

HARGA UPAH PEKERJA

No.	URAIAN	KODE	SATUAN	HARGA YG DIGUNAKAN (Rp.)	HARGA SATUAN (Rp.)
1	Pekerja	(L01)	Jam	19.870,00	140.000,00
2	Tukang	(L02)	Jam	22.857,14	160.000,00
3	Mandor	(L03)	Jam	26.428,57	185.000,00
4	Operator	(L04)	Jam	23.571,43	165.000,00
5	Pembantu Operator	(L05)	Jam	15.714,29	110.000,00
6	Sopir / Driver	(L06)	Jam	21.428,57	150.000,00
7	Pembantu Sopir / Driver	(L07)	Jam	15.714,29	110.000,00
8	Mekanik	(L08)	Jam	21.428,57	150.000,00
9	Pembantu Mekanik	(L09)	Jam	15.714,29	110.000,00
10	Kepala Tukang	(L10)	Jam	25.714,29	180.000,00
11	Tenaga Ahli Muda S1 (1 Tahun)	(L11)	Jam	114.523,81	801.666,67
12	Tenaga Ahli Muda S1 (5 Tahun)	(L12)	Jam	151.666,67	1.061.666,67
13	CAD / CAM OPERATOR	(L16)	Jam	64.071,43	448.500,00
14	SOFTWARE PROGRAMMER / IMPLEMENTER	(L17)	Jam	75.214,29	526.500,00
15	HARDWARE TECHNICIAN	(L18)	Jam	64.071,43	448.500,00
16	FACILITATOR	(L19)	Jam	64.071,43	448.500,00
17	SENIOR ASSISTANT PROFESSIONAL STAFF	(L20)	Jam	81.714,29	572.000,00
18	ASSISTANT PROFESSIONAL STAFF	(L21)	Jam	77.071,43	539.500,00
19	SPECIAL TECHNICIAN / INSPECTOR	(L22)	Jam	75.214,29	526.500,00
20	TECHNICIAN	(L23)	Jam	64.071,43	448.500,00
21	INSPECTOR	(L24)	Jam	64.071,43	448.500,00
22	SURVEYOR	(L25)	Jam	57.571,43	403.000,00

HARGA ALAT BERAT

NO	KODING	MERЕК	TYPE	TH BUAT	NJKB
1	2	3	4	5	6
1	600683 00199	AZO ID AZP	AZP 8 / THANDEM ROLLER	2011	485.000.000
2	600684 00199	BACKHLIS	WINDROW TURNER 17,5	2014	3.200.000.000
3	600056 00732	BOMAG	BW 100 AD / VIBRATOR TANDEM ROLLER	2015	386.000.000
4	600056 00832	BOMAG	BW 130 AD / VIBRATOR ROLLER	2015	588.000.000
5	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2012	787.000.000
6	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2013	819.000.000
7	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2014	850.000.000
8	600056 01032	BOMAG	BW 219D-4 / COMPACTOR SINGLE DRUM	2013	1.644.000.000
9	600618 00599	CASE	2GS-580 N / BACKHOE LOADER	2012	1.083.000.000
10	600618 00699	CASE	580 SUPER N / BACKHOE LOADER	2011	1.264.000.000
11	600618 00799	CASE	580T 4X4 / TLB	2013	2.315.000.000
12	600074 17412	CATERPILLAR	120 K / MOTOR GRADDER	2013	1.548.000.000
13	600074 19212	CATERPILLAR	160 K / MOTOR GRADDER	2012	3.933.000.000
14	600074 19312	CATERPILLAR	304CR / MINI EXCAVATOR	2015	782.000.000
15	600074 19412	CATERPILLAR	313 D2 LGP / HYDRAULIC EXCAVATOR	2014	1.012.000.000
16	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2011	1.124.000.000
17	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2012	1.147.000.000
18	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2013	1.198.000.000
19	600074 19612	CATERPILLAR	416F / BACKHOE LOADER	2013	979.000.000
20	600074 19712	CATERPILLAR	773 E / DUMP TRUCK	2012	6.297.000.000
21	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2012	3.317.000.000
22	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2013	3.487.000.000
23	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2014	3.657.000.000
24	600074 19912	CATERPILLAR	CAT 120K / MOTOR GRADER	2011	1.517.000.000
25	600074 20012	CATERPILLAR	CAT 428F / BACKHOE LOADER	2015	933.000.000
26	600074 20112	CATERPILLAR	CAT 924 H / WHEEL LOADER	2012	1.764.000.000
27	600074 20212	CATERPILLAR	D10T / BULLDOZER	2012	6.875.000.000
28	600074 20312	CATERPILLAR	D5E / BULLDOZER	2011	1.185.000.000
29	600074 20412	CATERPILLAR	D5K LGP / BULLDOZER	2013	1.628.000.000
30	600074 20512	CATERPILLAR	D5G / BULLDOZER	2011	1.772.000.000
31	600074 20612	CATERPILLAR	D6K LGP / BULLDOZER	2013	1.628.000.000
32	600074 20612	CATERPILLAR	D6R 2XL / BULLDOZER	2011	2.741.000.000
33	600074 20712	CATERPILLAR	D8R / BULLDOZER	2012	4.640.000.000
34	600074 20812	CATERPILLAR	DP 40N / FORKLIFT	2012	446.000.000
35	600074 20912	CATERPILLAR	428F / BACKHOE LOADER	2013	980.000.000
36	600074 21012	CATERPILLAR	6030 / EXCAVATOR	2015	45.600.000.000
37	600662 00675	DOOSAN	ADT DA40 / ARTICULATED DUMP TRUCK	2012	3.272.000.000
38	600662 00775	DOOSAN	D50C-5 STD / FORKLIFT	2012	371.000.000
39	600662 00875	DOOSAN	D70S-5 3M STD / FORKLIFT	2012	495.000.000
40	600662 00975	DOOSAN	DX 225 LCA / EXCAVATOR	2012	1.650.000.000
41	600447 00499	DYNAPAC	CA 151 / VIBRO	2005	405.000.000
42	600447 00599	DYNAPAC	CC20 / DOUBLE DRUM ROLLER	2011	498.000.000
43	600685 00199	EURO STAR	3240 / WHEEL LOADER	2012	192.000.000
44	600685 00299	EURO STAR	MT-4540 / WHEEL LOADER	2012	192.000.000

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1	2	3	4	5	6
1	600683 00199	AZO ID AZP	AZP 8 / THANDEM ROLLER	2011	485,000,000
2	600684 00199	BACKHLIS	WINDROW TURNER 17.5	2014	3,200,000,000
3	600056 00732	BOMAG	BW 100 AD / VIBRATOR TANDEM ROLLER	2015	386,000,000
4	600056 00832	BOMAG	BW 130 AD / VIBRATOR ROLLER	2015	588,000,000
5	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2012	787,000,000
6	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2013	819,000,000
7	600056 00932	BOMAG	BW 211D-40 / VIBRATOR ROLLER	2014	850,000,000
8	600056 01032	BOMAG	BW 219D-4 / COMPACTOR SINGLE DRUM	2013	1,644,000,000
9	600618 00599	CASE	2GS-580 N / BACKHOE LOADER	2012	1,083,000,000
10	600618 00699	CASE	580 SUPER N / BACKHOE LOADER	2011	1,264,000,000
11	600618 00799	CASE	580T 4X4 / TLB	2013	2,315,000,000
12	600074 17412	CATERPILLAR	120 K / MOTOR GRADDER	2013	1,548,000,000
13	600074 19212	CATERPILLAR	160 K / MOTOR GRADDER	2012	3,933,000,000
14	600074 19312	CATERPILLAR	304CR / MINI EXCAVATOR	2015	782,000,000
15	600074 19412	CATERPILLAR	313 D2 LGP / HYDRAULIC EXCAVATOR	2014	1,012,000,000
16	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2011	1,124,000,000
17	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2012	1,147,000,000
18	600074 19512	CATERPILLAR	320 D / EXCAVATOR	2013	1,198,000,000
19	600074 19612	CATERPILLAR	416F / BACKHOE LOADER	2013	979,000,000
20	600074 19712	CATERPILLAR	773 E / DUMP TRUCK	2012	6,297,000,000
21	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2012	3,317,000,000
22	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2013	3,487,000,000
23	600074 19812	CATERPILLAR	966 H / WHEEL LOADER	2014	3,657,000,000
24	600074 19912	CATERPILLAR	CAT 120K / MOTOR GRADER	2011	1,517,000,000
25	600074 20012	CATERPILLAR	CAT 428F / BACKHOE LOADER	2015	933,000,000
26	600074 20112	CATERPILLAR	CAT 924 H / WHEEL LOADER	2012	1,764,000,000
27	600074 20212	CATERPILLAR	D10T / BULLDOZER	2012	6,875,000,000
28	600074 20312	CATERPILLAR	D5E / BULLDOZER	2011	1,185,000,000
29	600074 20412	CATERPILLAR	D5K LGP / BULLDOZER	2013	1,628,000,000
30	600074 20512	CATERPILLAR	D5G / BULLDOZER	2011	1,772,000,000
31	600074 20612	CATERPILLAR	D6K LGP / BULLDOZER	2013	1,628,000,000
32	600074 20612	CATERPILLAR	D6R 2XL / BULLDOZER	2011	2,741,000,000
33	600074 20712	CATERPILLAR	D8R / BULLDOZER	2012	4,640,000,000
34	600074 20812	CATERPILLAR	DP 40N / FORKLIFT	2012	446,000,000
35	600074 20912	CATERPILLAR	428F / BACKHOE LOADER	2013	980,000,000
36	600074 21012	CATERPILLAR	6030 / EXCAVATOR	2015	45,600,000,000
37	600662 00675	DOOSAN	ADT DA40 / ARTICULATED DUMP TRUCK	2012	3,272,000,000
38	600662 00775	DOOSAN	D50C-5 STD / FORKLIFT	2012	371,000,000
39	600662 00875	DOOSAN	D70S-5 3M STD / FORKLIFT	2012	495,000,000
40	600662 00975	DOOSAN	DX 225 LCA / EXCAVATOR	2012	1,650,000,000
41	600447 00499	DYNAPAC	CA 151 / VIBRO	2005	405,000,000
42	600447 00599	DYNAPAC	CC20 / DOUBLE DRUM ROLLER	2011	498,000,000
43	600685 00199	EURO STAR	3240 / WHEEL LOADER	2012	192,000,000
44	600685 00299	EURO STAR	MT-4540 / WHEEL LOADER	2012	192,000,000

