

LAMPIRAN

Daftar Upah Pekerja Pada Proyek

NO	Jenis Upah	Satuan	Harga
1	Pekerja	Hr	125,000.00
2	Mandor	Hr	200,000.00
3	Tukang Kayu	Hr	130,000.00
4	Kep.Tk. Kayu	Hr	150,000.00
5	Tukang Batu	Hr	120,000.00
6	Kep.Tk. Batu	Hr	150,000.00
7	Tukang Besi	Hr	160,000.00
8	Kep.Tk. Besi	Hr	175,000.00
9	Tukang Gali	Hr	100,000.00
10	Kep. Tk. Gali	Hr	120,000.00

RAB Proyek Pekerjaan yang ada di jalur kritis

NO	Uraian Pekerjaan	Vol	Satuan	Harga Sat	Nilai
1	2	3	4	5	6
A	Pekerjaan P2				
	Urugan dan Tanah Pematatan	154.74	m3	30,000.00	4,642,200.00
	Pemasangan Lantai Kerja	5.2	M ²	1,673,250.00	8,700,900.00
	Pembesian Pilecap	16,228.42	Kg	12,874.00	208924679.1
	Instal Bekisting Pilecap	36	M ²	403,027.00	14,508,972.00
	Pengecoran pilecap	58.75	M ³	2,105,750.00	123,712,812.50
	Pembesian Pierleg	6,694	Kg	12,874.00	86,182,804.42
	Instal Bekisting Pier Leg	177.41	M ²	459,067.00	81,443,076.47
	Pengecoran Pierleg	103.59	M ³	2,105,750.00	218,134,642.50
	Pembesian Pier head	12,545.59	Kg	12,874.00	161,511,925.66
	Instal Bekisting Pier Head	53.78	M ²	459,067.00	24,688,623.26
	Pengecoran Pier head	6.17	M ³	2,105,750.00	12,992,477.50
				Jumlah	945,443,113.39
B	Pekerjaan Struktur Atas Jembatan				
	Erection P2-P3 (bentang 57.5m)	109173.667	kg	4,250.00	463,988,084.75
				Jumlah	463,972.50
C	Pekerjaan Lantai Jembatan P2-P3				
	Pekerjaan Pembesian	21213.13	Kg	12,874.00	273,097,835.62
	Pekerjaan Cor	117.37	M ³	2,105,750.00	247,151,877.50
				Jumlah	520,249,713.12

LAMPIRAN ANALISIS HARGA SATUAN PEKERJAAN

Koef	Satuan	Pembesian pilecap/1kg	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		10,374.00
1.03	Kg	Besi Beton Ulir	9,800.00	10,094.00
0.01	Kg	Kawat Beton (Bendrat)	28,000.00	280.00
	B	Upah		2,500.00
0.008	OH	Pekerja	125,000.00	1,000.00
0.008	OH	Tukang Besi	160,000.00	1,280.00
0.0008	OH	Kepala Tukang Besi	175,000.00	140.00
0.0004	OH	Mandor	200,000.00	80.00
	C	Peralatan		
	D	A+B+C		12,874.00

12,874.00

bahan 9,430.91
upah 2,272.73
11,703.64

Koef	Satuan	Instal Bekisting pilecap	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		325,027.11
0.17	Lhr	Plywood 15 mm	280,000	48,611.11
8.99	Kg	UNP	10,500	94,416
0.80	Bh	Wing mt, steel cone & tie rod	15,000	12,000
14.17	Kg	Hollow 100x50	12,000	170,000
	B	Upah		78,000
0.26	OH	Pekerja	125,000.00	32,500.00
0.26	OH	Tukang Kayu	130,000.00	33,800.00
0.06	OH	Kepala Tukang Kayu	150,000.00	9,000.00
0.01	OH	Mandor	200,000.00	2,700.00
	C	Peralatan		
	D	A+B+C		403,027.11

