H 12 19 5,05 3.38 2.8 2.8 0.55 0.37 11.2 11.9 20.27 43.1 75 DM-9-H 15 22 5.32 2.28 3.04 5.2 0.73 0.49 48.1 29.5 47.5 93.2 35.7 75 DM-9-H 15 22 5.33 2.15 3.34 3.45 5.5 0.55 0.37 11.2 11.9 20.27 43.1 75 DM-9-H 15 22 5.33 2.15 3.34 3.45 5.45 0.35 0.33 11.2 11.9 20.27 43.1 75 DM-9-H 15 22 4.928 2.001 3.31 5.25 0.73 0.49 48.1 29.5 44.5 68.9 3.3 75 DM-9-H 15 22 4.928 2.001 3.31 5.25 0.73 0.49 48.1 29.3 44.5 68.9 3.3 75 DM-9-H 15 22 4.71 1.39 3.14 5.45 0.73 0.49 48.1 2.2 44.5 68.9 3.3 75 DM-9-H 15 22 4.71 1.39 3.14 6.45 0.73 0.49 48.1 2.2 44.5														
SE OM-9-1 12 13 4625 27 2325 29 0.55 0.37 17.6 15.7 26.01 555 223														
28 OM-9-1 12 19 501 2546 2884 318 0.95 6.37 27.7 20.5 31.84 998 2.86 23.7 20.4 20.5 20.5 21.8 20.5 20.5 21.8 20.5 20.5 21.8 20.5														
27 OM-9-2											20.5			
28 EM-1 12 1.9 8.06 3.897 2.595 2.74 0.955 0.37 21.9 17.7 28.59 223 2.42 29 EM-2 12 1.9 5.97 3.790 2.511 2.71 0.555 0.37 22.1 17.7 28.57 28.57 28.52 24.3 30 EM-2-1 12 1.9 5.97 3.898 2.562 2.74 0.955 0.37 21.9 17.7 28.57 28.3 2.42 31 EM-3 12 1.9 5.59 3.39 2.68 28.1 0.555 0.37 21.5 18.7 28.58 0.532 2.45 32 EM-4-2 1.2 1.9 5.42 3.972 1.885 1.55 0.55 0.37 11.2 11.9 20.97 552 1.45 33 EM-4-3 1.2 1.9 6.25 4.787 1.855 1.54 0.955 0.37 11.2 11.9 20.97 552 1.45 34 EM-4-4 1.2 1.9 6.25 4.787 1.855 1.54 0.955 0.37 11.2 11.9 20.97 552 1.55 34 EM-4-4 1.2 1.9 6.25 4.787 1.855 1.54 0.955 0.37 11.2 11.9 20.97 552 1.55 35 EM-4-2 1.5 2.2 5.522 2.406 3.516 58.8 0.13 0.49 48.1 2.95 4.75 3.93 3.7 36 AM-5-1 1.5 2.2 5.532 2.406 3.516 58.8 0.13 0.49 48.1 2.95 4.75 3.93 3.7 37 AM-6-1 1.5 2.2 5.332 2.328 3.404 55.5 0.73 0.49 48.8 2.82 46.02 8.93 3.8 38 AM-5-1 1.5 2.2 5.332 2.328 3.346 54.2 0.73 0.49 48.8 2.24 4.02 8.93 3.8 38 AM-6-2 1.5 2.2 4.228 1.932 3.346 54.2 0.73 0.49 43.8 2.24 4.22 8.85 3.83 39 AM-6-2 1.5 2.2 4.228 1.932 3.346 54.2 0.73 0.49 43.8 2.24 4.22														2.65
19 EM - 2 12 13 5.97 3.798 2.571 2.78 0.55 0.37 22 17.8 28.67 22.5 2.43 30 EM - 2 12 13 5.97 3.808 2.562 2.74 0.555 0.37 21.9 17.7 28.57 26.3 2.42 31 EM - 3 12 1.9 5.59 3.39 2.8 28.1 0.555 0.37 21.5 15.2 2.858 632 2.45 33 22.6 4.72 21.8 5.43 3.972 1.858 15.5 0.55 0.37 12.5 11.9 20.92 2.45 33 EM - 4-3 12 1.9 5.14 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.54 0.555 0.37 11.2 11.9 20.92 4.91 1.84 4.987 1.853 1.84 4.985 0.37 1.2 11.9 20.92 4.91 1.84 4.987 1.853 1.84 4.985 0.37 1.2 1.1 2.0 2.0 2.0 4.1 2.1					3.897	2.563		0.55	0,37	21.9	17.7	28.59		2,42
30 EM-2-1					3,799			0.55		22	17.8	28.67		2.43
12 12 13 14 15 12 13 14 14 15 15 15 15 15 15	30 EM-2-1	1.2	1.9	5.97	3.808	2,562								
33 EM-4-3 12 19 6.14 4.887 1.853 15.4 0.55 0.37 11.2 11.9 20.92 451 1.84 Total														
Second Control Seco														
Total														
Copporate Gover 1 AM-2	34 EM-4-4	1.2	1.9	6.25	4.191	1.853	15.4	0.55	0.37	11.8	11.9	20.92	451	1,84
Copporate Gover 1 AM-2	Total						1 090	187	126	883	662	1 040	22,600	870
AM-2	TOTAL						1,000	10.7	12,0	400	***	1,010	,,,,	
AM-2	Concrete cover													
2 AM-3		1.5	2.2	5.522	2.406	3.516	58.8	0.73	0.49	48.1	29,5	47.5		
4 AM-6-1 1, 5 22 4928 1,982 3,346 53.4 0,73 0,49 43.1 27.8 45.25 887 3.8 6 AM-6-2 1,5 22 4928 2,007 3,321 52.6 0,73 0,49 42.4 2,73 44.92 881 3,78 6 AM-7-1 1,5 22 4711 1,797 3,314 52.4 0,73 0,49 42.2 27.2 44.80 891 3,77 3,78 6.5 0,73 0,49 54.2 27.2 44.80 891 3,77 3,78 6.5 0,73 0,49 54.2 27.2 44.80 891 3,77 3,78 6.5 0,73 0,49 54.2 27.2 44.80 895 3,77 6 6.5 0,73 0,49 54.2 27.2 44.80 995 4,71 8 6.5 0,73 0,49 54.2 27.2 44.80 995 4,71 8 6.5 0,73 0,49 54.2 27.2 44.80 995 4,71 8 6.5 0,73 0,49 54.2 27.2 4,71 1,797 8,79 6,75 0,73 0,49 54.2 27.2 4,71 1,79 8,79 1,79 1,79 1,79 1,79 1,79 1,79 1,79 1	2 AM-3			5.332			55,2							
6 AM-6-2 15 22 4928 2007 3321 52.6 0.73 0.49 42.4 27.3 44.92 881 3.78 6 AM-7-1 1.5 2.2 4.711 1.395 3.716 65.5 0.73 0.49 42.4 27.2 44.82 881 3.78 7 DM-4 1.5 2.2 4.711 1.395 3.716 65.5 0.73 0.49 64.2 31.8 59.14 995 41.7 9 DM-1 1.5 2.2 4.711 1.395 3.716 65.5 0.73 0.49 54.2 31.8 59.14 995 41.7 9 DM-1 1.5 2.2 4.711 1.393 3.736 68.3 0.73 0.49 37.8 25.5 47.7 836 3.61 9 DM-1 1.5 2.2 4.722 4.728 2.79 3.153 47.6 0.73 0.49 37.8 25.5 47.7 836 3.61 10 DM-1 1.5 2.2 4.728 2.79 3.153 47.6 0.73 0.49 37.8 25.5 47.7 836 3.61 11 DM-1 1.5 2.2 4.728 2.79 3.153 47.6 0.73 0.49 37.8 25.5 47.7 836 3.61 12 DM-1 1.5 2.2 4.721 1.44 3.671 64 0.73 0.49 32.8 31.3 49.54 973 41.1 12 DM-2 1.5 2.2 5.507 2.62 3.261 51.8 0.73 0.49 38.7 25.8 43.0 844 3.14 12 DM-3 1.5 2.2 5.332 2.55 3.182 49.5 0.73 0.49 38.7 25.8 43.0 844 3.14 13 DM-1 1.5 2.2 4.624 2.864 3.16 47.8 0.73 0.49 38.7 25.8 43.0 844 3.16 47.8 0.73 0.49 38.7 25.8 43.0 844 3.16 47.8 0.73 0.49 38.7 25.8 43.0 844 3.16 47.8 0.73 0.49 38.7 25.8 43.0 844 3.16 47.8 0.73 0.49 38.7 25.8 43.0 3.64 3.16 47.8 0.73 0.49 38.7 25.8 43.0 3.64 3.16 47.8 0.73 0.49 38.7 25.8 43.0 3.64 3.16 47.8 0.73 0.49 38.7 25.8 43.0 3.64 3.16 47.8 0.73 0.49 38.7 25.8 43.0 3.64 3.16 47.8 0.73 0.49 3.17 2.2 3.34 7.0 3.28 3.16 3.17 3.16 3.16 3.17 3.16 3.	3 AM-5-1	1.5		5,132										
6 M-7-1 15 22 4,711 1,797 3,314 5,24 0,73 0,49 422 27.2 44,85 879 3,77 7 DM-6 1,5 22 4,711 1,395 3,718 555 0,73 0,49 542 31,8 50,14 955 4,14 1 8 IM-5-1 1,5 22 4,711 1,373 3,736 663 0,73 0,49 55 32,1 50,43 991 4,19 10 CM-11-1 1,5 22 5,713 2,279 3,153 47,6 0,73 0,49 3,6 24,7 4,175 8,16 10 CM-12-1 1,5 22 4,928 2,247 3,081 45,6 0,73 0,49 3,6 24,7 4,175 8,17 3,54 11 CM-13-1 1,5 22 4,711 1,44 3,671 64 0,73 0,49 3,6 24,7 4,175 8,17 3,54 11 CM-13-1 1,5 22 5,507 2,62 3,267 51,8 0,73 0,49 41,5 26,9 44,47 3,72 3,13 12 CM-8 1,5 2,2 5,507 2,62 3,267 51,8 0,73 0,49 41,5 26,9 44,47 3,72 3,15 13 CM-9 1,5 2,2 5,507 2,62 3,267 51,8 0,73 0,49 41,5 26,9 44,47 3,72 3,15 13 CM-9 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 41,5 26,9 44,47 3,72 3,15 15 CM-6 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 41,5 26,9 44,47 3,72 3,15 15 CM-6 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 17,5 16,1 2,388 8,51 2,66 15 CM-6 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 17,5 16,1 2,388 8,51 2,66 16 CM-7 1,5 2,2 5,17 2,665 2,050 40,8 0,73 0,49 17,5 16,1 2,388 8,51 2,66 17 CM-8 1,5 2,5 5,17 2,565 2,050 40,8 0,73 0,49 3,1 23,8 40,88 7,70 3,47 1 17 DM-8 1,5 2,2 5,17 2,565 2,050 40,8 0,73 0,49 3,1 23,8 40,88 7,70 3,47 1 18 DM-9 1,5 2,2 5,17 2,565 2,050 40,8 0,73 0,49 3,1 23,8 40,88 7,70 3,47 1 19 EM-4 1,5 2,2 5,17 2,565 2,00 3,00 2,00 3,43 0,73 0,49 2,7 2,0 3,43 7,70 3,47 1 19 EM-4 1,5 2,2 5,10 3,30 6 2,44 2,55 0,73 0,49 2,7 2,0 3,48 4,68 7,71 3,41 1 19 EM-4 1,5 2,2 5,20 3,30 2,44 2,55 0,73 0,49 2,7 2,0 3,567 0,93 1,11 1 19 EM-4 1,5 2,2 5,20 3,30 6 2,44 2,55 0,73 0,49 2,7 2,0 3,567 0,93 1,11 1 19 EM-5 1,5 2,2 5,17 2,17 3,30 3,00 2,44 2,55 0,73 0,49 2,7 2,0 3,567 0,93 1,11 1 10 EM-5 1,5 2,2 5,13 2,10 3,43 3,39 4,51 3,39 0,73 0,49 2,57 2,0 3,567 0,93 1,11 1 10 EM-7 1,5 2,2 5,23 3,10 2,10 3,43 3,39 4,51 3,39 0,73 0,49 2,57 2,0 3,568 695 3,00 3,00 3,00 3,00 3,00 3,00 3,00 3,0														
7 DM-4														
8 BM-5-1 1.5 2.2 4.711 1.313 3.738 86.3 0.73 0.49 55 32.1 50.43 991 4.19 9 CM-11-1 1.5 2.2 5.132 2.379 3.153 47.8 0.73 0.49 3.6 24.7 41.75 817 3.35 10 CM-12-1 1.5 2.2 4.928 2.247 3.061 45.6 0.73 0.49 3.6 24.7 41.75 817 3.35 11 CM-13-1 1.5 2.2 4.711 1.44 3.671 64 0.73 0.49 3.6 24.7 41.75 817 3.41 12 CM-8 1.5 2.2 5.332 2.55 3.182 49.5 0.73 0.49 41.5 26.9 44.47 812 3.75 13 CM-9 1.5 2.2 5.332 2.55 3.182 49.5 0.73 0.49 41.5 26.9 44.47 812 3.75 14 CM-10 1.6 2.2 4.844 2.084 3.16 47.8 0.73 0.49 38.7 2.58 40.93 84.3 3.44 15 CM-9 1.5 2.2 4.844 2.084 3.16 47.8 0.73 0.49 38.7 2.58 40.93 84.3 3.44 16 CM-7 1.5 2.2 5.132 2.55 2.189 2.17 0.73 0.49 38.7 2.58 40.93 84.3 3.44 16 CM-7 1.5 2.2 5.17 2.685 2.055 40.8 0.73 0.49 31.7 22.9 38.43 7.70 3.47 17 DM-8 1.5 2.2 5.17 2.585 2.055 40.8 0.73 0.49 31.7 22.9 38.43 7.70 3.47 17 DM-8 1.5 2.2 5.17 2.585 2.055 40.8 0.73 0.49 31.1 2.28 40.88 7.85 18 DM-9 1.5 2.2 5.19 2.519 3 43.4 0.73 0.49 34.1 2.38 40.88 7.85 19 EM-4 1.5 2.2 5.019 2.799 2.68 35.2 0.73 0.49 25.4 20 35.62 38.4 3.13 20 EM-4-1 1.5 2.2 5.33 3.114 2.616 33.7 0.73 0.49 25.4 20 35.62 30.8 34.3 2.99 21 EM-5 1.5 2.2 5.22 3.001 2.609 33.8 0.73 0.49 25.9 20.2 35.95 700 3.11 22 EM-5 1.5 2.2 5.22 3.001 2.609 33.8 0.73 0.49 25.3 1.95 3.52 6.92 3.07 23 EM-5 1.5 2.2 5.33 1.88 3.394 54.9 0.73 0.49 54.5 2.88 46.85 9.15 3.88 24 EM-1 1.5 2.2 5.33 1.88 3.394 54.9 0.73 0.49 54.5 2.88 46.85 9.15 3.88 25 EM-5 1.5 2.2 5.33 1.88 3.394 54.9 0.73 0.49 57.3 3.44 57.9														
9 CM-11-1 15 22 5,132 2319 3,153														
10 OM-12-1 15 22 4928 2247 3081 45,6 0.73 0.49 36 24,7 41,75 817 3.54 11 OM-13-1 15 22 4711 1.44 3671 64 0.73 0.49 25,8 31,3 49.54 973 41,3 12 OM-8 1.5 2.2 5,507 2.62 3.287 51,8 0.73 0.49 41,5 26,9 44,47 372 3.75 13 OM-9 1.5 2.2 5,332 2.55 3.182 48,5 0.73 0.49 38,7 25,8 43,03 844 3.84 14 OM-10 1.5 2.2 4.844 2.084 3.16 47,8 0.73 0.49 38,7 25,8 43,03 844 3.84 15 OM-6 1.5 2.2 4.625 2.836 2.189 24,7 0.73 0.49 31,6 27,8 15 OM-6 1.5 2.2 5,17 2.685 2,005 40,8 0.73 0.49 31,7 22,9 39,43 770 33,7 17 OM-8 1.5 2.2 5,119 2.519 3 43,4 0.73 0.49 31,7 22,9 39,43 770 33,7 17 OM-8 1.5 2.2 5,119 2.519 3 43,4 0.73 0.49 34,1 23,8 40,68 795 3.46 18 OM-9 1.5 2.2 5,019 2.739 2.68 33,2 0.73 0.49 26,7 20,8 36,46 711 31,4 19 EM-4 1.5 2.2 5,33 3.114 2.616 33,7 0.73 0.49 25,7 20,8 36,46 711 31,4 19 EM-4 1.5 2.2 5,33 3.104 2.616 33,7 0.73 0.49 25,7 20,5 30,68 6934 3.08 21 EM-5 1.5 2.2 5,22 2.939 2.641 343 0.73 0.49 25,5 20,2 35,95 700 3.11 22 EM-5-1 1.5 2.2 5,22 3.001 2.619 33,8 0.73 0.49 25,5 20,2 35,95 700 3.11 22 EM-5-1 1.5 2.2 5,22 3.011 2.609 33,6 0.73 0.49 25,5 20,2 35,95 700 3.11 23 EM-5-2 1.5 2.2 5,22 3.011 2.609 33,6 0.73 0.49 25,5 20,1 35,68 695 3.02 24 EM-6 1.5 2.2 5,332 1.923 3,433 55,8 0.73 0.49 48,1 28,8 46,85 915 3.91 24 EM-6 1.5 2.2 5,332 1.923 3,433 55,8 0.73 0.49 48,1 28,8 46,85 915 3.91 25 EM-5-1 1.5 2.2 5,332 1.923 3,433 5,40 3,40 3,40 45,3 45,80 5,40 3,40 25 EM-5-1 1.5 2.2 5,332 1.933 3,434 54,9 0.73 0.49 48,1														
11 DM-13-1 1, 15 22 4,711 1,44 3,671 64 0,73 0,49 52,8 31,3 49,54 973 4,13 12 0M-8 1,5 22 5,507 2,62 3,267 51,51 0,73 0,49 41,5 26,9 44,47 8,12 3,75 13 0M-9 1,5 2,2 5,332 2,55 3,182 48,5 0,73 0,49 38,7 25,8 44,09 844 3,84 14 0M-10 1,5 2,2 5,332 2,55 3,182 48,5 0,73 0,49 38,7 25,8 44,09 844 3,84 14 0M-10 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 38,7 25,8 44,09 844 3,84 14 0M-10 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 38,7 25,8 44,09 844 3,84 14 0M-10 1,5 2,2 4,844 2,084 3,16 47,8 0,73 0,49 38,7 25,8 42,0 8,28,3 3,62 16 0M-7 1,5 2,2 5,17 2,665 2,005 40,8 0,73 0,49 31,7 22,9 39,43 770 3,27 77 0M-8 1,5 2,2 5,17 2,665 2,005 40,8 0,73 0,49 31,7 22,9 39,43 770 3,27 77 0M-8 1,5 2,2 5,109 2,799 2,68 35,2 0,73 0,49 26,7 20,6 38,46 711 3,14 9, EM-4 1,5 2,2 5,33 3,114 2,616 33,7 0,73 0,49 26,7 20,6 38,46 711 3,14 9, EM-4 1,5 2,2 5,33 3,114 2,616 33,7 0,73 0,49 26,7 20,6 38,46 711 3,14 2,18 14 1,5 2,2 5,33 3,306 2,424 29,5 0,73 0,49 21,7 18,2 33,08 643 2,89 21 EM-5 1,5 2,2 5,22 2,979 2,641 343 0,73 0,49 21,7 18,2 33,08 643 2,89 21 EM-5 1,5 2,2 5,22 3,011 2,609 3,38 0,73 0,49 25,5 20 2,55 5,50 3,68 695 3,08 3,2 EM-5 1,5 2,2 5,22 3,011 2,609 3,38 0,73 0,49 25,5 20 3,58 6 995 3,08 3,2 EM-5 1,5 2,2 5,33 1,209 3,409 3,40 3,40 3,40 3,40 3,40 3,40 3,40 3,40														
12 OM-8														
13 OM-9														
14 OM-10										38.7	25.8	43.03	844	3.64
16 0M-7 1.5 2.2 5.17 2.665 2.905 408 0.73 0.49 31.7 22.9 39.43 770 3.37 17 0M-8 1.5 2.2 5.119 2.519 3 43.4 0.73 0.49 26.7 20.8 38.46 711 3.14 18 0M-9 1.5 2.2 5.30 3.114 2.616 33.7 0.73 0.49 26.7 20.8 38.46 711 3.14 19 EM-4 1.5 2.2 5.33 3.114 2.616 33.7 0.73 0.49 26.4 20 35.62 694 30.8 20 EM-4-1 1.5 2.2 5.33 3.104 2.616 33.7 0.73 0.49 26.4 20 35.62 694 30.8 21 EM-5 1.5 2.2 5.22 2.979 2.641 34.3 0.73 0.49 25.9 20.2 35.95 700 3.11 22 EM-5 1.5 2.2 5.22 3.001 2.619 33.8 0.73 0.49 25.5 20 35.66 695 30.8 23 EM-5-2 1.5 2.2 5.22 3.011 2.609 33.8 0.73 0.49 25.5 20 35.66 695 30.8 24 EM-6 1.5 2.2 4.89 2.689 2.621 33.9 0.73 0.49 25.5 20.1 35.68 695 30.8 Total	14 DM-10		2.2	4.844	2.084	3.16	47.8	0.73	0.49					
17 DM-8		1.5		4.625			24.7							
18 DM-9						2,905								
19 EM-4 1.5 2.2 5.33 3.114 2.616 33.7 0.73 0.49 25.4 20 35.62 694 3.08 20 EM-4-1 1.5 2.2 5.23 3.306 2.424 29.5 0.73 0.49 21.7 18.2 33.08 643 2.89 21 EM-5 1.5 2.2 5.22 2.919 2.641 34.3 0.73 0.49 25.5 20 35.95 700 3.11 22 EM-5-1 1.5 2.2 5.22 3.001 2.819 33.8 0.73 0.49 25.5 20 35.86 695 3.08 22 EM-5-2 1.5 2.2 5.22 3.001 2.819 33.8 0.73 0.49 25.5 20 35.86 695 3.08 2.685 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.686 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.686 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.686 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.621 33.9 0.73 0.49 25.6 20.1 35.68 695 3.09 2.621 33.9 3.43 3.44 3						3								
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	Total	t					380	4.4	3.0	273	167	296	6,020	38
		<u> </u>		·			<u> </u>						L	L