NO	KODING	MERЕК	TYPE	TH BUAT	NKJB
1	2	3	4	5	6
45	600685 00399	EURO STAR	MT-9040 / TRACTOR	2011	394,000,000
46	600685 00399	EURO STAR	MT-9040 / TRACTOR	2012	466,000,000
47	600685 00499	EURO STAR	FT-8240 / TRACTOR	2014	419,000,000
48	600009 00130	FORD NEW HOLLA	TL 90 / TRACTOR	2012	659,000,000
49	600686 00199	HELI	CDD 16-950 / STACKER	2013	140,000,000
50	600161 05549	HITACHI	210 MF-5G / EXCAVATOR	2014	1,052,000,000
51	600161 05649	HITACHI	GX 110 HP / EXCAVATOR	2012	965,000,000
52	600161 05749	HITACHI	ZW 180 / WHEEL LOADER	2012	1,426,000,000
53	600161 05849	HITACHI	ZX 138 MF / EXCAVATOR	2015	1,167,000,000
54	600161 05949	HITACHI	ZX 200 5G / EXCAVATOR	2013	1,110,000,000
55	600161 06049	HITACHI	ZX 210 LC-5G / EXCAVATOR	2012	1,310,000,000
56	600161 06149	HITACHI	ZX 210 MF / EXCAVATOR	2011	865,000,000
57	600161 06249	HITACHI	ZX 210 MF-5G / EXCAVATOR	2014	1,320,000,000
58	600161 04849	HITACHI	ZX 470 LC-5G / EXCAVATOR	2013	2,961,000,000
59	600161 06349	HITACHI	ZX 870 H-5G / EXCAVATOR	2012	6,178,000,000
60	600161 06449	HITACHI	ZX 200 3G / HYDRA EXCAVATOR	2012	1,055,000,000
61	600687 00199	JCB	3CX / BACKHOE LOADER	2013	958,000,000
62	600687 00299	JCB	531-70 / BACKHOE LOADER	2013	1,135,000,000
63	600687 00399	JCB	JS 200 SC / EXCAVATOR	2013	830,000,000
64	600630 01212	JOHN DEERE	JD5715 / FARM TRACTOR	2013	847,000,000
65	600222 00126	JONSERED	WX 165 / CRANE GRAPPLE	2014	1,399,000,000
66	600688 00199	KALMAR	DRF450-60S5 / REACH STACKER	2013	5,719,000,000
67	600217 01949	KOBELCO	SK 130 LB / HYDRAULIC EXCAVATOR	2011	1,865,000,000
68	600217 02049	KOBELCO	SK50P / EXCAVATOR	2011	756,000,000
69	600217 02149	KOBELCO	SK200-8 / HYDRA EXCAVATOR	2013	1,200,000,000
70	600220 24249	KOMATSU	D155A / BULLDOZER	2012	1,831,000,000
71	600220 24349	KOMATSU	D31E-20 / BULLDOZER	2014	736,000,000
72	600220 24449	KOMATSU	D39EX-22/P1 / BULLDOZER	2015	1,299,000,000
73	600220 24549	KOMATSU	D65 P-12 / BULLDOZER	2012	2,280,000,000
74	600220 24649	KOMATSU	D65E / BULLDOZER	2012	1,544,000,000
75	600220 24749	KOMATSU	D85E-SS-2 / BULLDOZER	2012	2,088,000,000
76	600220 24849	KOMATSU	GD511A-1 / MOTOR GRADER	2012	1,349,000,000
77	600220 24849	KOMATSU	GD511A-1 / MOTOR GRADER	2013	1,450,000,000
78	600220 24849	KOMATSU	GD511A-1 / MOTOR GRADER	2014	1,551,000,000
79	600220 24949	KOMATSU	HD 785 / DUMP TRUCK	2012	2,536,000,000
80	600220 25049	KOMATSU	PC 1250SP-8 / EXCAVATOR	2012	9,363,000,000
81	600220 25149	KOMATSU	PC 130F-7 / EXCAVATOR	2012	1,067,000,000
82	600220 25249	KOMATSU	PC 2000 / EXCAVATOR	2012	7,114,000,000
83	600220 25349	KOMATSU	PC 200-8 / EXCAVATOR	2012	1,159,000,000
84	600220 25349	KOMATSU	PC 200-8 / EXCAVATOR	2013	1,232,000,000
85	600220 25349	KOMATSU	PC 200-8 / EXCAVATOR	2014	1,304,000,000
86	600220 25449	KOMATSU	PC 300SE-8 / EXCAVATOR	2012	2,234,000,000
87	600220 25449	KOMATSU	PC 300SE-8 / EXCAVATOR	2013	2,362,000,000
88	600220 25549	KOMATSU	PC 400LCSE-8 / EXCAVATOR	2012	3,310,000,000
89	600220 25549	KOMATSU	PC 400LCSE-8 / EXCAVATOR	2013	3,440,000,000
90	600220 24349	KOMATSU	D31E-20 / BULLDOZER	2013	1,224,000,000

NO	KODING	MERЕК	TYPE	TH BUAT	NJKB
1	2	3	4	5	6
91	600220 24549	KOMATSU	D65 P-12 / BULLDOZER	2013	1,150,000,000
92	600220 25649	KOMATSU	D85E-SS-2 / BULLDOZER	2014	2,302,000,000
93	600220 25749	KOMATSU	PC 200 / EXCAVATOR	2013	1,299,000,000
94	600220 25849	KOMATSU	WA 150-5 / LOADER	2014	711,000,000
95	600464 00401	KUBOTA	LS P90 / FARM TRACTOR	2012	320,000,000
96	600464 00501	KUBOTA	M 9540 / TRACTOR	2012	404,000,000
97	600464 00501	KUBOTA	M 9540 / TRACTOR	2013	424,000,000
98	600468 00299	LINDE	C90-7 / CONTAINER HANDLER	2012	3,169,000,000
99	600689 00199	LIU GONG	WL CLG 835 / WHEEL LOADER	2011	596,000,000
100	600690 00199	LONKING	CDM 520 D / SINGLE DRUM ROLLER	2015	679,000,000
101	600690 00299	LONKING	CDM 855 EK / WHEEL LOADER	2015	740,000,000
102	600690 00399	LONKING	LG30DT / FORKLIFT	2016	325,000,000
103	600691 00199	LS TRACTOR	LS 47 / FARM TRACTOR	2013	571,000,000
104	600691 00299	LS TRACTOR	LS S45D (VGO) / FARM TRACTOR	2013	685,000,000
105	600470 01012	MASSEY FERGUSO	MF 2651 - 4 WD / FARM TRACTOR	2014	265,000,000
106	600470 01112	MASSEY FERGUSO	MF 440 / FARM TRACTOR	2011	446,000,000
107	600470 01212	MASSEY FERGUSO	MF 450 / FARM TRACTOR	2015	480,000,000
108	600261 95449	MITSUBISHI	FD50-2SP40-SPED/CF28C-50065 / FORKLIFT	2014	477,000,000
109	600261 95549	MITSUBISHI	FD-50N / FORKLIFT	2012	427,000,000
110	600281 00560	NEW HOLLAND	6610S-4WD / TRACTOR	2013	536,000,000
111	600281 00960	NEW HOLLAND	TD90 / TRACTOR	2015	338,000,000
112	600281 01060	NEW HOLLAND	TT SS WD / FARM TRACTOR	2012	465,000,000
113	600692 00199	NICHIYU	FBR W 18-75C-600 M / FORKLIFT	2014	216,000,000
114	600478 00999	SAKAI	652 / VIBRATOR ROLLER DOUBLE DRUM	2015	875,000,000
115	600478 01099	SAKAI	SV 515 D / VIBRATING COMPACTOR	2012	1,145,000,000
116	600478 01199	SAKAI	SV 525 D / VIBRATOR ROLLER	2015	852,000,000
117	600672 00225	SANY	SHG 1090 C / MOTOR GRADER	2015	1,234,000,000
118	600693 00199	SHANDONG LIUGO	LG936L / WHEEL LOADER	2012	517,000,000
119	600627 00525	SHANTUI	D16L / BULLDOZER	2014	1,334,000,000
120	600357 01849	SUMITOMO	SH210-S / EXCAVATOR	2013	1,420,000,000
121	600371 02549	TCM	TCMFD150S-3 / FORKLIFT	2013	514,000,000
122	600372 00399	TERBERG	YT 220 MK 11 / TERMINAL TRACTOR	2013	935,000,000
123	600673 00212	TEREX	TR50 / DUMP TRUCK	2012	2,216,000,000
124	600381 89649	TOYOTA	60-8FD30 / FORKLIFT	2013	371,000,000
125	600381 89749	TOYOTA	02-7 FD A50 / FORKLIFT	2013	252,000,000
126	600401 17326	VOLVO	A40F / ARTICULATED DUMP TRUCK	2012	4,045,500,000
127	600401 17426	VOLVO	EC210BLC / EXCAVATOR	2012	1,128,000,000
128	600401 17526	VOLVO	L 150 E / WHEEL LOADER	2012	1,464,000,000
129	600401 17626	VOLVO	SD110D C-SERIES / COMPACTOR	2013	979,000,000
130	600694 00199	WINTOR	EXPLORER G-4 / TRACTOR	2016	102,000,000
131	600695 00199	XCMG	QUY50A / CRAWLER CRANE	2012	1,070,000,000
132	600695 00299	XCMG	QUY50A / CRAWLER CRANE	2013	1,124,000,000
133	600696 00199	XUGONG	QY25K / CRANE	2014	1,582,000,000
134	600674 00212	YANMAR	EF352T / TRACTOR	2012	183,000,000