403,027.11

bahan 295,479.19
upah 70,909.09
366,388.28

Koef	Satuan	Pengecoran pilecap	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		1,905,750.00
1.05	M3	Beton Site mix fc' 30 Mpa	1,815,000	1,905,750.00
	B	Upah		200,000
1.25	OH	Pekerja	125,000.00	156,250.00
0.24	OH	Tukang Batu	120,000.00	28,800.00
0.03	OH	Kepala Tukang Batu	150,000.00	4,950.00
0.05	OH	Mandor	200,000.00	10,000.00
	C	Peralatan		
	D	A+B+C		2,105,750.00

2,105,750.00

bahan 1,732,500.00
upah 181,818.18
1,914,318.18

Koef	Satuan	Pengecoran pierhead	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		1,905,750.00
1.05	M3	Beton Site mix fc' 30 Mpa	1,815,000	1,905,750.00
	B	Upah		200,000
1.25	OH	Pekerja	125,000.00	156,250.00
0.24	OH	Tukang Batu	120,000.00	28,800.00
0.03	OH	Kepala Tukang Batu	150,000.00	4,950.00
0.05	OH	Mandor	200,000.00	10,000.00
	C	Peralatan		
	D	A+B+C		2,105,750.00

2,105,750.00

bahan 1,732,500.00
upah 181,818.18
1,914,318.18

Koef	Satuan	Pengecoran pierleg	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		1,905,750.00
1.05	M3	Beton Site mix fc' 30 Mpa	1,815,000	1,905,750.00
	B	Upah		200,000
1.25	OH	Pekerja	125,000.00	156,250.00
0.24	OH	Tukang Batu	120,000.00	28,800.00
0.03	OH	Kepala Tukang Batu	150,000.00	4,950.00
0.05	OH	Mandor	200,000.00	10,000.00
	C	Peralatan		
	D	A+B+C		2,105,750.00

2,105,750.00

bahan 1,732,500.00
upah 181,818.18
1,914,318.18

Koef	Satuan	Pembesian pierleg/1kg	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		10,374.00
1.03	Kg	Besi Beton Ulir	9,800.00	10,094.00
0.01	Kg	Kawat Beton (Bendrat)	28,000.00	280.00
	B	Upah		2,500.00
0.008	OH	Pekerja	125,000.00	1,000.00
0.008	OH	Tukang Besi	160,000.00	1,280.00
0.0008	OH	Kepala Tukang Besi	175,000.00	140.00
0.0004	OH	Mandor	200,000.00	80.00
	C	Peralatan		
	D	A+B+C		12,874.00

12,874.00

bahan 9,430.91
upah 2,272.73
11,703.64

Koef	Satuan	Pembesian pierhead/1kg	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		10,374.00
1.03	Kg	Besi Beton Ulir	9,800.00	10,094.00
0.01	Kg	Kawat Beton (Bendrat)	28,000.00	280.00
	B	Upah		2,500.00

12,874.00

bahan 9,430.91
upah 2,272.73

0.008	OH	Pekerja	125,000.00	1,000.00
0.008	OH	Tukang Besi	160,000.00	1,280.00
0.0008	OH	Kepala Tukang Besi	175,000.00	140.00
0.0004	OH	Mandor	200,000.00	80.00
	C	Peralatan		
	D	A+B+C		12,874.00

11,703.64

Koef	Satuan	Instal Bekisting pierleg	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		325,027.11
0.17	Lbr	Plywood 15 mm	280,000	48,611.11
8.99	Kg	UNP	10,500	94,416
0.80	Bh	Wing nut, steel cone & tie rod	15,000	12,000
14.17	Kg	Hollow 100x50	12,000	170,000
	B	Upah		134,050
0.41	OH	Pekerja	125,000.00	51,250.00
0.41	OH	Tukang Kayu	130,000.00	53,300.00
0.17	OH	Kepala Tukang Kayu	150,000.00	25,500.00
0.02	OH	Mandor	200,000.00	4,000.00
	C	Peralatan		
	D	A+B+C		459,077.11