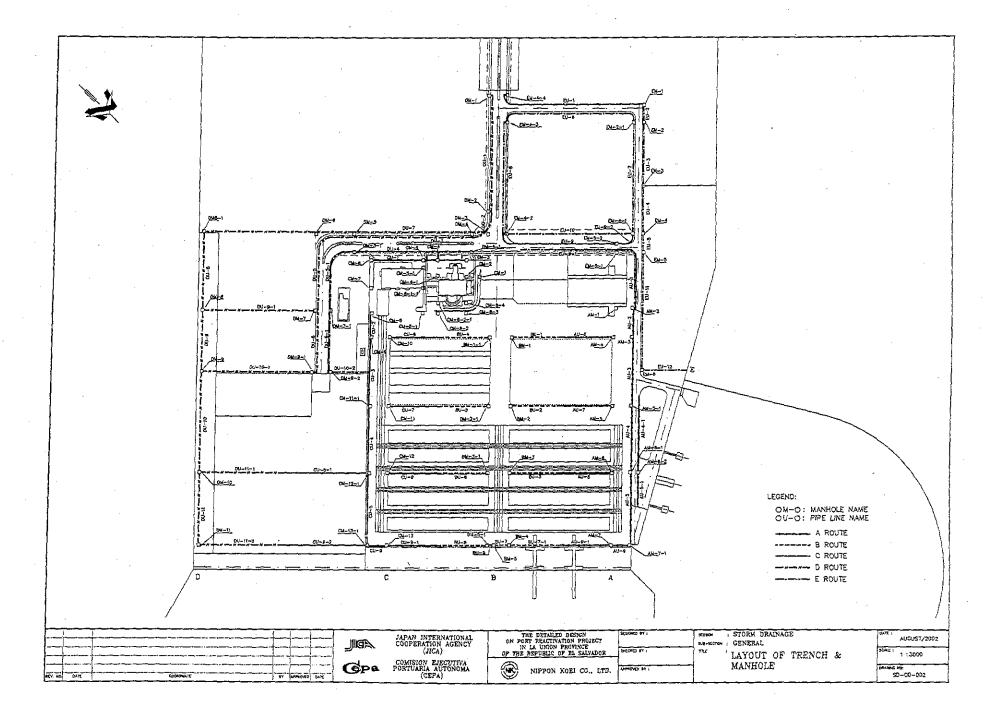
	QUANTITY CALCULATION C		
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole connecting to Oil Spants	Pay Item No. (BOQ)	2H-1101
Quantity Item	Expavation and Disnosal		m ³

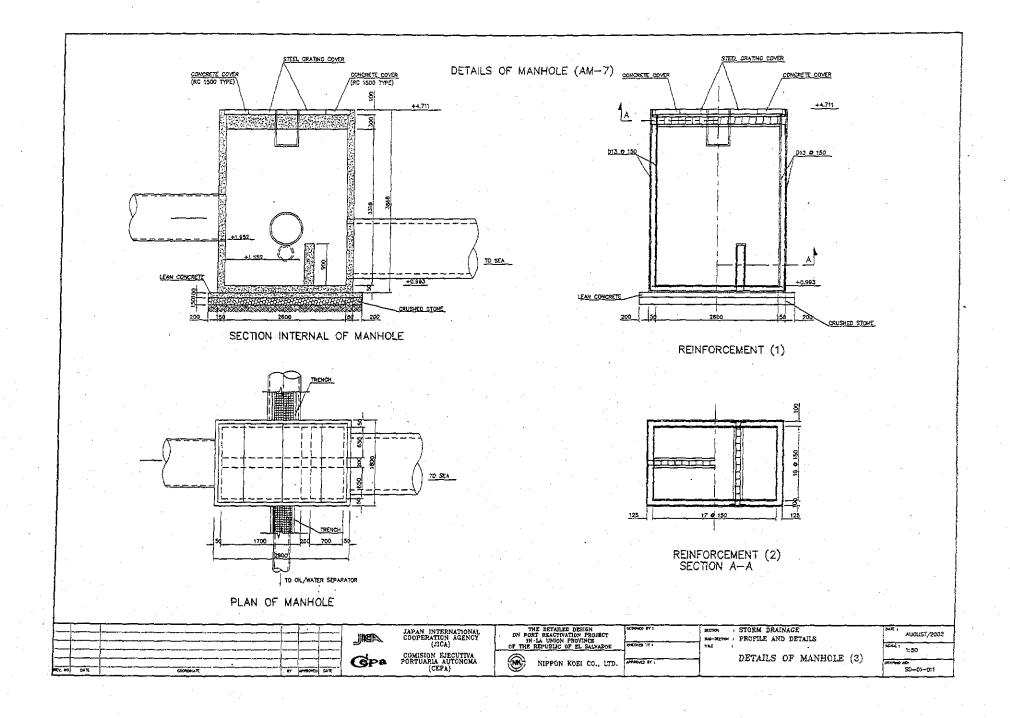
- 1. Calculation of depth of manhole.
- 2. Calculation of volume of excavation (Excel)

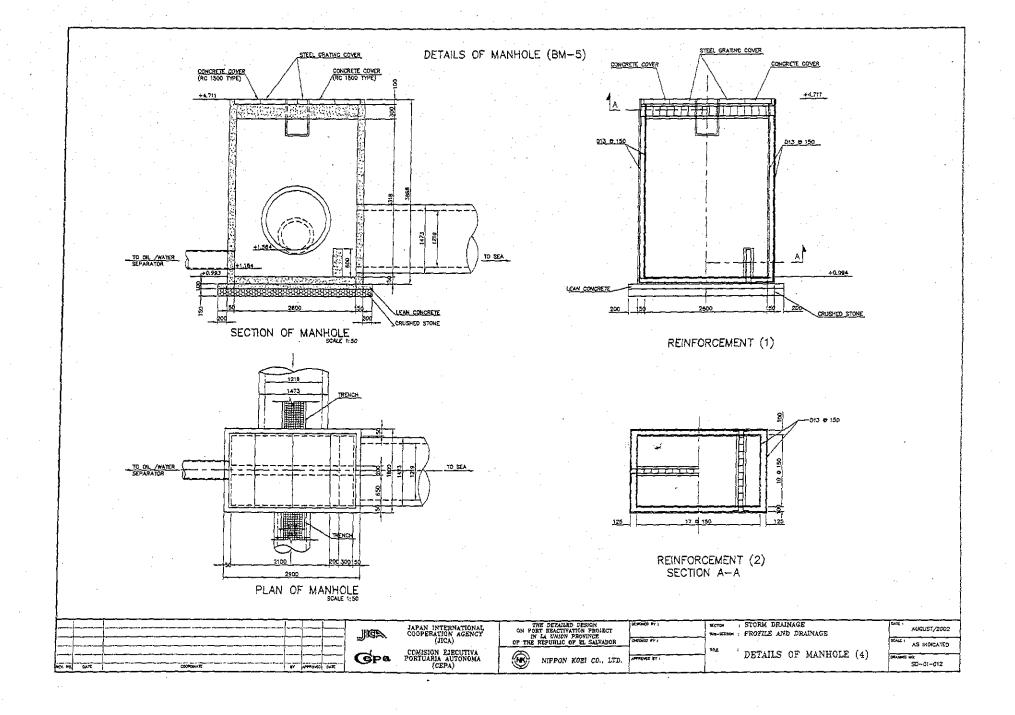
References, Calculation Base and Revisions