HARGA MATERIAL

URAIAN	KODE	SATUAN	HARGA SATUAN (Rp.)	KETERANGAN
Pasir Pasang (Sedang)	M01b	M3	137.270,27	152.370,00
Pasir Beton (Kasar)	M01a	M3	168.891,89	231.870,00
Pasir Halus (untuk HRS)	M01c	M3	133.288,29	147.950,00
Pasir Urug (ada unsur lempung)	M01d	M3	93.900,90	104.230,00
Batu Kali	M02	M3	537.117,12	596.200,00
Agregat Pecah Kasar	M03	M3	367.747,75	463.700,00
Agg. Halus LP A	M04	M3	417.747,75	463.700,00
Agregat Lolos # 1 "	M38	M3	417.747,75	463.700,00
Lolos screen1 ukuran (0 - 5)	M89a	M3	417.747,75	463.700,00
Lolos screen2 ukuran (0 - 5)	M89b	M3	417.747,75	463.700,00
Lolos screen2 ukuran (5 - 9,5)	M89c	M3	417.747,75	463.700,00
Lolos screen2 ukuran (9,5 - 19,0)	M89d	M3	417.747,75	463.700,00
F i l l e r (non semen) (limestone dust, kapur padam, dolomit, fly ash)	M05	Kg	2.952,25	3.277,00
Batu Belah / Kerakal	M06	M3	498.360,36	553.180,00
G r a v e l	M07	M3	333.333,33	370.000,00
Bahan Tanah Timbunan	M08	M3	93.432,43	103.710,00
Bahan Pilihan	M09	M3	106.729,73	118.470,00
Aspal	M10	Kg	18.000,00	19.980,00
Kerosen / Minyak Tanah	M11	LITER	12.963,96	14.390,00
Semen / PC (50kg)		Zak	79.099,10	87.800,00
Semen / PC (kg)	M12	Kg	1.581,98	1.756,00
Besi Beton	M13	Kg	16.702,70	18.540,00
Kawat Beton	M14	Kg	25.225,23	28.000,00
Kawat Bronjong	M15	Kg	26.981,98	29.950,00
S i r t u	M16	M3	757.990,99	841.370,00
S i r t u (4 ≤ PI ≤10 ; LL ≤ 35 %)		M3	757.990,99	841.370,00
S i r t u (4 ≤ PI ≤15 ; LL ≤ 35 %)		M3	757.990,99	841.370,00
Cat Marka (Non Thermoplas)	M17a	Kg	20.270,27	22.500,00
Cat Marka (Thermoplastic)	M17b	Kg	91.420,00	91.420,00
P a k u	M18	Kg	22.972,97	25.500,00
Kayu Perancah	M19	M3	2.144.144,14	2.380.000,00
B e n s i n	M20	LITER	11.531,53	12.800,00
S o l a r	M21	LITER	20.630,63	22.900,00
Minyak Pelumas / Oli	M22	LITER	47.090,09	52.270,00
Plastik Filter	M23	M2	13.513,51	15.000,00
Pipa Galvanis Dia. 1.6"	M24	Batang	138.738,74	154.000,00
Pipa Porus diameter 4"	M25	M'	36.036,04	40.000,00
Agr. Kelas A	M26	M3	465.540,54	516.750,00
Agr. Kelas B	M27	M3	459.567,57	510.120,00
Agr. Kelas S	M29	M3	815.936,69	905.689,72
Lapis Drainase		M3	333.333,33	370.000,00
Geotextile	M30	M2	17.117,12	19.000,00
Aspal Emulsi	M31	Kg	18.000,00	19.980,00
Gebalan Rumput	M32	M2	22.522,52	25.000,00
Thinner	M33	Liter	35.585,59	39.500,00
Glass Bead	M34	Kg	17.117,12	19.000,00
Pelat Rambu (Eng. Grade)	M35a	BH	158.558,56	176.000,00
Pelat Rambu (High I. Grade)	M35b	BH	195.045,05	216.500,00
Rel Pengaman	M36	M'	668.468,47	742.000,00
Beton Struktur Fc' 30 Mpa	M37	M3	3.051.271,90	3.051.271,90
Baja Tulangan (Polos) U24	M39a	Kg	16.027,03	17.790,00
Baja Tulangan (Ulir) D32	M39b	Kg	18.045,05	20.030,00
Kapur	M40	M3	36.036,04	40.000,00
Chipping	M41	M3	275.669,87	305.993,56
Chipping (kg)	M41kg	Kg	131,77	162,35
Cat	M42	Kg	48.648,65	54.000,00
Pemantul Cahaya (Reflector)	M43	Bh.	11.351,35	12.600,00
Pasir Urug	M44	M3	93.900,90	104.230,00
Arbocell	M45	Kg.	28.828,83	32.000,00
Baja Bergelombang	M46	Kg	17.117,12	19.000,00
Beton Fc' 10 Mpa	M47	M3	1.794.119,55	1.794.119,55
Baja Struktur	M48	Kg	12.432,43	13.800,00
Tiang Pancang Baja d 50 cm	M49	M'	495.495,50	550.000,00
Tiang Pancang Beton Pratekan	M50	M3	2.299.099,10	2.552.000,00
Kawat Las	M51	Kg	31.531,53	35.000,00
Pipa Baja	M52	Kg	12.432,43	13.800,00
Minyak Fluks	M53	Liter	5.618,92	6.237,00
Bunker Oil	M54	Liter	2.702,70	3.000,00
Asbuton Halus	M55	Ton	292.792,79	325.000,00
Baja Prategang	M56	Kg	12.432,43	13.800,00

URAIAN	KODE	SATUAN	HARGA SATUAN (Rp.)	KETERANGAN
Baja Tulangan	M57a	Kg	16.027,03	17.790,00
Baja Tulangan (Ulir) D39	M39c	Kg	18.045,05	20.030,00
Baja Tulangan (Ulir) D48	M39d	Kg	18.045,05	20.030,00
PCI Girder L=17m	M58a	Buah	77.477.477,48	86.000.000,00
PCI Girder L=21m	M58b	Buah	87.387.387,39	97.000.000,00
PCI Girder L=26m	M58c	Buah	111.711.711,71	124.000.000,00
PCI Girder L=32m	M58d	Buah	141.441.441,44	157.000.000,00
PCI Girder L=36m	M58e	Buah	151.351.351,35	168.000.000,00
PCI Girder L=41m	M58f	Buah	172.972.972,97	192.000.000,00
Beton Struktur Fe' 30 Mpa	M59	M3	4.650.854,27	4.650.854,27
Beton Struktur Fe' 15 Mpa	M60	M3	2.057.277,54	2.057.277,54
Cerucuk	M61	M	4.054	4.500,00
Elastomer 30x30x5	M62	buah	369.369	410.000,00
Bahan Pengawet: kreosot	M63	liter	45.045	50.000,00
Mata Kucing	M64	buah	118.739	131.800,00
Anchorage	M65	buah	672.023	828.000,00
Anti strpping agent	M66	Kg	45.045,05	50.000,00
Bahan Modifikasi	M67	Kg	1.009,01	1.120,00
Beton Struktur Fe' 50 Mpa	M68	M3	4.830.251,34	2.504.347,54
Beton Struktur Fe' 40 Mpa	M69	M3	4.768.268,05	4.131.400,74
Ducting (Kabel prestress)	M70	M'	135.135	150.000,00
Ducting (Strand prestress)	M71	M'	45.045	50.000,00
Beton Fe' 35 Mpa	M72	M3	4.764.198,05	4.131.400,74
Multipleks 18 mm	M73	M2	85.600,00	87.300,00
Elastomer jenis 1	M74a	buah	347.297,30	385.500,00
Elastomer jenis 2	M74b	buah	585.585,59	650.000,00
Elastomer jenis 3	M74c	buah	754.954,95	838.000,00
Expansion Tipe Joint Asphaltic Plug	M75d	M	1.261.261,26	1.400.000,00
Expansion Join Tipe Rubber	M75e	M	1.081.081,08	1.200.000,00
Expansion Join Baja Siku	M75f	M	245.045,05	272.000,00
Marmer	M76	Buah	540.540,54	600.000,00
Kerb Type A	M77	Buah	40.540,54	45.000,00
Paving Block	M78	Buah	74.324,32	82.500,00
Mini Timber Pile	M79	Buah	24.324,32	27.000,00
Expansion Joint Tipe Torma	M80	M1	1.081.081,08	1.200.000,00
Strip Bearing	M81	Buah	206.756,76	229.500,00
Joint Socket Pile 35x35	M82	Set	547.297,30	607.500,00
Joint Socket Pile 16x16x16	M83	Set	60.810,81	67.500,00
Mikro Pile 16x16x16	M84	M1	54.729,73	60.750,00
Matras Concrete	M85	Buah	364.864,86	405.000,00
Assetilline	M86	Botol	206.756,76	229.500,00
Oxygen	M87	Botol	103.378,38	114.750,00
Batu Bara	M88	Kg	540,54	600,00
Pipa Galvanis Dia 3"	M24a	M	131.396,40	145.850,00
Pipa Galvanis Dia 1,5"	M24b	M	58.423,42	64.850,00
Agregat Pecah Mesin 0-5 mm	M91	M3	417.747,75	463.700,00
Agregat Pecah Mesin 5-10 & 10-20 mm	M92	M3	417.747,75	463.700,00
Agregat Pecah Mesin 20-30 mm	M93	M3	487.242,26	463.700,00
Joint Sealent	M94	Kg	25.225,23	28.000,00
Cat Besi Anti Karat	M95	Kg	70.360,36	78.100,00
Expansion Cap	M96	Kg	5.450,45	6.050,00
Polytene 125 Mikron	M97	Kg	16.666,67	18.500,00
Curing Compound	M98	Ltr	13.738,74	15.250,00
Kayu Acuan	M99	Kg	2.144.144,14	2.380.000,00
Additive	M67a	Kg	33.333,33	37.000,00
Casing Baja	M100	M2	190.225,23	211.150,00
Pasir Tailing	M101	M3	233.333,33	259.000,00
Polimer	M102		40.540,54	45.000,00
Batubara	M103	kg	720,72	800,00
Kerb jenis 1	M104	Buah	40.540,54	45.000,00
Kerb jenis 2	M105	Buah	45.045,05	50.000,00
Kerb jenis 3	M106	Buah	49.549,55	55.000,00
Bahan Modifikasi	M107	Kg	1.009,01	1.120,00
Aditif anti pengelupasan	M108	Liter	45.045,05	50.000,00
Bahan Pengisi (Filler) Tambahan	M109	Kg	1.581,98	1.756,00
Asbuton yang diproses	M110	Kg	27.027,03	30.000,00
Elastomer Alam	M111	Kg	27.027,03	30.000,00
Elastomer Sintesis	M112	Kg	27.027,03	30.000,00
Anchorage	M113	Buah	230.405,41	255.750,00
- hidup	M114	bh	675.675,68	750.000,00
- mati	M115	bh	360.360,36	400.000,00
Kabel Prategang	M116	Kg	17.319,82	19.225,00
- Selongsong	M117	M'	88.648,65	98.400,00
- Baja Prategang	M118	Kg	621.989,05	621.989,05
- Grouting	M119	M2	6.089,33	6.759,16
Angkur Kabel Prategang, Tipe.....	M120	M2	0,00	-
Angkur Kabel Prategang, Tipe.....	M121	buah	0,00	-
Baja Profil	M122	Kg	0,00	-
Baja Tulangan BJTP 24 (epoxy coated)	M123	Kg	0,00	-