459,077.11

bahan 295,479.19
upah 121,863.64
417,342.83

Koef	Satuan	Instal Bekisting pierhead	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		325,027.11
0.17	Lhr	Plywood 15 mm	280,000	48,611.11
8.99	Kg	UNP	10,500	94,416
0.80	Ib	Wing nut, steel cone & tie rod	15,000	12,800
14.17	Kg	Hollow 100x50	12,000	170,000
	B	Upah		134,050
0.41	OH	Pekerja	125,000.00	51,250.00
0.41	OH	Tukang Kayu	130,000.00	53,300.00
0.17	OH	Kepala Tukang Kayu	150,000.00	25,500.00
0.02	OH	Mandor	200,000.00	4,000.00
	C	Peralatan		
	D	A+B+C		459,077.11

459,077.11

bahan 295,479.19
upah 121,863.64
417,342.83

Koef	Satuan	Pembesian Lantai Jembatan	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		10,374.00
1.03	Kg	Besi Beton Ulir	9,800.00	10,094.00
0.01	Kg	Kawat Beton (Bendrat)	28,000.00	280.00
	B	Upah		2,500.00
0.008	OH	Pekerja	125,000.00	1,000.00
0.008	OH	Tukang Besi	160,000.00	1,280.00
0.0008	OH	Kepala Tukang Besi	175,000.00	140.00
0.0004	OH	Mandor	200,000.00	80.00
	C	Peralatan		
	D	A+B+C		12,874.00

12,874.00

bahan 9,430.91
upah 2,272.73
11,703.64

Koef	Satuan	Pengecoran Lantai Jembatan	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		1,905,750.00
1.05	M3	Beton Site mix f'c' 30 Mpa	1,815,000	1,905,750.00
	B	Upah		200,000
1.25	OH	Pekerja	125,000.00	156,250.00
0.24	OH	Tukang Batu	120,000.00	28,800.00
0.03	OH	Kepala Tukang Batu	150,000.00	4,950.00
0.05	OH	Mandor	200,000.00	10,000.00
	C	Peralatan		
	D	A+B+C		2,105,750.00

2,105,750.00

bahan 1,732,500.00
upah 181,818.18
1,914,318.18

Koef	Satuan	Urugan Tanah dan Pematatan	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		
	B	Upah		30,000
0.20	OH	Pekerja	125,000.00	25,000.00
0.025	OH	Mandor	200,000.00	5,000.00
	C	Peralatan		
	D	A+B+C		30,000.00

30,000.00 HSP

bahan -
upah 27,272.73
27,272.73

Koef	Satuan	Lantai Kerja	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		1,643,250.00
1.05	M3	Beton Site mix fc' 10 Mpa	1,565,000	1,643,250.00
	B	Upah		30,060
0.20	OH	Pekerja	125,000.00	25,000.00
0.01	OH	Tukang Batu	120,000.00	1,560.00
0.01	OH	Kepala Tukang Batu	150,000.00	1,500.00
0.01	OH	Mandor	200,000.00	2,000.00
	C	Peralatan		
	D	A+B+C		1,673,310.00

1,673,310.00

bahan 1,493,863.64
 upah 27,327.27
 1,521,190.91

Koef	Satuan	Pekerjaan Erection P2-P3	Harga Bahan/Upah (Rp)	Jumlah
	A	Bahan		
	B	Upah		4,250
0.014	OH	Pekerja	125,000.00	1,732.46
0.014	OH	Tukang Besi	160,000.00	2,217.54
0.0008	OH	Kepala Tukang Besi	175,000.00	140.00
0.0008	OH	Mandor	200,000.00	160.00
	C	Peralatan		
	D	A+B+C		4,250.00