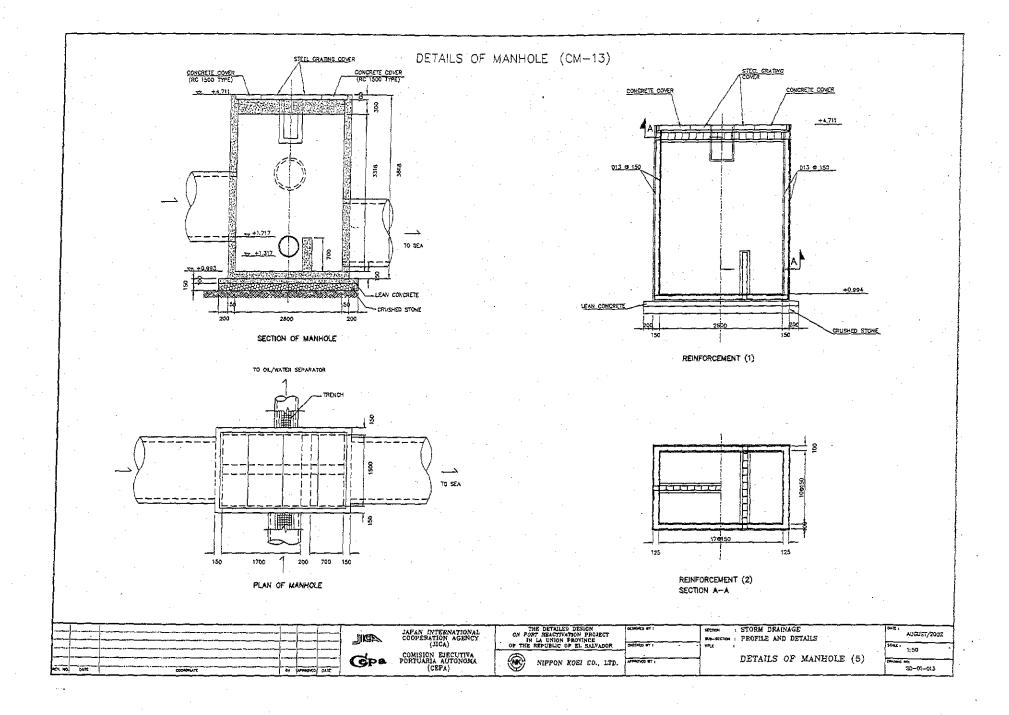
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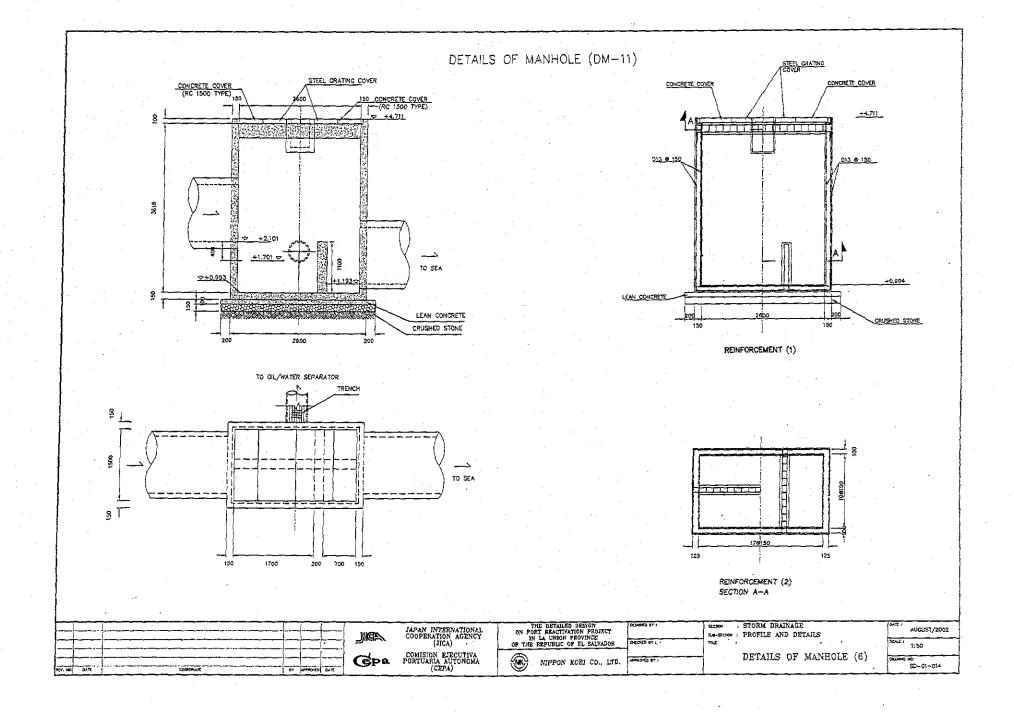
FN: Calculation_Cover_Sheet_020504_seg cover











Conc	orete čover													Manhole,
T SOME		W	а	GL.	B,L,	h	Vex	Vcs	Vio	Vbf	Cmpot	Form	Re-bar	Concrete
<u> </u>	Taxa	(m)	(m)]	(m)	(m)	(m)	(m3)	(m3) 1	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)
2	AM~1 CM-1	1,2	1.9 1.9	5.522 5.562	2,444 3,399	3.478 2.563	49.6 27.4	0.55 0.55	0.37	42,4 21.9	26.7 17.7	38,47 28,59	846 623	3,16 2,42
3	CM-2	1,2	1.9	5,537	3.343	2,594	28	0.55	0.37	22.4	18	28.92	631	2.44
4	CM-3	1.2	1.9	5,437	3,303	2,534	28,8	0.55	0.37	21,3	17.5	28.27	616	2,4
- 5	CM-4	1,2	1.9	5.437	3,229	2,608	28,3	0,55	0.37	22.7	18.1	29.07	634	2,45
8	CM-4-1	1.2	1.9	5.537	3,269	2.668	29.5	0.55	0.37	23.8	18.7	29,72	649	2.5
8	CM-5 CM-5-1	1,2	1.9	5.637	3.189 3.205	2,848 2.832	33.4 33.1	0.55 0.55	0.37	27.3 27.1	20,3	31,66	693 689	2.65 2.64
9	CM-6	1.2	1.9	5.637 5.637	3.055	2,982	36.5	0.55	0.37	30.2	21.6	31.49 33.11	725	2.76
10	CM-7	1,2	1.9	5.857	2,691	3.566	52,2	0.55	0.37	44.8	27.7	39.42	887	3.23
11	CM8-1	1.2	1.9	5.507	2.755	3.152	40.7	0.55	0.37	34,1	23.3	34,95	766	2.9
12	CM8-1-1	1.2	1.9	5.592	2,819	3,173	41.3	0.55	0,37	34,6	23.5	35.17	772	2,91
13	CM-8-2	1.2	1.9	5.507	2,795	3.112	39.7	0.55	0.37	33.2	22.9	34.51	757	2,86
14	CM-8-2-1	1.2	1.9_	5.602	2.821	3.181	41.5	0.55	0.37	34.8	23.6	35,26	773	2.92
15	CM-8-3 CM-8-4	1.2	1,9	5.507 5.507	2,258 2,895	3.649 3.012	54.7 37.3	0.55 0.55	0.37 0.37	47,2 30.9	28.6 21.9	40.31	887 732	3,3 2,78
17	DM-1	1.2	1.9 1.9	6.25	4.797	1.853	15.4	0.55	0.37	11.2	11.9	33,43 20,92	451	1.84
18	DM-2	1.2	1,9	5.5	3.147	2,753	31.3	0.55	0.37	25.4	19,5	30.64	669	2,57
19	DM-3	1.2	1.9	5.2	3.045	2.555	27.2	0,55	0.37	21.7	17.6	28,5	621	2,41
20	DM~4	1.2	1.9	5.34	3,125	2.815	28,4	0.55	0.37	22.8	18.2	29,15	636	2,46
21	DM-4-1	1.2	1.9	5.34	3,047	2,893	30,1	0.55	0.37	24.3	18.9	29.99	655	2,52
22	DM-5	1.2	1.9	5.34	2,865	2.876	34,1	0.55	0.37	28	20.6	31,95	699	2.67
23 24	DM-5-1 DM-7-1	1.2	1.9	5,34	2.887 2.683	2,853 2.887	33.8 34.3	0.55 0.55	0.37	27.5 28.2	20.4	31,72	694 702	2.65 2.68
25	DM-8-1		1.9	4.625	2,003	2.325	22.9	0,55	0,37	17.8	15,7	26.01	565	2,23
28	DM-9-1	1.2	1.9	5.01	2.546	2.864	33.8	0,55	0,37	27.7	20,5	31.84	696	2,66
27	DM-9-2	1.2	1.9	5.01	2,564	2,846	33.4	0.55	0,37	27.3	20.3	31,64	692	2,65
28	EM-1	1,2	1.9	6,06	3,897	2,563	27,4	0.55	0.37	21.9	17.7	28,59	623	2.42
	EM-2	1.2	1.9	5,97	3.799	2,571	27.6	0.55	0.37	22	17.8	28.67	625	2.43
30	EM-2-1	1.2	1.9	5.97	3,808	2.562 2.6	<u>27.4</u> 28.1	0,55 0,55	0.37	21.9 22.5	17.7	28.57	623 632	2.42
31	EM-3 EM-4-2	1.2	1.9	5.59 5.43	3.972	1.858	28.1 15.5	0.55	0.37 0.37	11.2	18 11.9	28,98	452	1,85
33	EM-4-3	1.2	1.9	6.14	4,687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
34		1.2	1.9	6.25	4.797	1.853	15.4	0,55	0.37	11.2	11.9	20.92	451	1.84
	Total						1,090	18.7	12.6	883	662	1,040	22,600	87.0
Cono	rete cover													
1	AM-2	1.5	2.2	5.522	2.406	3.516	58,8	0.73	0.49	48.1	29,5	47.5	932	3.97
2	AM-3	1,5	2.2	5.332	2,328	3,404	55.2	0.73	0.49	44.8	28.2	46.02	903	3,86
3	AM-5-1	1.5	2,2	5.132	2.158	3.374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.83
4	AM-8-1	1.5	2.2	4.928	1.982	3.346	53.4	0.73	0.49	43.1	27.6	45.25	887	3.8
5	AM-6-2	1.5	2.2	4.928	2,007	3,321 3,314	52,8	0.73	0.49	42.4	27.3	44,92	881 879	3.78
7	AM-7-1 BM-4	1.5	2.2	4.711	1.797 1.395	3.716	52.4 65.5	0.73	0.49	42.2 54.2	27.2 31.8	44.83 50.14	985	3.77 4.17
8	BM-5-1	1.5	2.2	4.711	1.373	3,738	66.3	0.73	0.49	55	32.1	50.43	991	4.19
9	CM-11-1	1.5	2.2	5,132	2.379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
10	CM-12-1	1.5	2.2	4.928	2.247	3.081	45.6	0.73	0.49	36	24.7	41.75	817	3.54
111	CM-13-1	1.5	2.2	4.711	1.44	3.671	64	0.73	0.49	52,8	31.3	49,54	973	4.13
12	CM-8	1.5	2.2	5.507	2.62	3,287	51.6	0.73	0.49	41.5	26.9	44.47	872	3,75
13	CM-9 DM-10	1.5 1.5	2,2 2,2	5.332 4.844	2.084	3.182 3.16	48.5 47.8	0.73	0,49 0.49	38.7 38	25.8 25.5	43.09 42.8	844 838	3.64 3.62
15	DM-8	1,5	2.2	4,625	2.836	2.189	24.7	0.73	0.49	17.6	16.1	29.98	581	2.66
16	DM-7	1.5	2.2	5.17	2.885	2,905	40,8	9.73	0.49	31.7	22.9	39.43	770	3.37
17	DM-8	1,5	2.2	5.119	2.519	3	43.4	0.73	0.49	34.1	23.8	40.68	795	3.48
18	DM-9	1.5	2.2	5.019	2.739	2,68	35.2	0.73	0.49	26.7	20,6	36.46	711	3.14
	EM-4-1	1.5	2.2	5.33	3,114	2,618	33.7	0.73	0.49	25,4	20	35.62	694	2.89
	EM-5	1.5	2.2	5.33 5.22	3,306 2,979	2.424 2.641	29.5 34.3	0.73	0.49	21.7 25.9	18.2 20.2	33.08 35.95	643 700	3.11
	EM-5-1	1.5	2.2	5.22	3.001	2.619	33.8	0.73	0,49	25.5	20.2	35.66	695	3.08
23	EM-5-2	1.5	2.2	5,22	3.011	2,609	33.6	0.73	0.49	25.3	19.9	35.52	692	3.07
24	ЕМ-В	1.5	2,2	4.89	2,669	2,621	33.9	0,73	0.49	25,6	20.1	35.68	695	3.09
-	Total			· 			1,110	17.6	11.8	880	600	1.000	19,600	85
	rutal					1	1,110	17.0	11.0	660	ow)	1,000	19,000	63
	ng cover					· .								
	AM-4	1.5	2.2	5,332	2.28	3.452	56.7	0.73	0.49	46.1	28.8	46.65	915	3.91
	AM-5	1,5	2.2	5,132	2,109	3.423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.88
	AM-6 BM-1	1.5	2.2	4,928 5,332	1.934	3.394 3.851	54.9 70.4	0.73 0.73	0.49 0.49	44.5	28.1 33.4	45.89	900	3.85 4.3
	BM-1-1	1.5	2.2	5,332	1.929	3.803	68,6	0.73	0.49	58.7 57.1	32,8	51.92 51.28	1008	4.26
6	BM-2	1.5	2.2	5.132	1.71	3.822	69,3	0.73	0.49	57.7	33.1	51.54	1013	4.27
7	BM-2-1	1.5	2.2	5.132	1.758	3.774	67.6	0.73	0.49	56.2	32.5	50.9	1001	4.23
8	BM-3	1.5	2.2	4.928	1.534	3.794	68.3	0.73	0.49	56.8	32.7	51.17	1008	4.25
9	BM-3-1	1.5	2.2	4,928	1.582	3.746	68.8	0.73	0.49	55.2	32.2	50,53	993	4.2
	CM-10	1.5	2.2	5,332	2,502	3.23	49.9	0.73	0.49	39.9	26.3	43.72	856	3.69
	CM-11 CM-12	1.5	2,2	5.132 4.928	2,331	3.201 3.129	49 46.9	0.73	0.49 0.49	39.1 37.2	26 25,2	43.34 42.39	849 830	3.66 3.59
	J 12			7.010			. 10.0	 	V.7V	07.2		74.03	000	9.00
	Total						730	8.8	5.9	600	360	576	11,300	49
<u> </u>		L							·					
To oi	l separator					: 1								1
	AM-7	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
2	BM-5	1.5	2.2	4.711	0.993	4.118	93.4	1,09	0.73	68.2	41.7	73.89	1504	9.30
	CM-13	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68,2	41.7	73.89	1504	9.30
4	DM-11	1,5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68,2	41,7	73.89	1504	9.30
	Total						380	4.4	3.0	273	167	296	6,020	38
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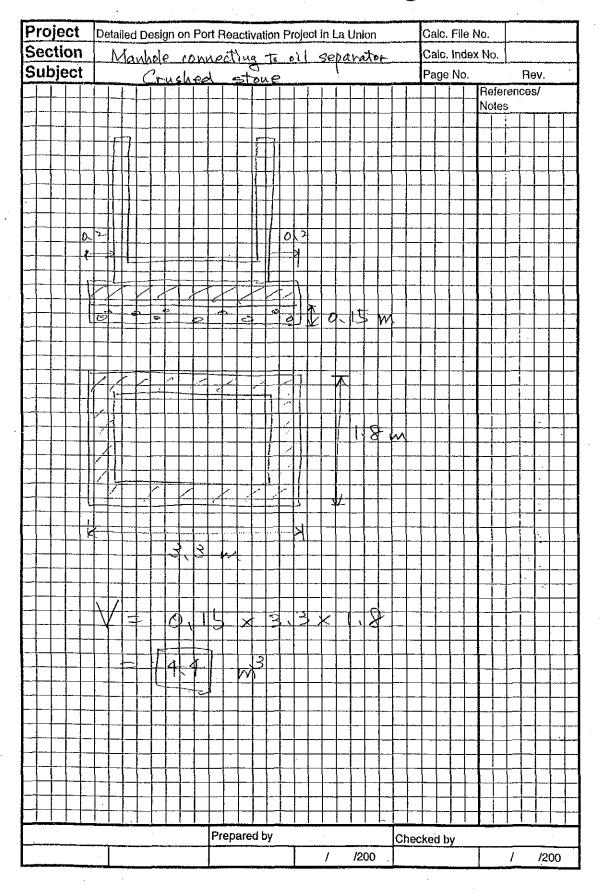
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	QUA	ANTITY C	ALCULAT	TION CO	OVER SHE	ET	<u>accessories (c. 1800). Augusti es es es es es es es es e</u>
Project	Detailed	Design on Po in La Unio		n Project	roject Code		JC1N004/2N0
Work Section Title	Manhole	connection	rto oll se	harater F	Pay Item No. (E	3OQ)	24-1102
Quantity Item	1	Lushed	•		Jnit		M_3
Calculation Procedu	re Applied	<u>i</u>					
Volume	of c	nushed	stone ,	vas e	omputed	Бу	multiplyin
avea	by tl	nickness	> .		· .		
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References, Calcula	tion Base	and Revision	ıs				
See	the	(ast	item	(2H	- 1101)	
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(I) NIPPON KOEI CO.,LTD.