URAIAN	KODE	SATUAN	HARGA SATUAN (Rp.)	KETERANGAN
Epoxy coated	M124	Kg	0,00	-
Cairan Perekat (Epoxy Resin)	M125	Kg	166.666,67	185.000,00
Epoxy Bahan Penutup (sealant)	M126	Kg	223.423,42	248.000,00
Alat Penyuntik Anti Gravitasi	M127	Bh	31.531,53	35.000,00
Polymer Mortar	M128	Kg	0,00	-
Anti Korosif Baja	M129	Kg	0,00	-
Acuan/multipleks	M130	M3	2.144.144,14	2.380.000,00
Concrete Grouting	M131	Kg	0,00	-
Pipa Galvanis Dia 8"	M132	M	707.207,21	785.000,00
Pelat Baja	M133	Kg	0,00	-
Baut Angkur	M134	Kg	22.522,52	25.000,00
Pipa Aluminium	M135	M'	0,00	-
Cat Galvanis	M136	Kg	90.090,09	100.000,00
Baut Mutu Tinggi	M137	Buah	22.522,52	25.000,00
Baja Struktur Titik leleh 2500 kg/cm2	M138	Kg	0,00	-
Baja Struktur Titik leleh 2800 kg/cm2	M139	Kg	0,00	-
Baja Struktur Titik leleh 3500 kg/cm2	M140	Kg	0,00	-
Bahan Grouting	M141	Kg	0,00	-
Kayu Kelas 1	M142	Kg	4.504.504,50	5.000.000,00
Pelat Baja (Klem)	M143	Kg	0,00	-
Timbunan/urugan Porous	M144	M3	273.840,52	273.840,52
Bahan Pengaman tebing galian (kayu)	M145	M3	0,00	-
Bahan Curing	M146	M2	0,00	-
Gelagar baja	M147	Kg	0,00	-
Fibre jenis e-glass	M148	M2	0,00	-
Bahan Geosynthetic	M149	M2	0,00	-
Bahan Baja Profil	M150	Kg	0,00	-
Bahan Baja Profil, Mutu BJ 32	M151	Kg	0,00	-
Bahan Baja Profil, Mutu BJ 41	M152	Kg	0,00	-
Bahan Baja Profil, Mutu BJ 52	M153	Kg	0,00	-
Petroleum jelly	M154	Kg	0,00	-
Bahan anti rayap	M155	Kg	0,00	-
Pelat Baja Galvanis	M156	Kg	0,00	-
Baja Struktur Lantai Ortotropik	M157	Kg	0,00	-
Aspal Emulsi CSS-1 atau SS-1	M31a	Liter	18.000,00	19.980,00
Aspal Emulsi CRS-1 atau RS-1	M31b	Liter	18.000,00	19.980,00
Aspal Emulsi Modifikasi Polimer 1h	M31c	Liter	18.000,00	19.980,00
Aspal Emulsi Modifikasi Polimer 2h	M31d	Liter	18.000,00	19.980,00
Serat Selulosa	M158	KG	20.270,27	22.500,00
Zeolit	M159	KG	5.405,41	6.000,00
Wax	M160	KG	28.905,41	32.085,00
Asbuton B 5/20	M161	KG	855,86	950,00
CPHMA	M162	Ton	0,00	-
Asbuton B 50/20	M163	KG	900,90	1.000,00
Pasir Kasar	M164	M3	208.891,89	231.870,00
Pipa Porus diameter 5"	M25a	M'	69.369,37	77.000,00
Pipa Porus diameter 6"	M25b	M'	99.099,10	110.000,00
Pipa Porus diameter 8"	M25c	M'	128.378,38	142.500,00
Backer rod 3/8 inci	M165	Kg	9.759,76	10.833,33
Cairan Perekat (Epoxy Resin) 2 komponen	M166	Ltr	315.315,32	350.000,00
Semen alumina	M167	Kg	12.156,00	13.493,16
Semen (OPC)	M168	Kg	1.009,01	1.120,00
Pasir Kasar	M134	M3	208.891,89	231.870,00
AK-2 (10/20)	M169	M3	211.711,71	235.000,00
Air	M170	Liter	13,20	14,65
Super plastisizer, maks 0,3 % Sm	M171	Kg	25.225,23	28.000,00
curing compound (pigmen putih)	M172	Ltr	13.738,74	15.250,00
BjTP 280	M173	Kg	16.027,03	17.790,00
Concrete Grouting Non shrinkage HWR	M174	Kg	6.089,34	6.759,16
Plastik membrane polyethylene 125 mikron	M175	Kg	16.666,67	18.500,00
Mortar semen cepat mengeras (RSC)	M176	Kg	3.870,54	4.296,30
Mortar pre-packed untuk stiching	M177	Kg	6.396,40	7.100,00
Termoplastik (sealant tuang panas)	M178	Kg	26.112,61	28.985,00
Backer rod 1 1/6 inci	M179	M1	14.914,29	16.554,86
Termoseting (sealant tuang dingin)	M180	Kg	58.858,86	65.333,33
Bahan grouting tersedia jenis preformed	M181	Kg	22.272,52	24.722,50
Plastizier'	M182	Kg	25.225,23	28.000,00
Rapid Setting Material (Beton Semen Fast Track < 24 jam)	M183	M3	3.689.747,19	4.095.619,38
Thermocouple	M184	Buah	25.000,00	25.000,00
Beton Struktur fc' 45 Mpa	M185	M3	4.768.268,05	4.768.268,05
Beton Struktur fc' 20 Mpa	M186	M4	2.882.547,38	2.882.547,38
Baja Struktur Grade 345 (Kuat Leleh 345 Mpa)	M187	Kg	15.315,32	17.000,00
Baja Struktur Grade 485 (Kuat Leleh 485 Mpa)	M188	Kg	16.216,22	18.000,00
Baja Struktur Grade 690 (Kuat Leleh 690 Mpa untuk Tebal Pelat ≤	M189	Kg	19.819,82	22.000,00
Baja Struktur Grade 690 (Kuat Leleh 620 Mpa untuk Tebal Pelat >	M190	Kg	19.819,82	22.000,00
Casing, diameter 800 mm	M191	Rp/M'	38.256,43	42.464,64
Bahan turap kayu tanpa pengawetan	M192	M3/M'	900.900,90	1.000.000,00
Berat H Beam per m'	M193		12.432,43	13.800,00