4,250.00

bahan -
 upah 3,863.64
 3,863.64
 40
 125,000.00 0.44 17.54
 160,000.00 0.56 22.46
 285,000.00

Lampiran Percepatan Proyek Dengan Kerja Shift

Uraian Pekerjaan	Durasi Normal (Hari)	Upah Total Pekerja Normal	Durasi Crash (Hari)	Upah Total Pekerja Crash	Cost Slope
Pembesian Pierhead	7	31,363,975.89	3	43,978,250.36	12,614,274.47
Instal Bekisting Pierhead	7	7,209,194.57	3	12,253,851.70	5,044,657.13
Urugan Tanah & Pemadatan	7	4,642,200.04	3	7,991,642.41	3,349,442.37
Pengecoran Pierhead	2	1,234,000.00	1	3,132,078.04	1,898,078.04
Pekerjaan Struktur Atas Jembatan Erection P2-P3 (bentang 57.5 m)	30	464,385,079.90	14	695,030,718.75	230,645,638.85
Pembesian Lantai Jembatan P2-P3	5	53,032,826.50	2	69,680,663.93	16,647,837.43
Pekerjaan Cor Lantai Jembatan P2-P3	2	23,474,000.00	1	37,794,817.95	16,647,837.43
Pengecoran Pierleg	2	20,718,000.00	1	34,178,397.95	13,460,397.95
Pembesian Pierleg	5	16,735,825.47	2	23,797,335.18	7,061,509.71
Instal Bekisting Pierleg	5	23,781,762.88	2	31,805,122.32	8,023,359.44
Pembesian Pilecap	5	40,571,051.15	3	79,658,785.71	39,087,734.57
Instal Bekisting Pilecap	5	2,807,999.93	3	8,219,142.86	5,411,142.93
Pengecoran Pilecap	2	11,750,000.00	1	7,605,000.00	7,268,494.46
Pemasangan Lantai Kerja	2	156,312.00	1	1,921,223.13	1,764,911.13
Total Durasi	86		40		
Normal Duration - Crash Duration			46		
Total Slope					368,925,315.9

Lampiran Percepatan Proyek Dengan Penambahan Tenaga Kerja

Uraian Pekerjaan	Durasi Normal (Hari)	Upah Total Pekerja Normal	Durasi Crash (Hari)	Upah Total Pekerja Crash	Cost Slope
Pembesian Pierhead	7	31,363,975.89	4	24,220,000.00	-7143975.896
Instal Bekisting Pierhead	7	7,209,194.57	4	7,480,000.00	270,805.43
Urugan Tanah & Pemadatan	7	4,642,200.04	4	4,600,000.00	-42200.0422
Pengecoran Pierhead	2	1,234,000.00	1	1,565,000.00	331,000.00
Pekerjaan Struktur Atas Jembatan Erection P2-P3 (bentang 57,5 m)	30	464,385,079.90	19	369,645,000.00	-94740079.9
Pembesian Lantai Jembatan P2-P3	5	53,032,826.50	3	41,190,000.00	-11842826.5
Pekerjaan Cor Lantai Jembatan P2-P3	2	23,474,000.00	1	14,785,000.00	-11842826.5
Pengecoran Pierleg	2	20,718,000.00	1	13,540,000.00	-7178000
Pembesian Pierleg	5	16,735,825.47	3	14,745,000.00	-1990825.473
Instal Bekisting Pierleg	5	23,781,762.88	3	19,335,000.00	-4446762.883
Pembesian Pilecap	5	40,571,051.15	4	42,820,000.00	2,248,948.85
Instal Bekisting Pilecap	5	2,807,999.93	3	4,395,000.00	1,587,000.07
Pengecoran Pilecap	2	11,750,000.00	1	7,605,000.00	-4145000
Pemasangan Lantai Kerja	2	156,312.00	1	1,190,000.00	1,033,688.00
Total Durasi	86		52		
Normal Duration - Crash Duration		34			
Total Slope					-137,901,054.8