	QUANTITY CALCULATION COVER SHEET									
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001							
Work Section Title	Manhole conventing to oil sepa	Pay Item No. (BOQ)	2H-1103							
Quantity Item	Lean concrete	Unit	М ³							

Volume of lean concrete was computed by multiplying area by thickness.

References, Calculation Base and Revisions

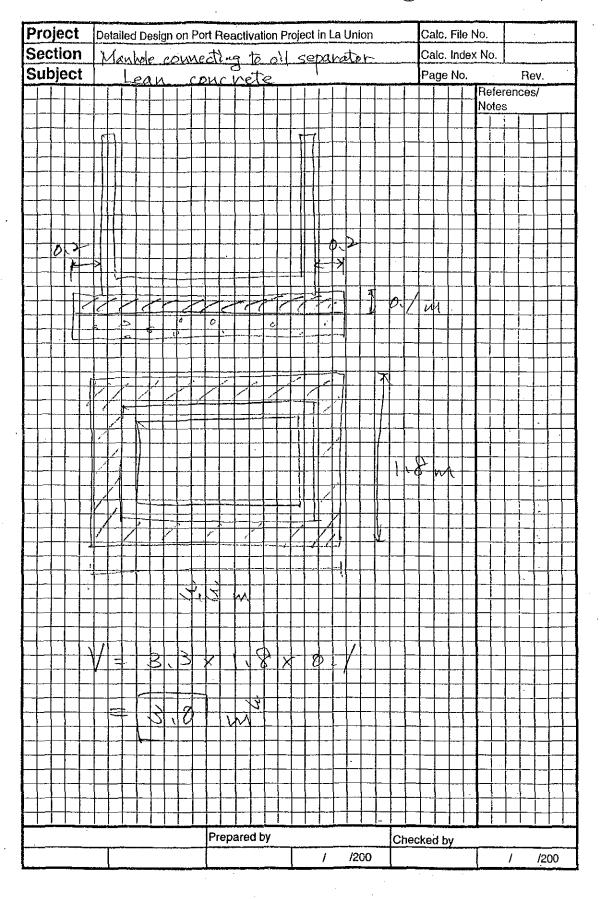
See the item of excavation and disposal of , 500 mm. (2+1-1101)

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(I) NIPPON KOEI CO, LTD.



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Project	1	-	rt Reactivatio n Province	n Project P	roject Code		JC1N004/2N00
Work Section Title	Manhole	LONNEC	thug to oi	Sepa.P	ay Item No. (I	30Q)	2H-1104
Quantity Item	1	forcem			init		kg_
Calculation Procedu	re Applied	1			÷.		
Welgh	t of re	inforce	ment u	ras coi	mputed	by	multiplying
unit we	eight k	y the	· height	t. [hit welg	ht i	was compute
	umption'	<i>(</i>					
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References, Calculat	tion Base and	l Revision	<u>is</u>				
See	the `	item	of exce	rvation	and d	is pos	sal of
,500	Dun.	()	H -	1101)		
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TABLE OF REINFORCEMENT (MANHOLE)

No.	D	L (m)	Qty	W/bat (kg)	W (kg)	Remarks
Manhole (H=2m, 150	0)				
A1	D13	4.00	28	3.98	111.44	
A2	D13	3.40	26	3.383	87.96	
B 1	D13	2.55	48	2.53725	121.79	
B2	D13	2.40	44	2.388	105.07	_
C1.	D13	2.60	22	2.587	56.91	
C2	D13	2,30	20	2.2885	45.77	
				total	528.94	1 spot
			·		265	1 spot/m
					:	
Manhole	(H=2m, 120	0)				
<u>A1</u>	D13	3.40	28	3.383	94.72	
A2	D13	2.80	26	2.786	72.44	
B1	D13	2.55	48	2.53725	121.79	
B2	D13	2.40	44	2.388	105.07	
C1	D13	2.30	22	2.2885	50.35	
C2	D13	2.00	20	1.99	39.8	
					<u> </u>	
				total	484.17	1 spot
					243	1 spot/m
Manhole	(H=2m, 150	0x2600)		L		
A1	D13	5.10	28	5.0745	142.09	
A2	D13	4,50	26	4.4775	116.42	
B1	D13	2.55	62	2.53725	157.31	
B2	D13	2.40	58	2.388	138.5	
C1	D13	2.60	11	2.587	28.46	
C2	D13	2.30	10	2.2885	22.89	
D1	D13 ·	3.70	18	3.6815	66.27	
D2	D13	3,40	17	3.383	57.51	
				total	729.45	1 spot
					365	1 spot / m
					()	

Concrete	cover						 ,			- T. F	· ·		Claration .	
	1	W	a ()	G.L.	B.L. (m)	h · (m)	Vex (m3)	Vos (m3)	Vlo ((m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)
1 AM-		(m) 1.2	(m) (1.9	(m) 5.522	2,444	3.478	49.6	0.55	0.37	42.4	26.7	38.47	846	3.16
2 CM-	-	1,2	1.9	5,582	3,399	2,563	27.4	0,65	0,37	21.9	17.7	28.59	623	2,42
3 CM-		1,2	1.9	5.537	3.343	2.594	28	0,55	0.37	22.4	18.	28.92	631	2.44
4 CM-		1.2	1.9	5.437	3.303	2,534	26,8	0.55	0.37	21.3	17.5	28,27	616	2,4
5 CM-		1.2	1.9	5,437	3,229	2,608	28,3	0.55	0.37	22,7	18.1	29.07	634	2,45
8 CM-		1,2	1.9	5,537	3.269	2,668	29.5	0.55	0,37	23,8	18.7	29.72	649	2.5
7 CM-		1.2	1.9	5,637	3,189	2,848	33,4	0.55	0,37	27.3	20,3	31.66	693	2.65
8 CM-		1.2	1.9	5.637	3.205	2.832	33.1	0.55	0.37	27.1	20.2	31.49	689	2.64
9 CM-		1,2	1.9	5.637	3.055	2,982	36,5	0.55	0.37	30.2	21.6	33.11	725	2.76
10 CM-		1.2	1.9	5.857	2.691	3,586	52,2	0.55	0.37	44.8	27.7	39.42	867	3.23
11 CM8		1.2	1.9	5.507	2.755	3.152	40.7	0,55	0.37	34,1	23.3	34.95	766	2,9
		1.2		5.592	2.819	3,173	41.3	0.55	0.37	34.6	23.5	35.17	772	2,91
12 CMB 13 CM-			1.9		2.795	3,112	39.7	0.55	0.37	33,2	22.9	34.51	757	2.88
		1.2	1.9	5.507	2.821	3.181	41.5	0.55	0.37	34.8	23.6	35.26	773	2.92
	8-2-1	1.2	1,9	5.602					0.37	47.2	28.6	40.31	887	3.3
15 CM-		1.2	1.9	5,507	2,258	3,649	54.7	0.55				33,43	732	2,78
16 CM~		1,2	1,9	5.507	2,895	3.012	37.3	0.55	0.37	30,9	21.9	20.92	451	1.84
17 DM-		1.2	1.9_	8,25	4.797	1.853	15.4	0.55	0.37	11.2 25.4	11.9 19.5	30.64	669	2,57
18 DM~		1.2	1.9	5.5	3.147	2,753	31.3		0.37 0.37	21.7		28,5	621	2.41
19 DM-		1,2	1.9	5,2	3.045	2,555	27.2	0.55		22.8	17.6	29,15	636	2.46
20 DM-		1,2	1.9	5.34	3.125	2.815	28,4	0.55	0,37		18.2		655	2.52
21 DM-		1.2	1.9	5.34	3,047	2,693	30.1	0.55	0.37	24.3	18,9	29,99		
22 DM-		1.2	1.9	5.34	2.865	2,875	34.1	0.55	0.37	28	20.6	31.95	699	2.67
23 DM-		1.2	1.9	5.34	2,887	2.853	33.6	0.55	0.37	27.5	20,4	31.72	694	2.65
24 DM-			1.9	5.17	2,683	2.887	34.3	0.55	0,37	28.2	20.7	32.08	702	2.68
25 DM-		1.2	1.9	4.625	2.7	2.325	22.9	0.55	0.37	17.8	15.7	26.01	565	2,23
26 DM-		1,2	1.9	5.01	2,546	2.864	33.8	0,55	0.37	27.7	20.5	31.84	696	2,66
27 DM-		1,2	1.9	5.01	2,564	2.846	33.4	0.55	0.37	27.3	20.3	31.64	692	2,65
28 EM-		1.2	1.9	6.06	3.897	2,583	27.4	0.55	0.37	21.9	17.7	28,59	623	2.42
29 EM-		1.2	1,9	5.97	3.799	2,571	27.6	0.55	0.37	22	17.8	28,67	825	2.43
30 EM-		1.2	1.9	5.97	3,808	2.562	27.4	0,55	0.37	21.9	17.7	28.57	623	2,42
31 EM-		1.2	1.9	5.59	3,39	2.6	28.1	0,55	0.37	22.5	18	28.98	632	2,45
32 EM-		1.2	1.9	5,43	3,972	1.858	15.5	0.55	0.37		11.9	20.97	452	1,85
33 EM-		1,2	1.9	6,14	4.687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1,84
34 EM-	4-4	1.2	1.9	6.25	4.797	1.853	15,4	0,55	0.37	11.2	11.9	20,92	451	1.84
							1.000					1010	00.000	02.0
Tota	' [1,090	18.7	12.6	883	662	1,040	22,600	87.0
ا ا	- 1		:								- 1	1		
Concrete o					0.100	0.546	50.0	0.72	0.40	40.1	29.5	47.5	932	3.97
1 AM-		1.5	2.2	5.522	2,406	3.516	58.8	0,73	0.49	48.1 44.8	28.2	46,02	903	3,86
2 AM-		1.5	2,2	5.332	2,328	3.404	55.2					45,62	895	3.83
3 AM-		1.5	2,2	5.132	2,158	3.374	54.2	0.73	0.49	43.8	27.9	45.25		3.8
4 AM-		1.5	2.2	4.928	1.982	3,348	53.4	0.73	0.49	43.1	27.6	44.92	887	3.78
5 AM-		1.5	2.2	4.928	2.007	3.321	52.8	0.73	0.49	42.4	27.3		881 879	3.77
6 AM-		1.5	2.2	4.711	1,797	3.314	52.4	0.73	0.49	42.2	27.2	44.83		4.17
7 BM-		1.5	2.2	4.711	1.395	3.716	65.5	0.73	0.49	54.2	31.8	50,14	985	4.19
8 BM-		1.5	2.2	4.711	1,373	3.738	66.3	0.73	0.49	55	32.1	50.43	991	
9 CM-		1,5	2,2	5.132	2,379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
10 CM-		1.5	2.2	4.928	2.247	3.081	45.6	0.73	0.49	36	24.7	41.75	817	
11 CM-		1.5	2,2	4.711	1.44	3.671	64_	0.73	0.49	52.8	31.3	49.54	973	4.13
12 CM-		1.5	2.2	5.507	2,62	3.287	51.6	0.73	0.49	41,5	26.9	44,47	872	3.75
13 CM-		1.5	2.2	5.332	2.55	3.182	48.5	0.73	0.49	38.7	25.8	43,09	844	3.64
14 DM-		1.5	2,2	4.844	2.084	3.18	47.8	0.73	0.49	38	25.5	42.8	838	3.62
15 DM-		1.5	2.2	4.625	2.836	2,189	24.7	0.73	0.49	17.6	16.1	29,98	581	2.66 3.37
16 DM-		1.5	2.2	5.17	2.665	2.905	40.8	0.73	0,49	31.7	22.9	39,43	770	
17 DM-		1,5	2,2	5.119	2,519	3	43.4	0.73	0,49	34.1	23.8	40.68 36.46	795 711	3.46 3.14
18 DM-		1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7		35.62		3.08
19 EM-		1.5	2,2	5.33	3.114	2.616	33.7	0.73	0.49	25.4 21.7	18.2	33.08	694 643	2.89
20 EM-		1.5	2.2	5,33	3.306	2,424	29.5	0.73	0.49	25.9	20.2	35.95	700	3.11
21 EM-5		1.5	2.2	5,22 5,22	2.979	2.641	34.3	0.73	0.49	25.5	20.2	35.66	695	3.08
22 EM-		1.5	2,2		3.001	2.619	33.8	0.73	0.49	25.3	19.9	35,52	692	3.07
23 EM-4		1,5	2.2	5.22	3,011	2,609	33.6		0.49	25.6	20.1	35,68	695	3.09
24 EM-I	<u></u> -∫	1,5	2,2	4.89	2,669	2.621	33.9	0.73	0.43	20.0	20.1	33,00		0.03
Tota	, -						1,110	17.6	11.8	880	600	1,000	19,600	85
1000	.						1,110	, 7,0	, 1,0		300	.,500	,500	, ~]
Grating co	ver 1					1			_		·			
i AM-		1,5	2.2	5.332	2.28	3.452	56.7	0,73	0.49	46.1	28.8	46.65	915	3.91
2 AM-		1.5	2.2	5.132	2.109	3.423	55.8	0.73	0.49	45.3	28.4	48.27	908	3.88
3 AM-		1.5	2.2	4.928	1.934	3,394	54.9	0.73	0,49	44.5	28.1	45.89	900	3.85
4 BM-		1.5	2.2	5.332	1.881	3.851	· 70.4	0.73	0.49	58.7	33.4	51.92	1021	4.3
5 BM-		1,5	2.2	5.332	1,929	3,803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.26
6 BM-		1.5	2.2	5.132	1.71	3,822	69.3	0,73	0.49	57.7	33.1	51.54	1013	4.27
7 BM-		1.5	2.2	5.132	1.758	3.774	67.6	0.73	0,49	56.2	32.5	50.9	1001	4.23
8 BM-		1.5	2.2	4.928	1.534	3.794	68.3	0.73	0.49	58.8	32.7	51.17	1008	4.25
9 BM-		1,5	2,2	4.928	1.582	3.746	68.6	0.73	0.49	55.2	32.2	50.53	993	4.2
10 CM		1,5	2.2	5.332	2.502	3,23	49.9	0.73	0.49	39,9	26.3	43.72	856	3,69
11 CM-		1.5	2.2	5.132	2.331	3.201	49	0.73	0.49	39.1	26	43.34	849	3.68
12 CM-		1.5		4.928	2.199	3.129	46.9	0.73	0,49	37.2	25.2	42.39	830	3.59
1														
Tota	ı						730	8.8	5.9	600	360	576	11,300	49
L														L
To oil sepa	المطورة				5 3				•		. (ı		
1 AM-		1.5	2,2	4,711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73,89	1504	9,30
2 BM-		1.5	2,2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
3 CM-			2.2	4.711	0.993	4.118	93.4	1.09	0.73	68,2	41.7	73.89	1504	9,30
4 DM-		1.5 1.5	2.2	4,711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
1 10m			2.2	7,111	0.333	7.310	70,7	1.00	4.10		- 1117	70.03	170-1	<u> </u>
Tota	 †						380	4.4	3.0	273	167	296	6,020	38
L													<u> </u>	+