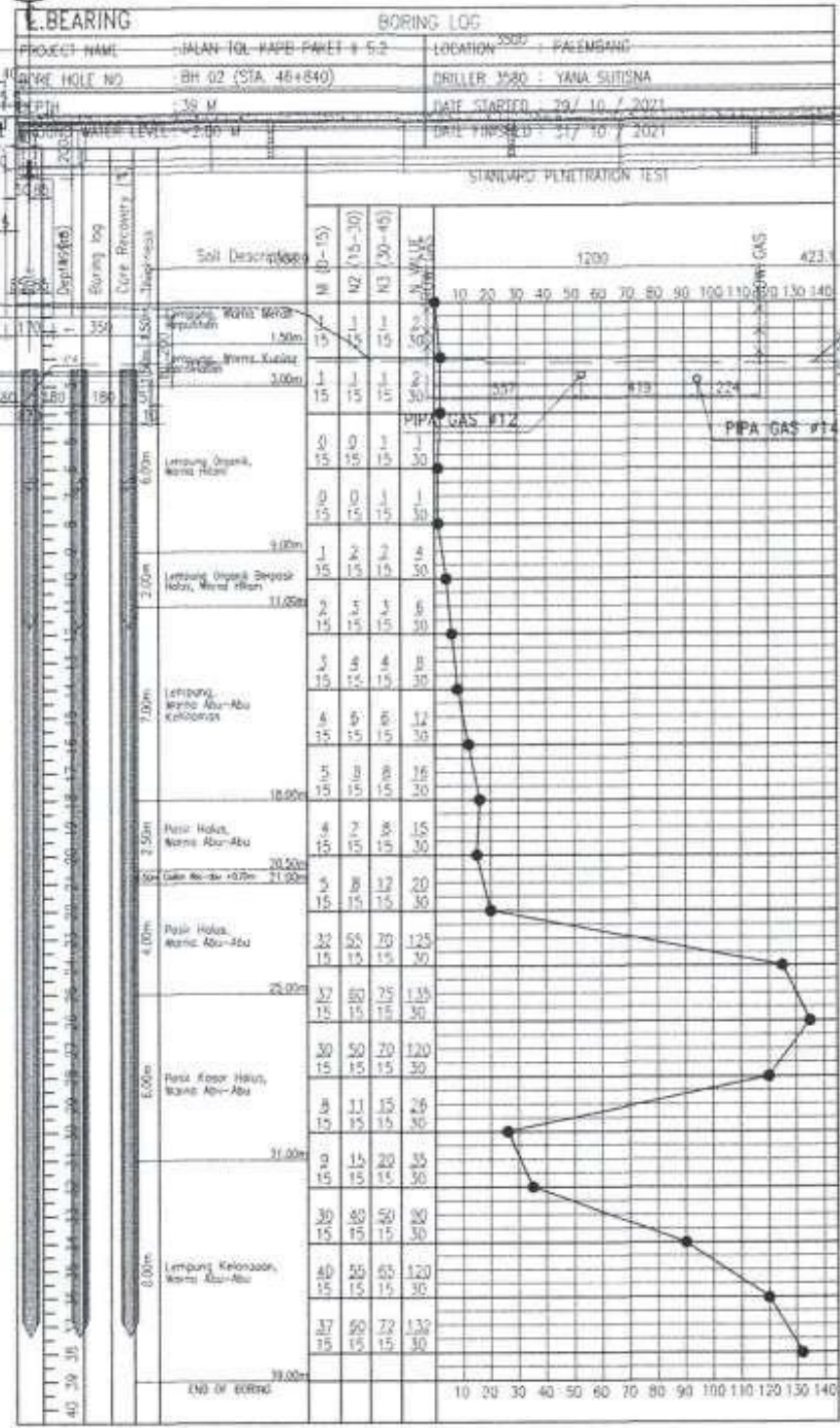
URAIAN	KODE	SATUAN	HARGA SATUAN (Rp.)	KETERANGAN
Strand 1/2 inci	M194		17.281,87	19.182,87
Perancah/ formwoks	M195		135.135,14	150.000,00
Bahan Turap Kayu dengan pengawetan	M196	M3/M'	1.171.171,17	1.300.000,00
Kreosot	M197	Kg	45.045,05	50.000,00
Bonding Agent	M198	Ltr	45.045,05	50.000,00
Cat dasar beton	M199	Kg	28.828,83	32.000,00
Cat akhir protektif beton	M200	Kg	36.036,04	40.000,00
Cat akhir dekoratif beton	M201	Kg	66.756,76	74.100,00
Cat dasar baja	M202	Kg	54.054,05	60.000,00
Cat akhir protektif baja	M203	M2		
FRP jenis E-glass untuk daerah kering	M204	M2		
FRP jenis E-glass untuk daerah basah	M205	M2		
FRP jenis glass untuk daerah kering	M206	M2		
FRP jenis carbon untuk daerah kering	M207	M2		
FRP jenis carbon untuk daerah basah	M208	M2		
Baja untuk pelat buhul dan pelat ganjal	M209	Buah		
Baut mutu tinggi A325 Tipe 1 diameter M25	M210	Buah		
Baut Mutu Tinggi A490 Tipe 1 diameter M25	M211	Buah	22.522,52	25.000,00
Baut Biasa Grade A diameter M25	M212	Buah		
Baut Biasa Grade B diameter M25	M213	Buah		
Baut Biasa Grade C untuk anchor bolts diameter M25	M214	Buah		
Elektroda Las SMAW	M215	Kg		
Elektroda Las SAW	M216	Kg	13.513,51	15.000,00
Elektroda Las GMAW	M217	Kg		
Elektroda Las FCAW	M218	Kg		
Pasir untuk sand blasting	M219	M3		
Baja Grade 250	M220	Kg		
Baja Grade 345	M221	Kg		
Baja Grade 485	M222	Kg		
Baut dan Mur	M223	Buah	11.711,71	13.000,00
Cat dasar kayu	M224	Kg		
Cat akhir protektif kayu	M225	Kg		
Perkerasan beton fast track <8 jam	M226	Kg	3.612.199,09	4.009.540,99
Silicon Seal	M227	Kg	27.027,03	30.000,00
Karet Pengisi Sambungan Strip Seal	M228	M'	1.081.081,08	1.200.000,00
Karet Pengisi Sambungan Compression Seal	M229	M'	1.081.081,08	1.200.000,00
Sambungan siar muai tipe modular	M230	M'	36.036,04	40.000,00
Sambungan siar muai tipe finger plate	M231	M'	3.153.153,15	3.500.000,00
Sambungan siar muai tipe doble siku	M232	M'		
Penutup karet neoprene	M233	M'		
Landasan logam berongga (Pot Bearing)	M234	Buah	3.001.458,81	3.331.619,28
Landasan logam jenis Spherical	M235	Buah	4.054.054,05	4.500.000,00
Stopper Lateral dan Horizontal	M236	Buah		
Lem PVC	M237	Kg	40.540,54	45.000,00
Tiang sandaran baja	M238	M'	135.135,14	150.000,00
Deck Drain	M239	Buah	90.090,09	100.000,00
Pipa PVC	M240	M'	67.567,57	75.000,00
Pipa Baja	M241	M'	360.360,36	400.000,00
Sambungan Pipa PVC	M242	Buah	13.513,51	15.000,00
Sambungan Pipa Baja	M243	Buah	31.531,53	35.000,00
Baja Tulangan (Furnished)	M57b	Kg	12.321,13	13.676,46
Bronjong dengan kawat dilapisi galvanis	M15a	Kg	18.018,02	20.000,00
Bronjong dengan kawat dilapisi PVC	M15b	Kg	25.225,23	28.000,00
Turap Beton	M244	Kg	4.764.198,05	4.131.400,74
Tiang Pancang Kayu	M245	M3	1.711.711,71	1.900.000,00
Plat sepatu tiang pancang / plat sambung	M246	Kg	13.963,96	15.500,00
Beton struktur bervolume besar, fc'30 Mpa	M247	M3	4.746.965,08	4.746.965,08
Beton struktur bervolume besar, fc'25 Mpa	M248	M3	4.649.284,76	4.649.284,76
Beton struktur bervolume besar, fc'20 Mpa	M249	M3	2.975.663,06	2.975.663,06
Beton struktur memadat sendiri, fc'30 Mpa	M250	M3	4.992.592,84	4.992.592,84
Beton struktur memadat sendiri, fc'25 Mpa	M251	M3	4.908.458,21	4.908.458,21
Beton struktur memadat sendiri, fc'20 Mpa	M252	M3	3.764.469,94	3.764.469,94
Beton Fc'35 Mpa	M253	M3	4.764.198,05	4.764.198,05
BjTS 280	M254	Kg	18.045,05	20.030,00
Asphaltic plug	M255	Kg	25.225,23	28.000,00
Asphaltic plug Moveable	M256	Kg	25.225,23	28.000,00
Accelerator	M256	Kg	15.765,77	17.500,00
Insulasi	M257	m2	135.135,14	150.000,00
Anyaman Kawat Baja Dilas	M258	Kg	10.990,99	12.200,00
Curing membrane	M259	Kg	180.180,18	200.000,00
Sambungan siar muai tipe Karet (Preformed T-shape)	M260	Kg	36.864,86	40.920,00
Bridging Plate PL 125 x 6	M261	Kg	13.963,96	15.500,00
Perletakan logam tipe fixed 150 Ton	M262	Buah	1.351.351,35	1.500.000,00
Perletakan logam tipe movable 150 Ton	M263	Buah	1.801.801,80	2.000.000,00
Elastomer bearing pad; (450x400x73) mm3	M264	Buah	2.367.567,57	2.628.000,00
Beton c 10 Mpa	M265	M3	1.591.333,41	1.766.380,09
Marmar	M266	M2	270.270,27	300.000,00
Baja Tulangan Angkur	M267	Kg	18.045,0	20.030,00
BjTS 420	M268	Kg	13.045,0	20.030,00

Detail Pemesian	Kode Besi	Type Bar Bending	Diameter (mm)	Jarak (mm)	Dimensi (Cm)					Total Panjang (m)	Jumlah Besi	Berat Unit (kg/m)	Jumlah Konstruksi (Jalur A)	Berat Total (kg)	Keterangan
	a	b	c	d	e										
	A1a.1	A	32	-	20	673	20			713	2	6.31	1.00	89.98	
	A1a.2	A	32	-	20	649	20			689	2	6.31	1.00	86.95	
	A2	G	19	200	150	1050	251	150		1601	33	2.23	1.00	1178.18	
	A2a	G	19	200	10	1190	121	10		1331	28	2.23	1.00	831.08	
	A4	G	19	200	150	251	1050	150		1601	33	2.23	1.00	1178.18	
	A6	B	19	100	1200	101				1301	12	2.23	1.00	348.15	
	A7	K	16	200	55	27	80	7	7	176	63	1.58	1.00	175.19	
	A8	L	16	200	7	295	15	7		324	63	1.58	1.00	322.51	
	A9	C	13	400/600	7	145	7			159	320	1.04	1.00	529.15	
	A10	C	13	400/600	7	50	7			64	21	1.04	1.00	13.98	
	A10.1	C	13	400/600	7	17	7			31	21	1.04	1.00	6.77	
	A10.2	C	13	400/600	7	10	7			24	63	1.04	1.00	15.72	
	A14	B	16	200	1200	101				1301	5	1.58	1.00	102.78	
	BERAT TULANGAN PER DIAMETER A1a,A2,A2a,A4,A6,A7,A8,A9,A10,A14 (Kg)												D13	565.62	
												D16	600.48		
												D19	3,535.58		
												D32	176.93		

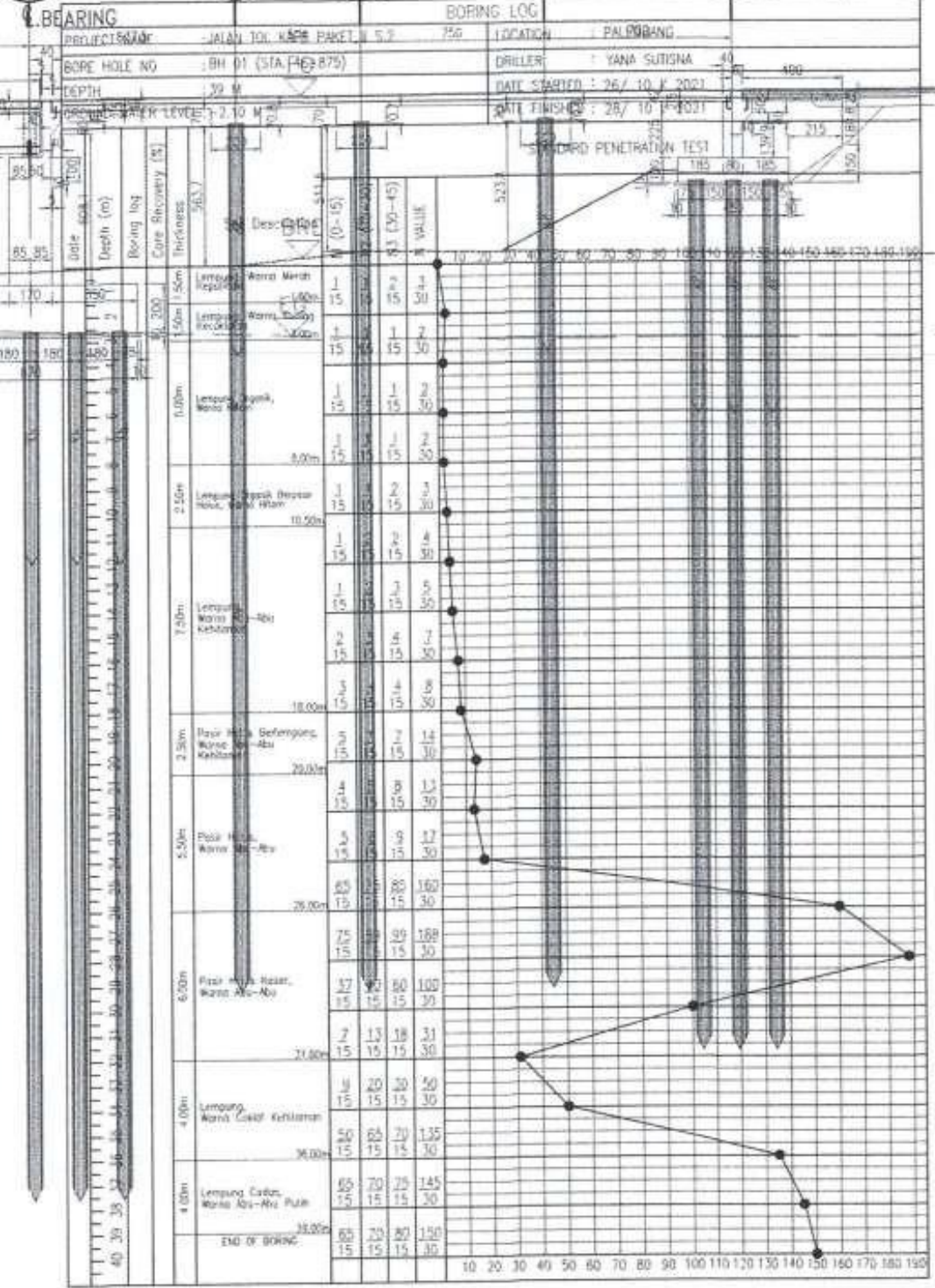
REKAP BERAT TULANGAN PER DIAMETER (Kg)												D13	565.62	
												D16	600.48	
												D19	3,535.58	
												D32	10,852.30	
TOTAL BERAT TULANGAN PER DIAMETER P1A(Kg)													15,553.98	