	QUANTITY CALCULATION C	OVER SHEET	
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole connecting to oil sepa.	Pay Item No. (BOQ)	2H-1105
Quantity Item		Unit	ka
Calculation Procedu			G .
Weight	of corner angle was	computed by	multiplying

References, Calculation Base and Revisions

See the item 2H-1101

Rev	Prep	ared	No. of	Chec	ked	Revie	ewed	Superseded
1164	by	Date	Pages	by	Date	by 、	Date	Superseded by Calc No.
0				Inuma		Ando		
1								
2								
3								

Grating type size (mm) 1594x795x100x2

NΞ

12

spots

	Form (side) (m2)	Form (bottom (m2)	Re-bar (D13) (kg)	Concrete (m3)	L50x50x6 (m)	(kg)	Re-bar (D9) (kg)
spot					7.2	31.9	1.2
total					86.4	383	14.4

Concrete type size (mm) 1280 x 425 x 100 x 3

N=

34

spots

		·					
	Form (side)	Form (bottom	Re-bar (D13)	Concrete	L50x50x6		Re-bar (D9)
·	(m2)	(m2)	(kg)	(m3)	(m)	(kg)	(kg)
one	0.168	0.55	6.87	0.055			
spot	0.504	1.65	20.61	0.165	6	26.6	1.0
total	17.2	56.1	701	5.61	204.0	905	34.0

size (mm) 1580 x 520 x 100 x 3

24

spots

	Form (side) (m2)	Form (bottom (m2)	Re-bar (D13) (kg)	Concrete (m3)	L50x50x6 (m)	(kg)	Re-bar (D9) (kg)
one	0.42	0.83	10.15	0.083			
spot	1.26	2.49	30.45	0.249	7.2	31.9	1.2
total	30.3	59.8	730.8	5.98	172.8	766	28.8

size (mm) 1580 x 520 x 100 x 2

spots

	Form (side) (m2)	Form (bottom (m2)	Re-bar (D13) (kg)	Concrete (m3)	L50x50x6 (m)	(kg)	Re~bar (D9) (kg)
one	0.42	0.83	10.15	0.083			
spot	0.84	1.66	20.3	0.166	7.2	31.9	1.2
total	3.4	6.7	81.2	0.7	28.8	/ 128	4.8

QUANTITY CALCULATION COVER SHEET								
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001					
Work Section Title	Manhole connecting to oil sepa.	Pay Item No. (BOQ)	24-110601					
Quantity Item	Form for Manhole	Unit	M2					
Quantity item	I form for Manhole	Unit	M_					

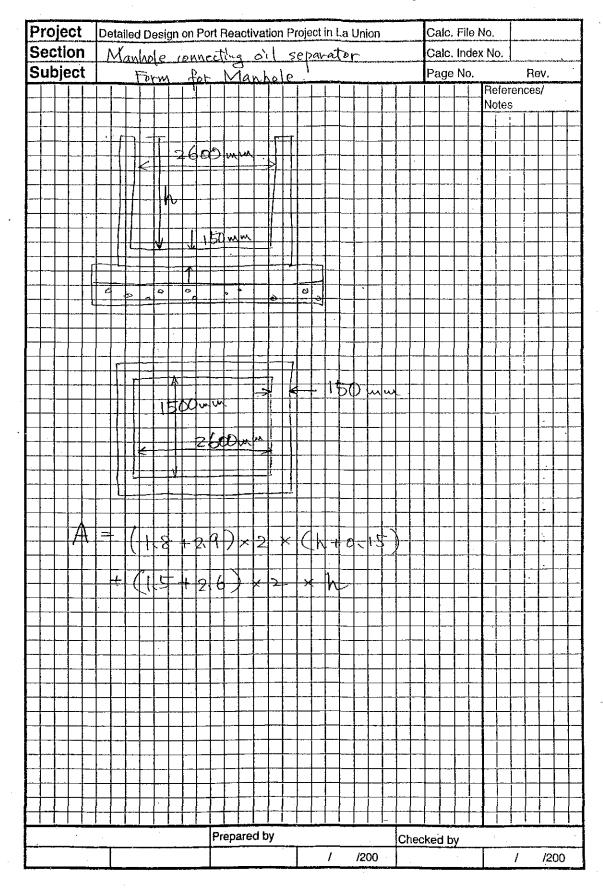
Area of form for manhole was computed by combining inside with outside.

References, Calculation Base and Revisions

See the item of Excavation and Disposal (2H-1101)

Rev-	Prepared		No. of	Chec	ked	Reviewed		Superseded	
1164	by	Date	Pages	by	Date	by	Date	by Calc No.	
0				Linuma		Ando			
1									
2							• • •		
3					, , , , , , , , , , , , , , , , , , ,				

(I) NIPPON KOEI CO.,LTD.



Concrete cover													Manhole_
	W	a	GL	8.L.	h	Vex	Vcs	Vic	Vbf	Cmpct	Form	Re-bar	Concrete
1 AM-1	(m) 1.2	(m) 1.9	(m) 9 5.522	(m) 2,444	(m) 3,478	(m3) 49,6	(m3) 0,55	(m3) 0,37	(m3) 42.4	(m2) 26,7	(m2) 38.47	(k _E) 848	(m3) 3.16
2 CM-1	1,2	1.9	9 5.562	3,399	2.563	27.4	0.55	0.37	21.9	17.7	28,59	623	2,42
3 CM-2	1,2			3,343	2.594	28	0.55_	0.37	22,4	18:	28,92	631	2,44
4 CM-3 5 CM-4	1,2			3,303 3,229	2,534 2,608	26,8 28.3	0.55 0.55	0.37 0.37	21,3 22,7	17,5 18.1	28,27 29.07	616 634	2.45
6 CM-4-1	1.2			3,269	2.668	29.5	0.55	0.37	23.8	18.7	29,72	649	2,5
7 CM-5	1.2	1.5	5.637	3.189	2.848	33.4	0.55	0.37	27.3	20.3	31.86	693	2.65
8 CM-5-1 9 CM-6	1.2			3,205	2.832	33,1	0.55	0.37	27.1	20.2	31,49	689	2.64 2.76
9 CM-6 10 CM-7	1,2			3,055 2,691	2,982 3,566	36,5 52,2	0.55 0.55	0.37	30,2 44,8	21.6 27.7	33,11 39,42	725 867	3.23
11 CM8-1	1.2	1.5		2.755	3,152	40.7	0.55	0,37	34.1	23,3	34,95	786	2.9
12 CM8-1-1	1.2				3,173	41.3	0.55	0,37	34.6	23.5	35.17	772	2.91
13 CM-8-2 14 CM-8-2-1	1.2	1.9		2.795 2.821	3,112 3,181	39.7 41.5	0,55 0,55	0.37	33,2 34.8	22,9 23.6	34,51 35,26	757 773	2,86 2.92
15 CM-8-3	1.2	1.9		2.258	3.649	54.7	0.55	0.37	47.2	28.6	40.31	887	3,3
16 CM-8-4	1.2	1.9		2.895	3,012	37.3	0,55	0,37	30.9	21.9	33.43	732	2.78
17 DM-1 18 DM-2	1.2	1.9		4.797 3.147	1.853	15.4	0.55	0.37	11.2	11.9	-20.92	451 669	1,84 2,57
19 DM-3	1.2				2.753 2.555	31.3 27.2	0.55 0.55	0.37	25.4 21.7	19.5 17.6	30.64 28.5	621	2.41
20 DM-4	1.2	1.5	9 5.34	3.125	2.615	28.4	0.55	0,37	22,8	18.2	29,15	636	2.46
21 DM-4-1	1,2				2,693	30.1	0.55	0.37	24.3	18,9	29.99	655	2.52
22 DM-5 23 DM-5-1	1.2				2,875 2,853	34.1 33.6	0.55 0.55	0.37	28 27.5	20,6	31.95 31.72	699 694	2.67 2.65
24 DM-7-1	1.2			2,683	2.887	34.3	0.55_	0.37	28,2	20.7	32.08	702	2.68
25 DM-8-1	1.2				2.325	22.9	0.55	0.37	17.8	15.7	26.01	565	2,23
26 DM-9-1 27 DM-9-2	1,2			2.546 2.584	2,864 2,846	33.8	0,55	0.37	27.7	20.5	31.84	696 692	2.66 2.65
28 EM-1	1.2				2,563	33.4 27.4	0,55 0.55	0,37	21.9	20.3 17.7	31,64 28,59	623	2.42
_29 EM-2	1.2			3.799	2,571	27,8	0.55	0.37	22	17.8	28.67	₿25	2.43
30 EM-2-1	1,2			3,808	2.562	27.4	0,55	0.37	21.9	17.7	28.57	623	2.42
31 EM-3 32 EM-4-2	1,2			3.39 3.972	2.6 1.858	28.1 15.5	0,55 0.55	0.37	22.5 11.2	18 11.9	28.98 20.97	632 452	2.45 1.85
33 EM-4-3	1.2				1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
34 EM-4-4	1.2	1.5	9 6,25	4.797	1.853	15.4	0.55	0.37	11.2	11,9	20.92	451	1.84
Total	-					1,090	18.7	12,6	883	662	1,040	22,600	87.0
1.	1.0				. :	1,000	10.7	12,0		002	1,010	. 20,000	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Concrete cover	1.5	2,5	2 5.522	2,406	3.516	58.8	0.73	0.49	48,1	29.5	47.5	932	3.97
2 AM-3	1.5			2,328	3,404	55.2	0.73	0.49	44.8	28.2	46.02	903	3,86
3 AM-5-1	1.5	2.2	2 5,132	2.158	3.374	54.2	0.73	0.49	43.8	27,9	45.62	895	3.83
4 AM-6-1	1.5			1.982	3.346	53.4	0.73	0.49	43.1	27.6	45.25	887	3.8
5 AM-6-2 6 AM-7-1	1.5			2.007 1.797	3.321 3.314	52.6 52.4	0.73	0.49	42.4 42.2	27.3 27.2	44.92 44.83	881 879	3.78 3.77
7 BM-4	1.5			1.395	3.716	65.5	0.73	0.49	54.2	31.8	50.14	985	4.17
8 BM-5-1	1.5			1.373	3,738	66.3	0.73	0.49	55	32.1	50.43	991	4.19
9 CM-11-1 10 CM-12-1	1,5				3.153 3.081	47.6	0.73 0.73	0.49 0.49	37.8 36	25.5	42.7 41.75	836 817	3,61 3.54
11 CM-13-1	1.5			1.44	3.671	45.6 64	0.73	0.49	52.8	24.7 31.3	49.54	973	4.13
12 CM-8	1.5	2,2	5.507	2,62	3.287	51.6	0.73	0.49	41.5	26,9	44.47	872	3.75
13 CM-9 14 DM-10	1.5			2,55 2.084	3.182	48.5	0.73	0.49	38,7	25.8	43.09	844	3.64
15 DM-6	1.5			2.836	3.16 2.189	47.8 24.7	0,73 0.73	0.49 0.49	38 17.6	25,5 16.1	42.8 29.98	838 581	3.62 2.66
16 DM-7	1.5	2.2	2 5.17	2.665	2,905	40.8	0.73	0.49	31.7	22,9	39.43	770	3.37
17 DM-8	1.5				3	43,4	0.73	0.49	34.1	23.8	40.68	795	3,46
18 DM-9 19 EM-4	1.5 1.5			2,739 3,114	2,68 2,616	35.2 33.7	0.73	0.49 0.49	26.7 25.4	20.6 20	36.46 35.62	711 694	3.14
20 EM-4-1	1.5	2.2		3,306	2.424	29,5	0.73	0.49	21.7	18.2	33,08	643	2,89
21 EM-5	1.5			2,979	2.641	34.3	0.73	0.49	25,9	20.2	35.95	700	3.11
22 EM-5-1 23 EM-5-2	1.5				2.619 2.609	33.8	0.73	0.49	25.5 25.3	20 19.9	35.66 35.52	895 692	3.08
24 EM-6	1.5				2.621	33.9	0.73	0.49	25.6	20.1	35.68	695	3.09
													25
Total						1,110	17.6	11,8	880	600	1,000	19,600	85
Grating cover	1.		9 5900	0.00	0.454	50.5		0.40	40.			. 645	001
1 AM-4 2 AM-5	1,5 1,5				3.452 3.423	56.7 55.8	0.73 0.73	0.49 0.49	46.1 45.3	28.8 28.4	46.65 46.27	915	3.91 3,88
3 AM-6	1.5				3.394	54.9	0.73	0.49	44.5	28.1	45.89	900	3.85
4 8M-1	1.5	2.1	2 5.332	1.881	3,851	70.4	0.73	0.49	58.7	33.4	51.92	1021	4.3
5 8M-1-1 6 BM-2	1.5				3,803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.28
7 BM-2-1	1.5				3,774	69.3 67.6	0.73 0.73	0.49	57.7 56.2	33.1 32.5	51.54 50.9	1001	4.23
8 BM-3	1.5	2.	2 4.928	1.534	3,794	68.3	0,73	0.49	56.8	32.7	51.17	1006	4.25
9 BM-3-1	1.5				3,746	66.6	0,73	0.49	55.2	32.2	50.53	993	4.2
10 CM-10 11 CM-11	1.5				3,23 3,201	49.9 49	0.73 0.73	0.49	39.9 39.1	26.3 26	43.72 43.34	856 849	3.69 3.66
12 CM-12	1.5				3.129	46.9	0.73	0.49	37.2	25.2	42.39	830	3.59
Total						720	00	5.0	600	300	576	11 200	40
Total						730	8.8	5.9	600	360	576	11,300	49
To oil separator	1						_			-			1
1 AM~7	1.5			0.993	4.118	93.4	1.09	0.73	68.2	41.7	73,89	1504	9.30
2 BM-5	1,5			0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
3 CM-13 4 DM-11	1.5 1.5				4.118 4.118	93.4 93.4	1.09	0.73	68.2 68.2	41.7 41.7	73.89 73.89	1504 1504	9.30 9.30
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Total	"					380	4.4	3.0	273	167	296	6,020	38
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QUANTITY CALCULATION COVER SHEET									
Project Detailed Design on Port Reactivation Project in La Union Province Project Code JC1N004/2N									
Work Section Title	Manhole connecting to sil seta.	Pay Item No. (BOQ)	24-110602						
Quantity Item	Concrete for manhole	Unit	м ³						

Volume of concrete for manhole was computed by deduction luner volume from total volume.

References, Calculation Base and Revisions

See the item of excavation and disposal (2H-1101)

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(I) NIPPON KOEI CO.,LTD.

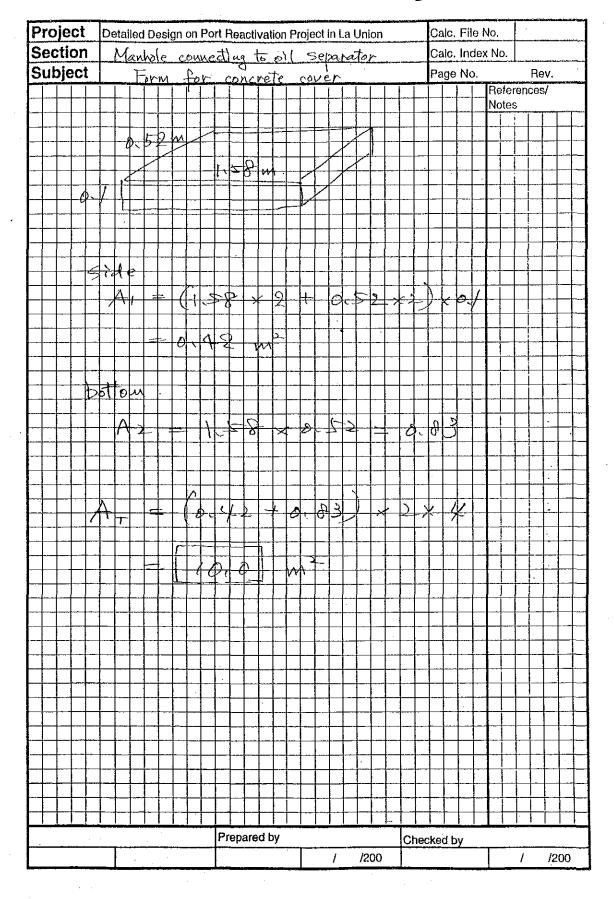
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Con	grete cover													Manhole,	. 环
Con	ciere cover	W	а	G,L,	Ð,L,	h	Vex	Vcs	VIc	Vbf	Cmpct	Form	Re-bar	Concrete	ĺ
	_	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	l
1	AM-1	1.2	1.9	5.522	2.444	3.478	49.6	0.55	0,37	42.4	26,7	38.47	846	3.16	
2	CM-1	1.2	1,9	5.562	3.399	2,563	27.4	0,55	0.37	21.9	17.7	28,59	623	2,42	ı
3	CM-2	1,2	1.9	5.537	3,343	2,594	28	0.55	0.37	22.4	18	28,92	631 616	2.44	
4_	CM-3	1.2	1.9	5,437	3,303	2,534	26.8	0.55 0.55	0.37 0.37	21.3 22.7	17.5 18.1	28.27 29.07	634	2.4 2.45	
5	CM-4-1	1.2	1,9 1,9	5.437 5.537	3,229 3,269	2,608 2,668	28,3 29,5	0,65	0.37	23.8	18.7	29.72	649	2,5	
7	CM-5	1,2	1.9	5.637	3,189	2.848	33.4	0.55	0.37	27.3	20.3	31.66	693	2.65	ŀ
8	CM-5-1	1,2	1.9	5.637	3,205	2.832	33.1	0.55	0.37	27.1	20.2	31.49	689	2.64	
9	CM-6	1,2	1.9	5.637	3.055	2,982	36.5	0.55	0,37	30,2	21.6	33.11	725	2,76	
10	CM-7	1,2	1.9	5.857	2.691	3,566	52,2	0.55	0,37	44.8	27.7	39.42	867	3,23	
11	CM8-1	1.2	1,9	5.507	2,755	3,152	40.7	0,55	0.37	34.1	23,3	34.95	766	2,9	
12	CM8-1-1	1,2	1.9	5.592	2,819	3,173	41.3	0,55	0.37	34.6	23.5	35,17	772	2,91	
13	CM-8-2	1,2	1.9	5.507	2,795	3,112	39.7	0.55	0.37	33.2	22.9	34.51	757	2.86	
14	CM-8-2-1	1.2	1.9	5,602	2,821	3,181	41.5	0.55	0.37	34.8 47.2	23.6	35,26 40,31	773 887	2.92 3.3	
15 16	CM-8-3 CM-8-4	1.2	1.9 1.9	5.507 5,507	2,258 2,895	3,649 3,012	54.7 37.3	0.55 0.55	0.37	30.9	28.6 21.9	33,43	732	2.78	
17	DM-1	1.2	1.9	6.25	4.797	1,853	15.4	0.55	0.37	11.2	11.9	20.92	451	1,84	
18	DM-2	1.2	1.9	5.5	3.147	2.753	31.3	0.55	0.37	25.4	19.5	30.64	669	2.57	
19	DM-3	1.2	1.9	5.2	3,045	2,555	27.2	0.55	0.37	21.7	17.6	28.5	621	2.41	
20		1.2	1.9	5.34	3.125	2.615	28.4	0.55	0.37	22.8	18.2	29.15	636	2.46	
21	DM-4-1	1.2	1.9	5.34	3,047	2,693	30.1	0,55	0.37	24.3	18.9	29.99	655	2.52	
22	DM-5	1,2	1.9	5.34	2,865	2,875	34.1	0.55	0.37	28	20.8	31.95	699	2.67	
23	DM-5-1	1.2	1.9	5.34	2,887	2,853	33.6	0.55	0.37	27.5	20.4	31.72	694	2.65	
24	DM-7-1	1.2	1.9	5.17	2.683	2,887	34.3	0.55	0.37	28.2	20.7	32,08 26.01	702 565	2.68	
25 26		1.2	1,9	4.625 5.01	2.7	2.325 2,864	22,9 33,8	0,55 0,55	0.37	17.8 27.7	15.7 20.5	31.84	696	2,23 2,66	
27	DM-9-1	1.2	1.9	5,01	2.546 2.564	2.846	33.8	0.55	0,37	27.3	20,3	31.64	692	2.65	
28	EM-1	1.2	1.9	6.06	3.897	2,583	27.4	0.55	0.37	21.9	17.7	28.59	623	2.42	
29	EM-2	1.2	1.9	5.97	3.799	2,571	27.6	0.55	0.37	22	17.8	28.67	625	2.43	
30		1.2	1.9	5.97	3,808	2.562	27.4	0,55	0.37	21.9	17.7	28,57	623	2.42	
31	EM-3	1.2	1.9	5.59	3.39	2.6	28,1	0.55	0.37	22,5	18	28.98	632	2.45	
32	EM-4-2	1.2	1.9	5.43	3.972	1.858	15.5	0.55	0.37	11.2	11.9	20.97	452	1,85	
33	EM-4-3	1.2	1.9	6.14	4.687	1,853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84	
34	EM-4-4	1.2	1.9	6.25	4.797	1.853	15.4	0,55	0.37	11.2	11.9	20.92	451	1.84	
	Total						1,090	18.7	12,6	883	662	1,040	22,600	87.0	
l.	lotai						1,030	10.7	12.0	004	***	1,0.0	24,000		
Con	crete cover														
	AM-2	1.5	2,2	5.522	2,406	3.516	58.8	0.73	0.49	48.1	29.5	47.5	932	3.97	
2	AM-3	1.5	2,2	5,332	2.328	3.404	55.2	0.73	0.49	44.8	28.2	46.02	903	3,86	
3_	AM-5-1	1.5	2.2	5,132	2,158	3.374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.83	
4	AM-6-1	1.5	2.2	4.928	1,982	3,346 3,321	53.4	0.73	0.49	43.1 42.4	27.8 27.3	45.25 44.92	887 881	3.8 3.78	
5	AM-6-2 AM-7-1	1.5	2,2	4.928	2,007 1,797	3,321	52.8 52.4	0,73 0.73	0.49 0.49	42.2	21.2	44.83	879	3.77	
7	8M-4	1.5	2.2	4.711	1.395	3.716	85.5	0.73	0.49	54.2	31,8	50.14	985	4.17	
8	BM-5-1	1,5	2,2	4.711	1,373	3.738	66.3	0.73	0.49	55	32.1	50.43	991	4.19	١.
9	CM-11-1	1.5	2.2	5,132	2.379	3.153	47.8	0.73	0.49	37.8	25.5	42,7	836	3.61	
10	CM-12-1	1.5	2.2	4.928	2.247	3.081	45.6	0.73	0.49	36	24.7	41,75	817	3.54	
11	CM-13-1	1.5	2.2	4.711	1.44	3,671	64	0.73	0.49	52.8	31.3	49.54	973	4.13	
12	CM-8	1.5	2.2	5.507	2,62	3.287	51.6	0.73	0.49	41.5	26.9	44.47	872	3.75	
13	CM-9	1.5	2.2	5.332	2.55	3.182	48.5	0.73	0.49	38.7	25.8 25.5	43.09 42.8	844 838	3.64 3.62	
14	DM-10 DM-6	1.5 1.5	2,2	4.844	2.084 2.836	3.16 2.189	47.8 24.7	0 <u>.73</u> 0.73	0.49 0.49	38 17.6	16.1	29.98	581	2.66	
16	DM-7	1.5	2.2	4.625 5.17	2.665	2,165	40.8	0.73	0.49	31.7	22.9	39.43	770	3.37	
. 17	DM-8	1.5	2.2	5.119	2.519	3	43.4	0.73	0.49	34.1	23.8	40.68	795	3.46	
18	DM-9	1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7	20.6	36.46	711	3.14	
19	EM-4	1.5	2.2	5.33	3.114	2.616	33.7	0.73	0.49	25.4	20	35.62	694	3.08	
20	EM-4-1	1.5	2.2	5.33	3.308	2,424	29.5	0.73	0.49	21.7	18.2	33.08	643	2.89	
21	EM-5	1,5	2.2	5.22	2,979	2.641	34.3	0.73	0.49	25.9	20.2	35.95	700	3.11	
	EM-5-1	1.5	2.2	5.22	3,001	2.619	33.8	0.73	0.49	25.5	20	35.86	695	3.08	
	EM-5-2	1.5	2,2	5.22	3.011	2.609	33.6 33.9	0.73	0.49 0.49	25.3 25.8	19.9	35.52 35.68	692 695	3,07 3,09	
14	EM-8	1.5	2.2	4.89	2,669	2.621	33,9	0.13	0,43	20.0	20.11	55.00	600	1,03	
	Total						1,110	17.6	11.8	880	600	1,000	19,600	85	
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	ing cover														
	AM-4	1.5	2.2	5.332	2,28	3,452	56.7	0.73	0,49	46.1	28.8	46.65	915	3.91	
	AM-5	1.5	2.2	5.132	2,109	3.423	5 <u>5.8</u>	0.73	0.49	45.3	28.4	46.27 45.89	908 900	3,88	
3 4	AM-6 BM-1	1.5 1.5	2.2	4.928 5.332	1,934 1,881	3,394 3,851	54.9 70.4	0.73	0.49	44.5 58.7	28.1 33.4	51.92	1021	3.85 4.3	,
5	BM-1-1_	1.5	2.2	5.332	1,881	3,851	68.6	0.73	0.49	57.1	32.8	51.92	1008	4.26	
6	BM-2_	1.5	2.2	5.132	1.71	3.822	69.3	0.73	0.49	57.7	33.1	51.54	1013	1.27	
17	BM-2-1	1.5	2.2	5.132	1.758	3.774	67.6	0.73	0.49	56.2	32.5	50.9		4.23	
8	BM-3	1.5	2.2	4.928	1.534	3.794	68.3	0.73	0.49	56.8	32.7	51.17	1006	4.25	
9	BM-3-1	1.5	2.2	4.928	1.582	3.748	66.6	0.73	0.49	55.2	32.2	50,53	993	4.2	
10	CM-10	1.5	2.2	5.332	2.502	3.23	49.9	0.73	0.49	39.9	26.3	43,72	856	3.69	
11		1.5	2.2	5,132	2,331	3.201	49	0.73	0.49	39.1	26	43.34	849	3,68	
12	CM-12	1.5	2,2	4.928	2.199	3.129	46.9	. 0,73	0.49	37.2	25.2	42,39	830	3.59	
	 _	<u> </u>					720	0.0	5.0	600	260	576	11 300		ĺ
	Total						730	8.8	5.9	600	360	216	11,300	49	
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Toa	i separator	L_		<u>. </u>		. 1							L	L 1	ĺ
	AM-7	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30	ĺ
2	BM-5	1.5	2.2	4.711	0,993	4.118	93.4	1.09	0,73	68.2	41.7	73,89		9.30	
3	CM-13	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0,73	68.2	41.7	73.89	1504	9,30	ĺ
4	DM-11	1.5	2,2	4.711	0.993	4.118	93.4	1.09	0.73	88.2	41.7	73,89	1504	9.30	
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.	Total						380	4.4	3.0	213	167	<9p	6,020	38	H
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	QUA	NTITY C	ALCULAT	TION C	OVER SHE	ET	
Project			rt Reactivatio	n Project	Project Code		C1N004/2N00
Work Section Title	Manhale	connecti	ng to oil	seba.	Pay Item No. (I	BOQ)	2H-11060
Quantity Item			ucrete c		Unit		MY
Calculation Procedu	re Applied	١					
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QUANTITY CALCULATION COVER SHEET												
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001									
Work Section Title	Manhole connecting to oil sepa.	Pay Item No. (BOQ)	2H-110604									
Quantity Item	Reinforgament for concrete	Unit	kq									
Calculation Procedu												

Weight of reinforcement was computed by multiplying unit weight by the length.