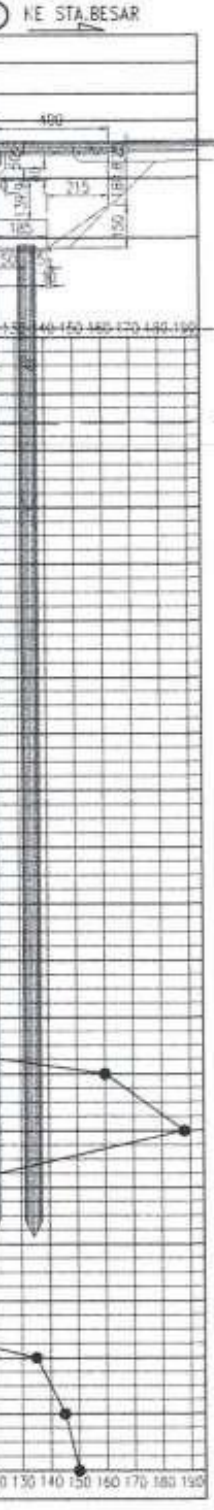
P18



P29



A28



TABEL PEMANCANGAN UB STA 46+800

LOKASI	JUMLAH TITIK PEMANCANGAN	NOMER TITIK	TIPE TIANG PANCANG (m)					TOTAL (m)	TERPASANG s.d COP (m)
			BOTTOM	MIDDLE	MIDDLE	MIDDLE	MIDDLE		
P1 A	30 TITIK	1	12	15	-	-	-	27	24.17
		2	12	15	-	-	-	27	24.09
		3	12	15	-	-	-	27	23.58
		4	12	15	-	-	-	27	23.65
		5	12	15	-	-	-	27	23.20
		6	12	15	-	-	-	27	23.21
		7	12	15	-	-	-	27	23.44
		8	12	15	-	-	-	27	23.06
		9	12	15	-	-	-	27	22.07
		10	12	15	-	-	-	27	23.49
		11	12	15	-	-	-	27	23.50
		12	12	15	-	-	-	27	23.80
		13	12	15	-	-	-	27	23.78
		14	12	15	-	-	-	27	23.94
		15	12	15	-	-	-	27	23.73
		16	12	15	-	-	-	27	23.46
		17	12	15	-	-	-	27	23.00
		18	12	15	-	-	-	27	23.44
		19	12	15	-	-	-	27	23.52
		20	12	15	-	-	-	27	23.50
		21	12	15	-	-	-	27	23.91
		22	12	15	-	-	-	27	23.76
		23	12	15	-	-	-	27	23.63
		24	12	15	-	-	-	27	23.91
		25	12	15	-	-	-	27	24.16
		26	12	15	-	-	-	27	23.74
		27	12	15	-	-	-	27	23.97
		28	12	15	-	-	-	27	23.91
		29	12	15	-	-	-	27	23.85
		30	12	15	-	-	-	27	23.14
P1 B	30 TITIK	1	12	15	-	-	-	27	23.43
		2	12	15	-	-	-	27	23.06
		3	12	15	-	-	-	27	22.86
		4	12	15	-	-	-	27	22.78
		5	12	15	-	-	-	27	23.04
		6	12	15	-	-	-	27	22.91
		7	12	15	-	-	-	27	23.20
		8	12	15	-	-	-	27	23.00
		9	12	15	-	-	-	27	22.40
		10	12	15	-	-	-	27	23.50
		11	12	15	-	-	-	27	23.15
		12	12	15	-	-	-	27	23.88
		13	12	15	-	-	-	27	23.12
		14	12	15	-	-	-	27	23.23
		15	12	15	-	-	-	27	23.23
		16	12	15	-	-	-	27	22.72
		17	12	15	-	-	-	27	22.87
		18	12	15	-	-	-	27	23.17
		19	12	15	-	-	-	27	22.98
		20	12	15	-	-	-	27	23.21
		21	12	15	-	-	-	27	22.89
		22	12	15	-	-	-	27	23.38
		23	12	15	-	-	-	27	23.27
		24	12	15	-	-	-	27	23.04
		25	12	15	-	-	-	27	23.40
		26	12	15	-	-	-	27	23.24
		27	12	15	-	-	-	27	23.39
		28	12	15	-	-	-	27	23.50
		29	12	15	-	-	-	27	23.36
		30	12	15	-	-	-	27	23.65

SNI 3966:2012

Lampiran A
(normatif)
Kinerja karakteristik bantalan karet

Tabel A.1 - Bantalan karet ukuran 230 mm X 150 mm

ketebalan pelat baja : 5 mm
(faktor bentuk efektif : 7,17)

ketebalan selimut samping : 6 mm
kekakuan tekan lapisan selimut
atas dan bawah : $1\,020 \times 10^3$ kN/m

ketebalan geser atas dan bawah : 4 mm
kekakuan tekan lapisan selimut
atas dan bawah : $6,64 \times 10^3$ kN/m

jumlah lapisan dalam karet	tinggi keseluruhan	kekakuan tekan pada geser nol yang direncanakan	kekakuan geser rata-rata (toleransi $\pm 20\%$)	kapasitas penyimpangan geser	beban dasar (diizinkan)		kapasitas putar pada satuan pembebanan		Penomoran SAA
					pada gaya geser maks.	pada gaya geser nol	dimensi terpendek	dimensi terpanjang	
	mm	10^3 kN/m	10^3 kN/m	mm	kN	kN	10^{-6} rad, kN	10^{-6} rad, kN	

ketebalan lapisan karet dalam: 6 mm
faktor bentuk : 1,04

kekakuan tekan setiap lapisan dalam karet : 924×10^3 kN/m

kekakuan geser setiap lapisan dalam karet : $4,43 \times 10^3$ kN/m

2	35	243	1,33	10	190	280	28,9	18,8	01:06:02R-5
4	57	159	0,83	16	180	280	57,7	37,6	01:06:04R-5
6	79	118	0,604	22	170	280	86,6	56,5	01:06:06R-5
8	101	94,2	0,474	27,6 *	160 *	280	115,5	75,3	01:06:08R-5

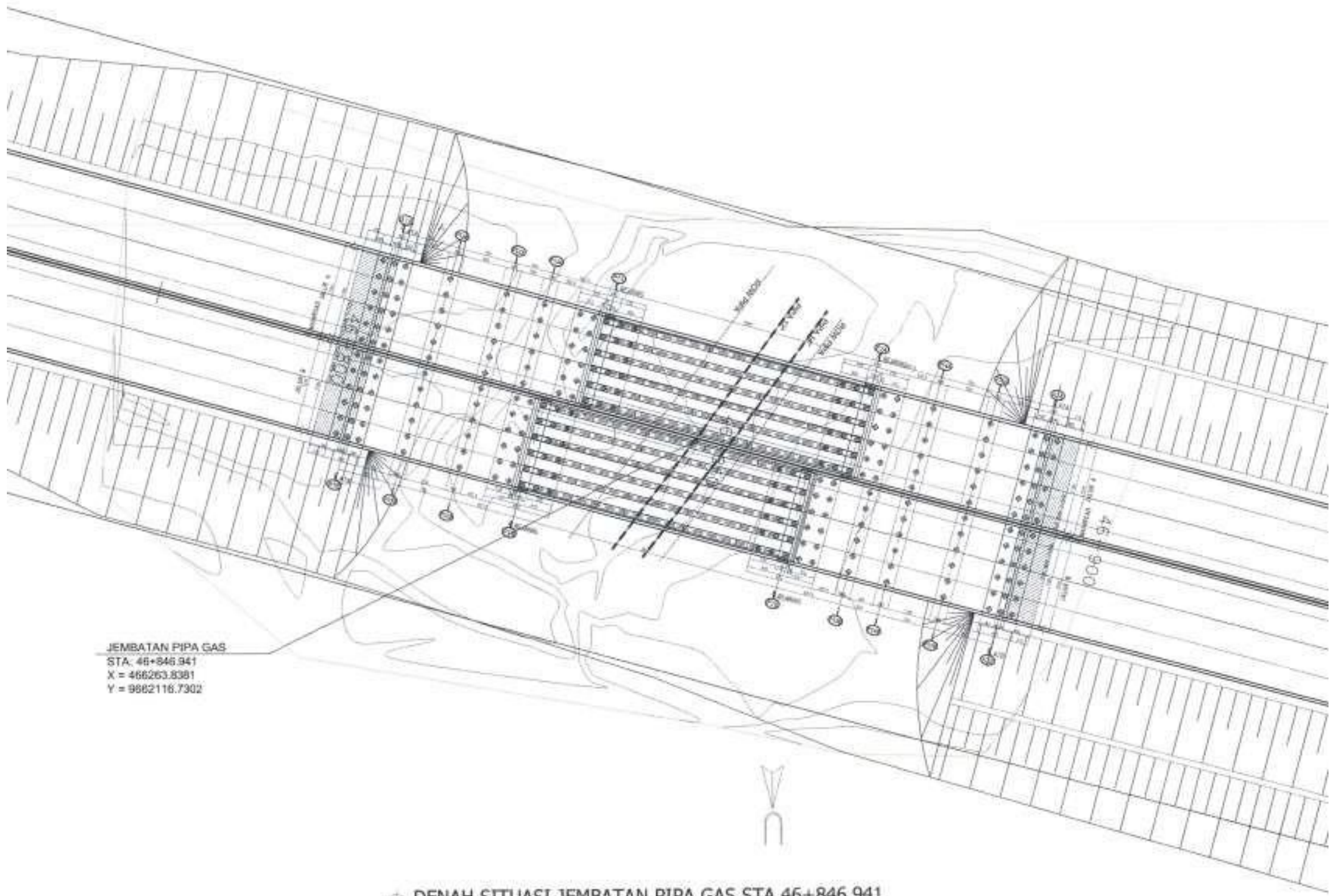
ketebalan lapisan dalam karet : 9 mm
faktor bentuk : 4,69

kekakuan tekan setiap lapisan dalam karet : 294×10^3 kN/m

kekakuan geser setiap lapisan dalam karet : $2,95 \times 10^3$ kN/m

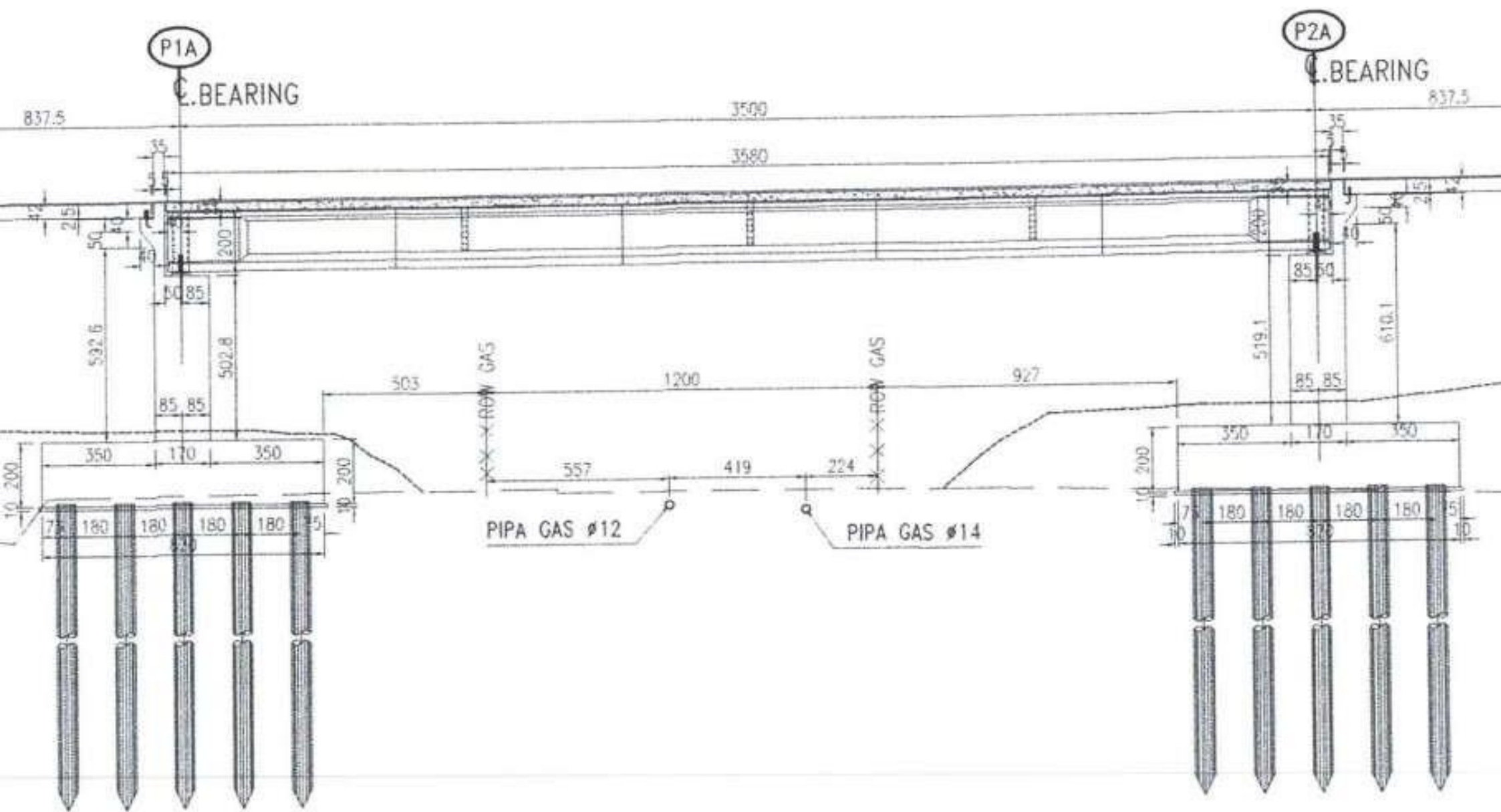
1	27	187	1,56	8,5	130	190	45,4	29,6	01:09:01R-5
2	41	114	1,02	13	130	190	90,8	59,2	01:09:02R-5
4	69	64,2	0,604	22	120	190	181,5	118,4	01:09:04R-5
6	97	44,7	0,428	27,6 *	120 *	190	272,3	177,6	01:09:06R-5

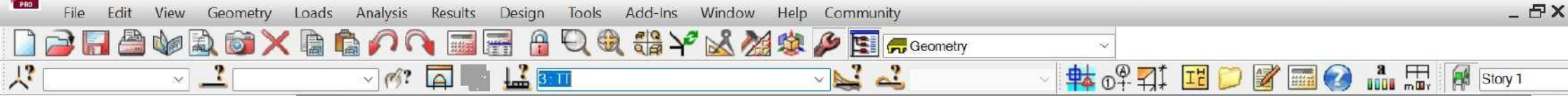
* nilai tersebut berdasarkan pada pengurangan maksimum yang diizinkan dari luas bidang yang diproyeksikan = 20% geser sejajar terhadap dimensi terpendek



JEMBATAN PIPA GAS
STA. 46+846.941
X = 466263.8381
Y = 9882116.7302

⊕ DENAH SITUASI JEMBATAN PIPA GAS STA.46+846.941
SKALA 1:500





Object Inspector

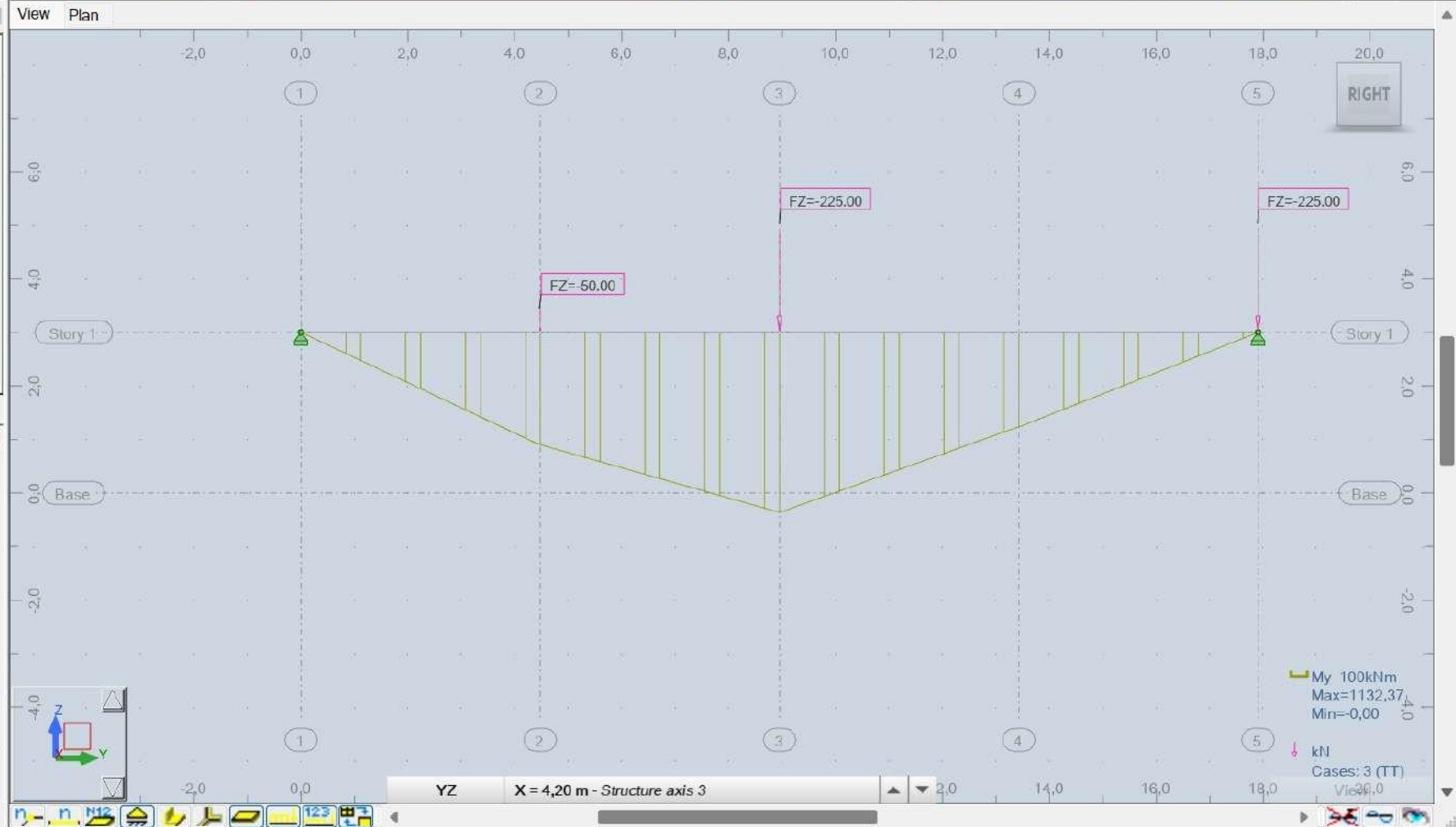
View Plan

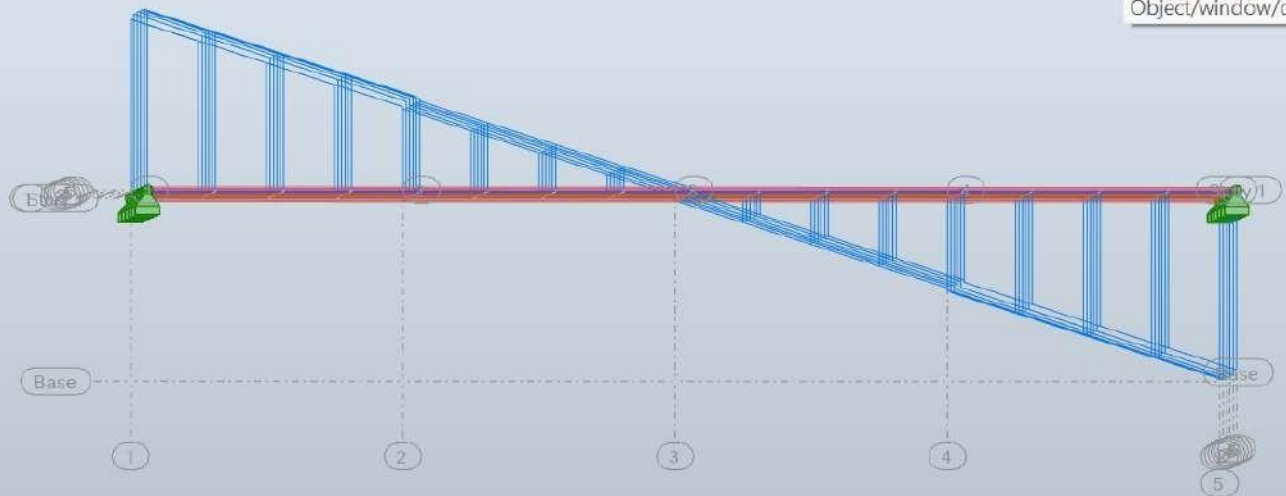
Objects Number o...