References, Calculation Base and Revisions

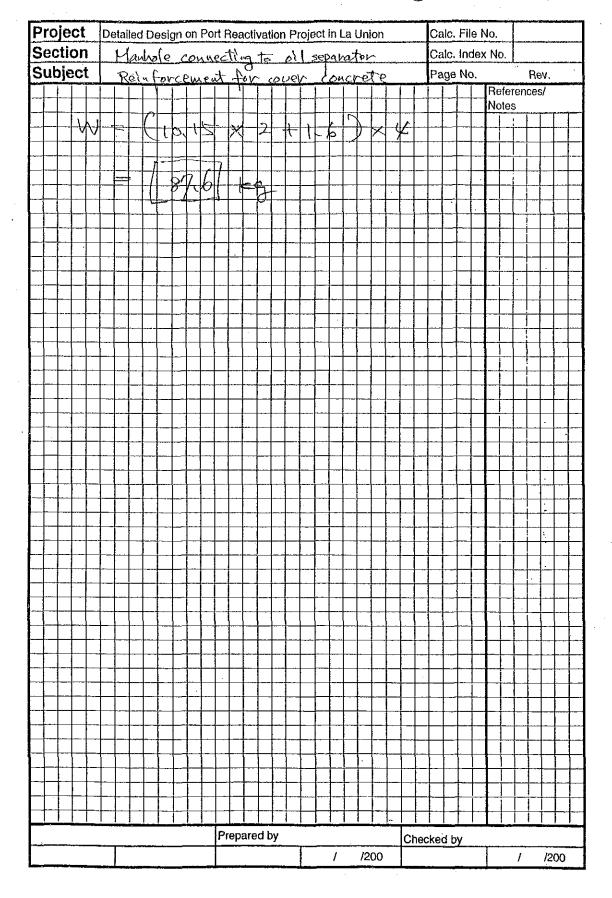
See the item 2H-1101

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No.	D	L (m)	Qıy	W/bar (kg)	W (kg)	Remarks
Manhole co	ver (1500t	ype)				
A1	D13	1.40	5	1.393	6.97	
A2	D13	0.40	. 8	0.398	3.18	
				total	10.15	1580x520x100
		· -		total/spot	30.45	ISSONISSONIOS
			 	total/spot	30.43	
L50x50x6		7.20			31.9	per spot
Re-bar	D9	0.10	24	0.05	1.2	per spot
		:				
Manhole co	ver (1200t	уре)				
A1	D13	1.20	4	1.194	4.78	
A2	D13	0.30	7	0.2985	2.09	
				total	6.87	1280x425x100
				total/spot	20,61	
L50x50x6	- :	6.00			26.6	nor anot
	730		30	0.05		per spot
Re-bar	D9	0.10	20	0.05	1.0	per spot
Manhole co	ver (1500)	(2600)				
A1	D13	1.40	5	1.393	6.97	
A2	D13	0.40	8	0.398	3.18	
				total	10.15	1580x520x100
		ļ	1	1		1300x320x100
	-			total/spot	30.45	
L50x50x6		9.40			41.7	per spot
Re-bar	D9	0.10	32	0.05	1.6	per spot
			<u> </u>			
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	QUANTITY CALCULATION C		
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole connecting to oil sepa.	Pay Item No. (BOQ)	24-110605
Quantity Item	Concrete for concrete cover	Unit	m ³

Calculation Procedure Applied

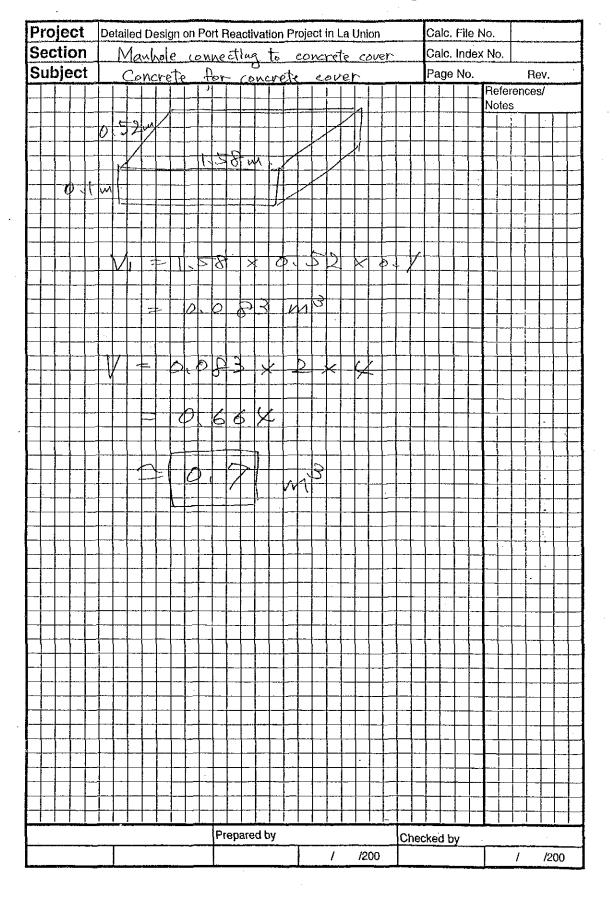
concrete volume for concrete cover was computed by multiplying unit volume by the number.

References, Calculation Base and Revisions

See the item 2H-1101

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QUANTITY CALCULATION COVER SHEET												
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001									
Work Section Title	Manhae connecting to oil sepa,	Pay Item No. (BOQ)	24-110606									
Quantity Item	grating cover	Unit	Nos									

Calculation Procedure Applied

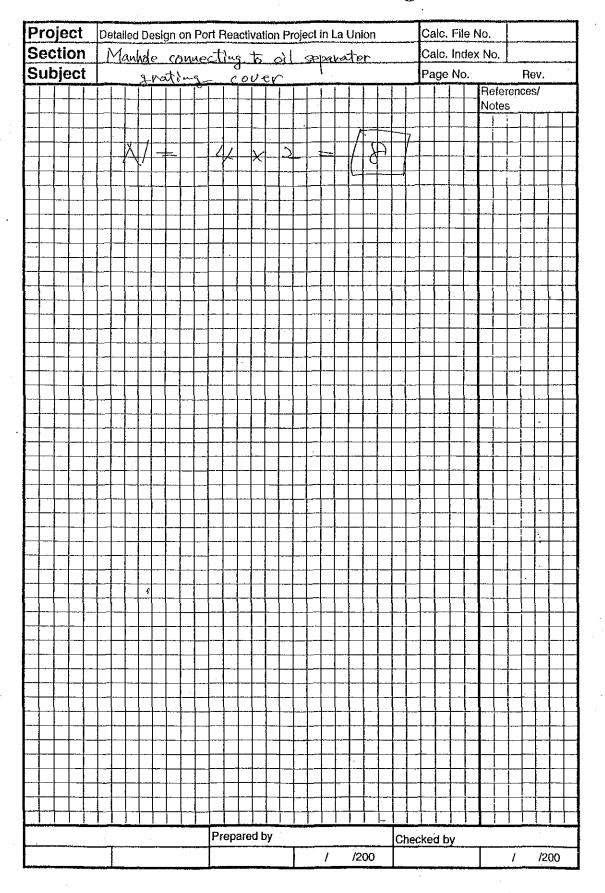
Grating cover was computed.

References, Calculation Base and Revisions

See the item 2H-1101,

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	QUANTITY CALCULATION C		
Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Manhole connecting to all sera.	Pay Item No. (BOQ)	2H-11070/
Quantity Item	Backfill sand	Ünit	m³

Calculation Procedure Applied

Volume of backfill sand was computed by deduction of crushed stone, lean concrete and manhole from the excavation volume.

References, Calculation Base and Revisions

See the item 2H-1101.

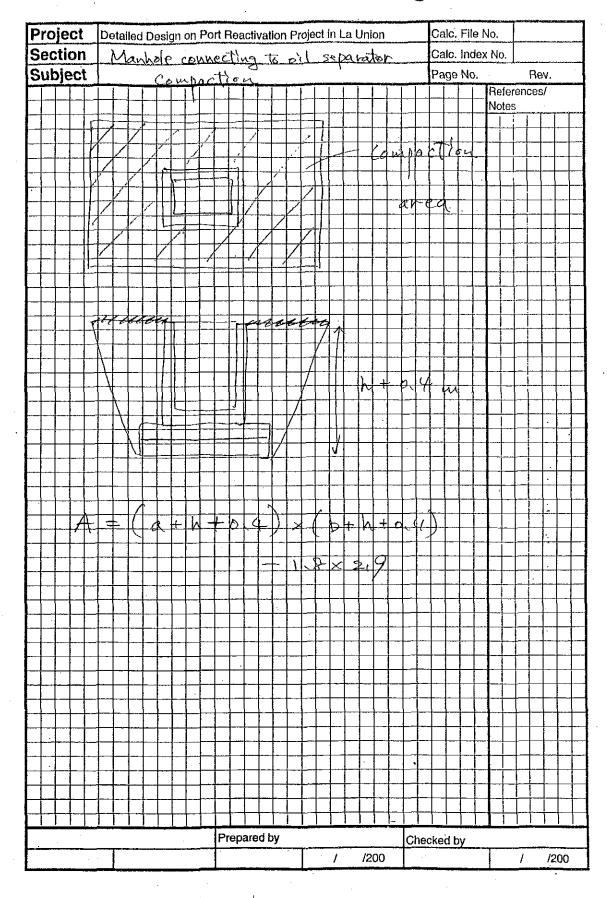
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Doncre	te cover													Mannole
		W	a (_)	G.L.	8.L (m)	h (m)	Vex (m3)	Vcs (m3)	Vio (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)
1 A	M-1	(m) 1.2	(m) 1.9	(m) 5.522	2.444	3,478	49.6	0.55	0.37	42,4	26.7	38.47	846	3.16
	M-1	1.2	1.9	5.562	3,399	2,563	27.4	0,55	0.37	21.9	17.7	28,59	623	2.42
	M-2	1,2	1.9	5.537	3.343	2.594	28	0.55	0.37	22.4	18	28,92	631	2,44
	M-3	1.2	1.9	5.437	3,303	2.534	26.8	0.55	0,37	21.3	17.5	28.27	616	2.4 2.45
	M-4-1	1.2	1.8	5.437 5.537	3,229 3,269	2,608 2,668	28.3 29.5	0,55 0,55	0.37	22.7	18.1 18.7	29.07 29.72	634 649	2.43
	M-5	1,2	1.9 1.9	5.637	3.189	2.848	33.4	0.55	0.37	27.3	20.3	31.66	693	2,65
	M-5-1	1.2	1.9	5.637	3,205	2,832	33.1	0.55	0.37	27.1	20,2	31.49	689	2.64
	M-6	1.2	1.9	5,637	3,055	2,982	36.5	0.55	0,37	30.2	21.6	33.11	725	2.76
	M-7	1.2	1.9	5.857	2,691	3,566	52.2	0,55	0,37	44.8	27.7	39.42	867	3.23
	M8-1	1,2	1.9	5.507	2,755	3,152	40.7	0,55	0.37	34.1	23.3	34,95	786	2.9
	M8-1-1	1.2	1.9	5.592	2.819	3.173	41.3	0,55	0.37	34.6	23,5	35,17	712	2,91
	M-8-2	1.2	1.9	5.507	2,795	3,112	39.7	0,55	0.37	33.2	22,9	34.51	757	2.86
	M-8-2-1	1.2	1.9	5.602	2,821	3.181	41.5	0.55	0.37	34.8	23.6	35,26	773	2,92
	M-8-3	1.2	1.9	5,607_	2,258	3.649	54.7	0,55	0.37	47.2	28,6 21,9	40,31 33,43	887 732	2.78
	M-8-4	1.2	1.9 1.9	5.507 6.25	2.895 4.797	3.012 1.853	37,3 15.4	0,55 0,55	0.37	30,9 11,2	11.9	20.92	451	1.84
	M~1 M~2	1.2	1.9	5.5	3,147	2.753	31.3	0.55	0.37	25.4	19,5	30.64	689	2.57
	M-3	1.2	1,9	5.2	3.045	2.555	27.2	0.55	0,37	21.7	17,6	28.5	621	2.41
	M-4	1.2	1.9	5.34	3.125	2.615	28.4	0.55	0.37	22.8	18,2	29.15	636	2,48
	M-4-1	1.2	1.9	5.34	3.047	2,693	30.1	0.55	0.37	24.3	18.9	29,99	655	2,52
	M-5	1,2	1.9	5.34	2.865	2.875	34.1	0.55	0.37	28	20,6	31.95	699	2,67
	M-5-1	1,2	1.9	5.34	2.887	2.853	33.6	0,55	0.37	27.5	20.4	31.72	694	2,65
	M-7-1	1,2	1.9	5.17	2,683	2,887	34.3	0,55	0.37	28.2	20.7	32.08	702	2.68
25 D	M-8-1	1.2	1.9	4.625	2.7	2,325	22.9	0.55	0.37	17.8	15.7	26,01	565	2.23
	M-9-1	1.2	1,9	5.01	2,546	2,864	33.8	0,55	0.37	27.7	20.5	31,84	696	2.66
	M-9-2	1.2	1.9	5,01	2,564	2,848	33.4	0.55	0.37	27.3	20.3	31.64	692	2.65
	M-1	1,2	1.9	6.06	3,897	2,563	27.4	0.55	0.37	21,9	17.7	28.59	623	2.42
	M-2	1.2	1.9	5,97	3.799	2.571	27.6	0.55	0.37	22	17.8	28.67	625	2.43 2.42
	M-2-1	1.2	1.9	5.97	3,808	2,562 2.6	27.4 28.1	0,55 0,55	0.37	21.9	17,7	28.57 28,98	623 632	2.45
	M-3	1.2	1.9	5,59	3,39	1,858	15.5	0,55	0.37	11.2	18 11.9	20.97	452	1.85
	M-4-2	1.2	1.9	5.43 6.14	3.972 4.687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
34 E	M-4-3 M-4-4	1.2	1.9	6.25	4.797	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.84
77-15	(W -7 -1	1,4	1,17		1.707						, r.v.			
T-	otal						1,090	18.7	12,6	883	662	1,040	22,600	87.0
oncrei	te cover													
	M-2	1.5	2.2	5.522	2.406	3.516	58.8_	0.73	0.49	48.1	29,5	47.5	932	3,97
	M-3	1.5	2.2	5,332	2,328	3,404	55.2	0.73	0.49	44.8	28.2	46.02	903	3.86
	M-5-1	1.5	2.2	5.132	2.158	3,374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.83
	M-6-1	1,5	2,2	4.928	1.982	3.346	53.4	0.73	0.49	43.1 42.4	27.6	45.25 44.92	887	3.8 3.78
	M-6-2	1.5	2,2	4.928	2.007	3.321	52.6	0.73	0.49 0,49	42,2	27.3 27.2	44.83	881 879	3.77
	M-7-1 M-4	1.5	2.2	4.711	1,797	3.314 3.716	52.4 65.5	0,73 0.73	0.49	54.2	31.8	50.14	985	4.17
	M-5-1	1.5	2,2	4.711	1.395	3.738	66.3	0.73	0.49	55	32.1	50.43	991	4.19
	M-11-1	1.5	2.2	5,132	2,379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.61
	M-12-1	1.5	2.2	4,928	2,247	3.081	45.6	0.73	0.49	38	24.7	41.75	817	3.54
	M-13-1	1.5	2.2	4.711	1.44	3.671	64	0.73	0.49	52.8	31.3	49.54	973	4.13
	M-8	1.5	2,2	5.507	2.62	3.287	51.6	0.73	0.49	41.5	26.9	44.47	872	3,75
	M-9	1.5	2.2	5.332	2,55	3.182	48.5	0.73	0.49	38.7	25.8	43.09	844	3.64
14 D	M-10	1,5	2.2	4.844	2.084	3.16	47.8	0.73	0.49	38	25.5	42.8	838	3.62
	M-6	1.5	2,2	4.625	2.836	2.189	24.7	0.73	0.49	17.6	16.1	29.98	581	2.66
	M-7	1.5	2.2	5.17	2.665	. 2,905	40.8	0.73	0.49	31.7	22.9	39.43	170	3.37
	M-8	1.5	2,2	5.119	2,519	3	43,4	0.73	0.49	34.1	23.8	40.68	795	3.46
	M-9	1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7	20.6	38.46	711	3.14
	M-4	1.5	2.2	5.33	3,114	2,616	33.7	0.73	0.49	25.4	20	35.62 33.08	694 643	· 3.08 2.89
	M-4-1 M-5	1.5	2.2	5.33 5.22	3,306 2,979	2.424 2.641	29.5 34.3	0.73	0.49 0.49	21.7 25.9	18,2 20,2	35,95	700	3.11
	M~5−1	1.5 1.5	2,2	5.22	3.001	2.619	33.8	0.73	0.49	25.5	20.2	35.66	695	3.08
	M-5-2	1.5	2.2	5.22	3,011	2,609	33.6	0.73	0.49	25.3	19.9	35.52	692	3.07
4 E		1.5	2.2	4.89	2,669	2.621	33.9	0.73	0.49	25.6	20.1	35.68	695	3.09
									11.8	880	600	1,060	19,600	85
	otal						1,110	17.6	11.0		000	1,000	19,000	43
	cover_ M-4	1.5	2.2	5.332	2.28	3.452	56.7	0.73	0.49	46.1	28.8	46.65	915	3.91
	M~5	1.5	2.2	5.132	2.109	3.423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.88
3 A		1.5	2.2	4.928	1,934	3.394	54.9	0.73	0.49	44.5	28.1	45.89	900	3.85
	M-1	1.5	2.2	5.332	1.881	3,851	70.4	0.73	0.49	58.7	33.4	51.92	1021	4.3
	M-1-1	1.5	2.2	5.332	1.929	3.803	68.6	0.73	0.49	57.1	32.8	51.28	1008	4.26
	M-2	1.5	2.2	5.132	1.71	3.822	69.3	0.73	0.49	57.7	33.1	51.54	1013	4.27
7 B	M-2-1	1.5	2.2	5.132	1.758	3.774	67.6	0.73	0.49	56.2	32.5	50.9	1001	4.23
	M-3	1.5	2,2	4.928	1.534	3.794	68.3	0.73	0.49	56.8	32.7	51,17	1006	4.25
	M-3-1	1.5	2.2	4.928	1.582	3.746	66.6	0.73	0.49	55.2	32.2	50.53	993	4.2
	M-10	1.5	2.2	5,332	2,502	3.23	49.9	0.73	0.49	39,9	26.3	43.72	856	3.69
	M-11	1.5	2.2	5.132	2.331	3.201	49	0.73	0.49	39.1	26	43.34	849	3.66
12 C	M-12	1.5	2.2	4.928	2,199	3.129	48.9	. 0.73	0.49	37.2	25.2	42,39	830	3.59
` T‹	otal						730	8.8	5.9	800	360	578	11,300	49
											<u>-</u>		·	'
	eparator M-7	1.5	2.2	4.711	0.993	4.118	93.4	_ 1.09	0.73	68.2	41.7	73.89	1504	9.30
	M-5	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9.30
	M-13	1.5	2.2	4.711	0.993	4.118	93.4	1.09	0.73	68,2	41.7	73.89	1504	9.30
	M-11	1.5	2.2	4.711	0,993	4.118	93.4	1.09	0.73	68.2	41.7	73.89	1504	9,30
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	otal				· · · · ·		380	4.4	3.0	273	167	296	6,020	38

	QUA	NTITY CALC	ULA	TION C	OVE	R SHE	ET			
Project	Detailed t	Design on Port Re in La Union Pro		n Project	Projec	t Code	JC	JC1N004/2N001		
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FN: Calculation_Sheet

I	W	a	aL.	Ð,L,	h	Vex	Vcs	Vlo	Vbf	Cmpct	Form	Re-bar	Concret
AM-1	(m) 1.2	(m) 1.9	(m) 5.522	(m) 2,444	(m) 3.478	(m3) 49.6	(m3) ! 0.55	(m3) 0.37	(m3) 42,4	(m2) 26,7	(m2) 38.47	(kg) 846	(m3) 3,1
CM-1	1,2	1.9	5.562	3,399	2.563	27,4	0.55	0.37	21.9	17.7	28.59	623	2.4
CM-2	1.2	1.9	5,537	3,343	2.594	28	0.55	0.37	22,4	18	28,92	631	. 2,4
CM-3 CM-4	1.2	1.9	5.437	3.303	2.534	26.8	0,55	0,37	21.3	17.5	28,27	616	. 2
CM-4 CM-4-1	1.2	1.9	5.437 5,537	3,229 3,269	2,608 2,668	28.3 29.5	0,55 0,55	0,37 0,37	22 <u>.7</u> 23.8	18.1 18.7	29.07 29.72	634 649	2,4
CM-5	1,2	1.9	5,637	3,189	2,848	33,4	0,55	0.37	27.3	20.3	31.68	893	2.6
CM-5-1	1.2	1.9	5,637	3,205	2,832	33.1	0.55	0.37	27.1	20,2	31.49	689	2.6
CM-6	1.2	1.9	5,637	3.055	2.982	36.5	0.55	0.37	30.2	21.6	33.11	725	2.7
CM-7	1.2	1.9	5.857	2.691	3.566	52,2	0.55	0.37	44.8	27.7	39,42	887	3.2
CM8-1	1.2	1.9	5.507	2,755	3.152	40.7	0.55	0,37	34.1	23.3	34.95	766	2
CM8-1-1	1.2	1.9	5.592	2.819	3,173	41.3	0,55	0.37	34.6	23.5	35,17	772	
CM-8-2 CM-8-2-1	1.2	1.9	5.507 5.602	2.795 2.821	3.112 3.181	39.7 41.5	0,55 0,55	0.37	33.2 34.8	22.9 23.6	34.51 35.26	757 773	2.1
CM-8-3	1.2	1.9	5,507	2.258	3,649	54.7	0.55	0.37	47.2	28.6	40.31	887	3
CM-8-4	1.2	1.9	5.507	2.895	3.012	37.3	0,55	0.37	30.9	21.9	33.43	732	2,
DM-1	1.2	1.9	6.25	4.797	1,853	15.4	0,55	0.37	11.2	11.9	20.92	451	1,4
DM-2	1.2	1.9	5,5	3.147	2,753	31.3	0.55	0.37	25.4	19.5	30.64	669	2,
OM-3	1.2	1.9	5.2	3.045	2.555	27.2	0.55	0.37	21.7	17.6	28.5	621	2,
DM-4	1.2	1.9	5.34	3.125	2.615	28.4	0,55	0.37	22.8	18.2	29.15	636	2.
DM-4-1 DM-5	1.2	1.9	5.34 5.34	3,047 2.865	2.693 2.875	30.1_ 34.1_	0.55 0.55	0.37	24.3	18.9 20.6	29.99 31.95	655 699	<u>2.</u> 2.
DM-5-1	1.2	1.9_	5.34	2.887	2.853	33.6	0.55	0.37	27.5	20.4	31.72	694	2,
DM-7-1	1,2	1.9	5.17	2.683	2.887	34.3	0.55	0.37	28,2	20.7	32,08	702	2,
DM-8-1	1.2	1.9	4.625	2.7	2,325	22.9	0,55	0.37	17.8	15.7	26.01	565	2
DM-9-1	1.2	1.9	5,01	2,546	2,864	33.8	0,55	0.37	27.7	20.5	31.84	696	2.
DM-9-2 EM-1	1.2	1.9	5,01	2,564	2.846	33.4	0,55	0,37	27.3	20.3	31.64	692	2.
EM-1	1.2	1.9	6,06	3,897	2,583	27,4	0.55	0.37	21.9	17.7	28.59	823	2.
EM-2 EM-2-1	1.2	1.9	5.97 5.97	3,799	2.571 2.562	27.6 27.4	0,55 0,55	0,37	21,9	17.8 17.7	28.67 28.57	625 623	2. 2.
EM-2-1	1.2	1,9	5,59	3,808	2,562	28.1	0.55	0.37	22.5	17.7	28.98	632	2,
EM-4-2	1.2	1.9	5.43	3,972	1.858	15.5	0,55	0.37	11.2	11.9	20.97	452	1.
EM-4-3	1.2	1.9	6.14	4.687	1.853	15.4	0.55	0.37	11.2	11.9	20.92	451	1.
EM-4-4	1,2	1.9	6.25	4.797	1.853	15,4	0,55	0.37	11.2	11.9	20,92	451	1.
Total	-			··		1,090	18.7	12.6	883	682	1,040	22,600	87
crete cover	1.5	2.2	5,522	2,406	3,516	58.8	0.73	0.49	48,1	29,5	47.5	932	3.
AM-3	1.5	2.2	5.332	2.328	3.404	55.2	0.73	0.49	44.8	28.2	46.02	903	3,
AM-5-1	1.5	2.2	5.132	2.158	3.374	54.2	0.73	0.49	43.8	27.9	45.62	895	3.
AM-6-1	1.5	2.2	4.928	1,982	3,346	53.4	0.73	0.49	43.1	27,6	45.25	887	
AM-6-2	1,5	2.2	4.928	2.007	3,321	52.6	0.73	0,49	42.4	27.3	44.92	881	3.
AM-7-1 BM-4	1.5	2.2	4.711	1.797	3.314	52.4	0.73	0.49	42.2	27.2	44.83	879	3.
BM-5-1	1.5 1.5	2.2	4.711 4.711	1.395	3,716 3,738	65.5 66.3	0.73	0.49	54.2 55	31,8 32.1	50,14 50.43	985 991	4. 4.
CM-11-1	1.5	2,2	5.132	2.379	3.153	47.6	0.73	0.49	37.8	25.5	42.7	836	3.
CM-12-1	1.5	2.2	4,928	2.247	3.081	45.6	0.73	0.49	36	24.7	41.75	817	3.
CM-13-1	1.5	2,2	4.711	1.44	3.671	64	0,73	0,49	52.8	31.3	49.54	973	4.
CM-8	1.5	2.2	5.507	2.62	3.287	51.6	0.73	0.49	41.5	26.9	44.47	872	3.
CM-9	1.5	2.2	5,332	2.55	3.182	48.5	0.73	0.49	38,7	25.8	43.09	844	3.
DM-10 DM-6	1.5	2.2	4.844 4.825	2,084	3.16 2.189	47.8 24.7	0.73	0,49 0,49	38 17.6	25.5	42.8	838 581	3.
DM-8 DM-7	1.5	2.2	5.17	2.836 2.665	2.905	40.8	0.73	0.49	31.7	16.1 22.9	29.98 39.43	770	2, 3.
DM-8	1.5	2.2	5.119	2,519	3	43.4	0.73	0.49	34.1	23.8	40,68	795	3.
DM-8 DM-9	1.5	2.2	5.019	2.739	2.68	35.2	0.73	0.49	26.7	20,6	38.46	711	3.
EM-4	1.5	2,2	5.33	3,114	2.616	33.7	0.73	0.49	25.4	20	35.62	694	- 3.
EM-4-1	1.5	2.2	5,33	3.306	2,424	29.5	0.73	0.49	21.7	18.2	33.08	643	2,
EM-5 EM-5-1	1.5	2.2	5.22	2.979	2,641	34.3	0.73	0.49	25.9	20.2	35.95	700	3.
EM-5-1 EM-5-2	1.5 1.5	2.2	5.22 5.22	3,001	2.619 2.609	33.8 33.6	0.73 0.73	0.49 0.49	25.5 25.3	20 19.9	35.66 35.52	695 692	3. 3.
EM-6	1.5	2,2	4.89	2.669	2.621	33.9	0.73	0.49	25.6	20.1	35.68	695	3.
Total						1,110	17.6	11.8	880	600	1,000	19,600	
ting cover	1,5	2.2	5.332	2.28	3.452	56.7	0.73	0.49	46.1	28,8	46.65	915	3.
AM-5	1.5	2.2	5.132	2.109	3.423	55.8	0.73	0.49	45.3	28.4	46.27	908	3.
AM-6	1.5	2.2	4.928	1,934	3,394	54.9	0.73	0.49	44.5	28.1	45,89	900	3.
BM-1	1.5	2,2	5,332	1,881	3.851	70.4	0.73	0.49	58.7	33.4	51.92	1021	
BM-1-1 BM-2	1.5	2.2	5,332	1.929	3.803	68.6	0.73	0.49	57,1	32.8	51.28	1008	4
	1.5 1.5	2,2	5,132 5,132	1.71 1.758	3.822 3.774	69,3 67.6	0.73	0.49	57.7 56.2	33.1 32.5	51.54 50.9	1013 1001	4
BM-2-1	1.5	2,2	4.928	1.534	3.794	68.3	0.73	0.49	56.8	32.7	51.17	1006	4
BM-2-1 BM-3	1.5	2.2	4.928	1.582	3.746	66.6	0.73	0.49	55,2	32,2	50.53	993	
BM-2-1 BM-3 BM-3-1	1.5	2,2	5.332	2.502	3.23	49.9	0.73	0.49	39.9	26.3	43.72	856	3
BM-3 BM-3-1 CM-10		2.2	5.132	2,231	3,201	49	0.73	0.49	39,1	26	43.34	849	3.
BM-3 BM-3-1 CM-10 CM-11	1,5	2,2	4.928	2,199	3,129	46.9	. 0.73	0.49	37.2	25.2	42,39	830	3
BM-3 BM-3-1 CM-10 CM-11 CM-11	1.5					730	8.8	5.9	600	360	576		
BM-3 BM-3-1 CM-10 CM-11											. 370	11,300	
BM-3 BM-3-1 CM-10 CM-11 CM-12 Total	1.5	7.2	4.711	0 993	4 118	<u></u>	1.09	0.73					
BM-3 BM-3-1 CM-10 CM-11 CM-12 Total		2.2	4.711 4.711	0.993 0.993	4.118 4.118	93.4 93.4	1,09	0.73 0.73	68.2 68.2	41,7	73.89 73.89	1504 1504	9.
BM-3 BM-3-1 CM-10 CM-10 CM-12 Total	1.5					93.4			68.2	41,7	73.89	1504	9. 9. 9.

380

4.4

3.0

Total

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6,020

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