- Stories
- Objects of a model
- Auxiliary objects

Geometry Groups

Name	Value	Unit
Base		
Story 1		





Object/window/capture selection

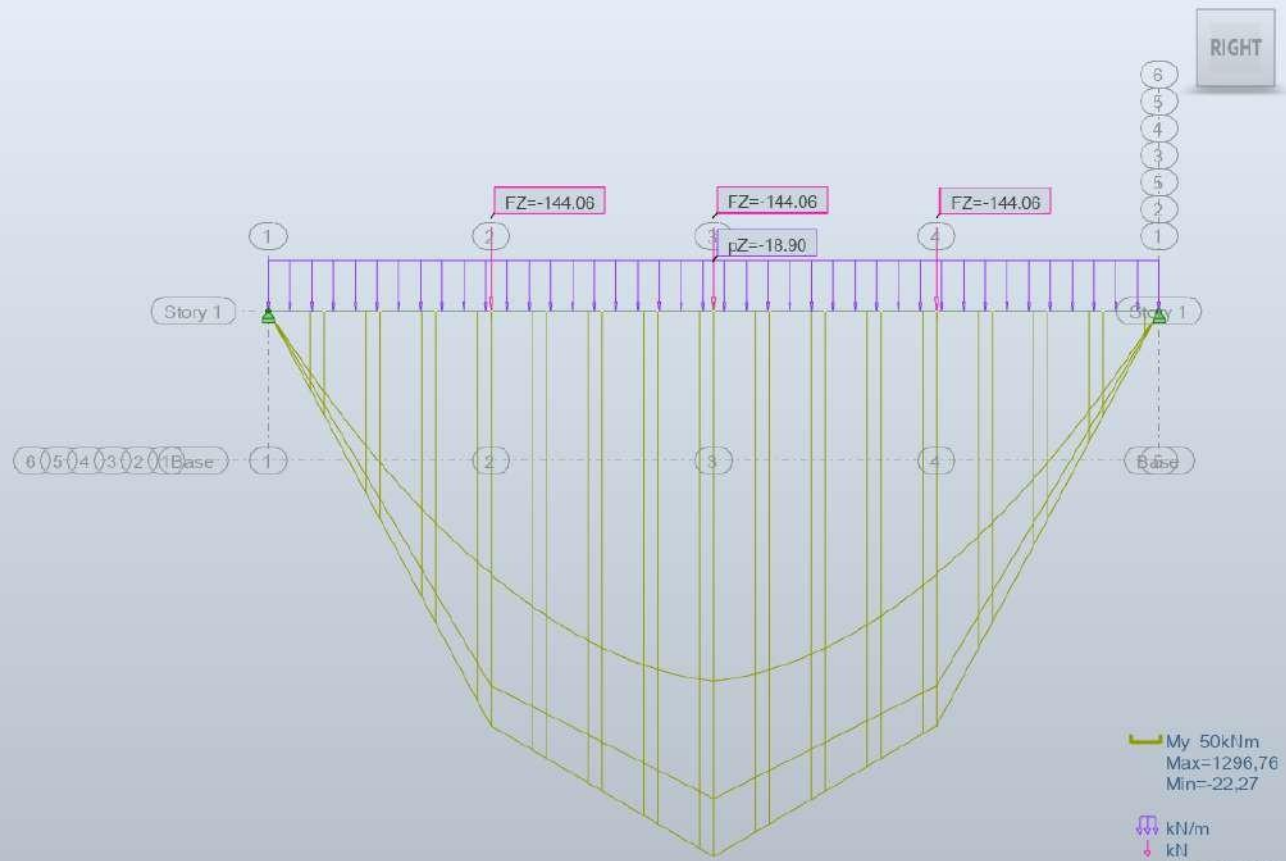
Fz 50kN
Max=202,28
Min=-202,28

-PZ kG
Cases: 1 (DL1)

View

3D Z = 4,00 m

View Plan



View

Results (FEM): out of date

391

43

TH12_CONCR

x=8.94; y=10.95; z=10.43

0.00

[m] [kN] [Deg]

View Plan

RIGHT



Fz 50kN
Max=13,38
Min=-13,38

kN/m
Cases: 6 (EWL)

View

3D Z = 4,00 m

View

Results (FEM): out of date

391

43

W 16x40

x=9,65; y=11,20; z=9,08

0.00

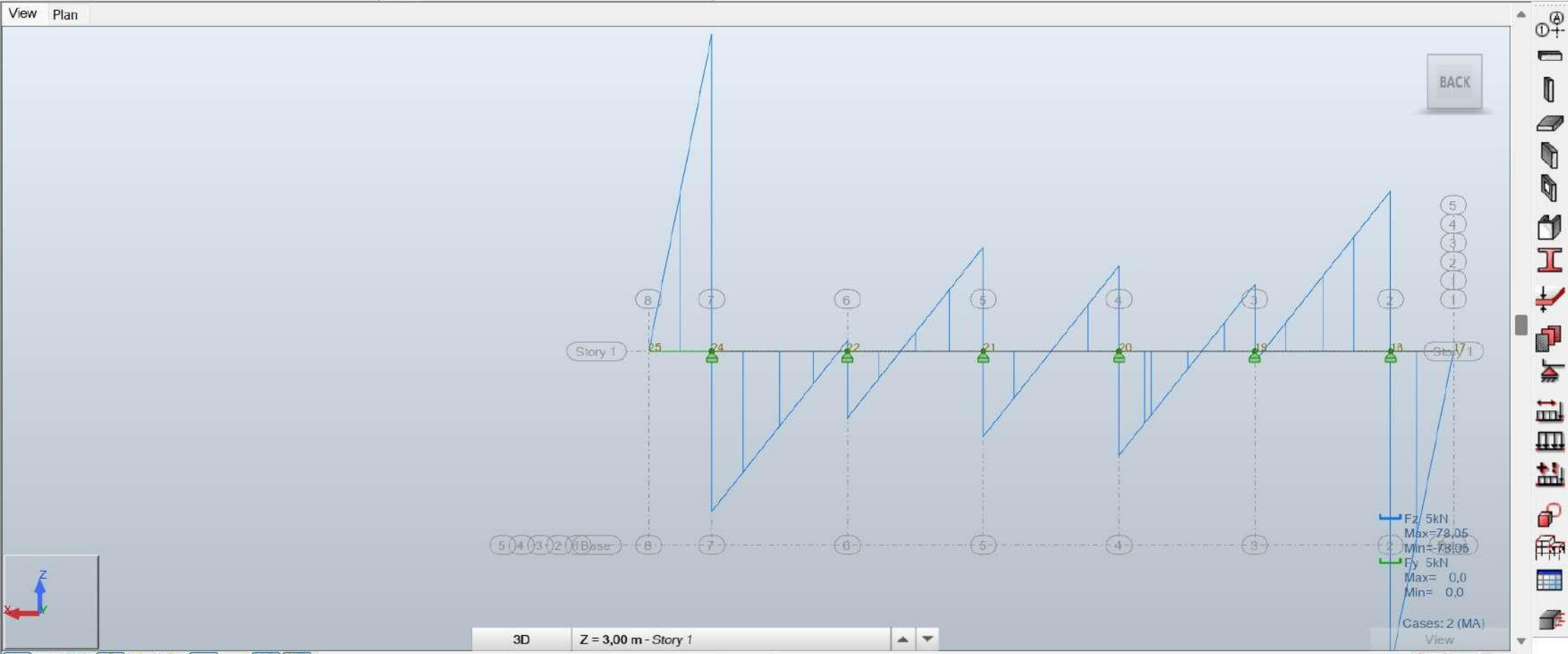
[m] [kN] [Deg]

File Edit View Geometry Loads Analysis Results Design Tools Add-Ins Window Help Community

Geometry

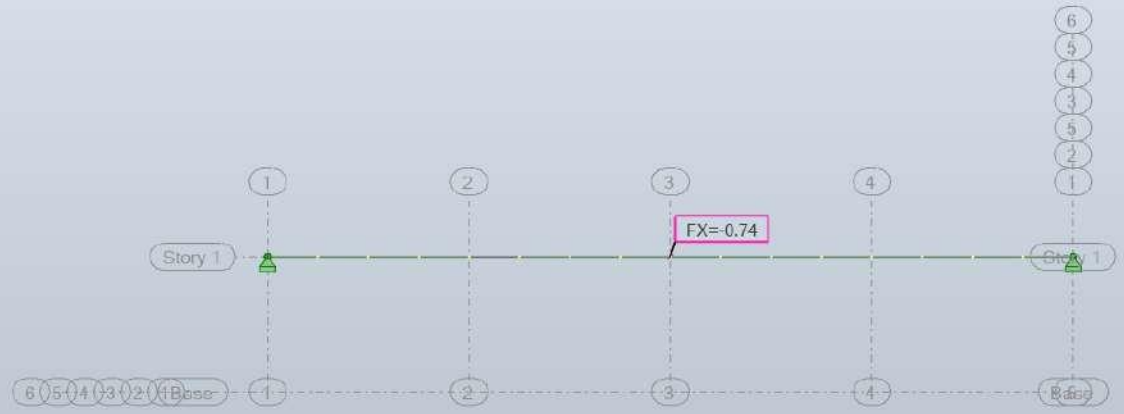
2-MA

Story 1



View Plan

RIGHT



Mz 50kNm
Max=1,90
Min=-0,22

kN
Cases: 7 (EWS)
View

3D Z = 4,00 m

View

Results (FEM): out of date

391

43

W 16x40

x=4,20; y=15,66; z=3,00

0.00

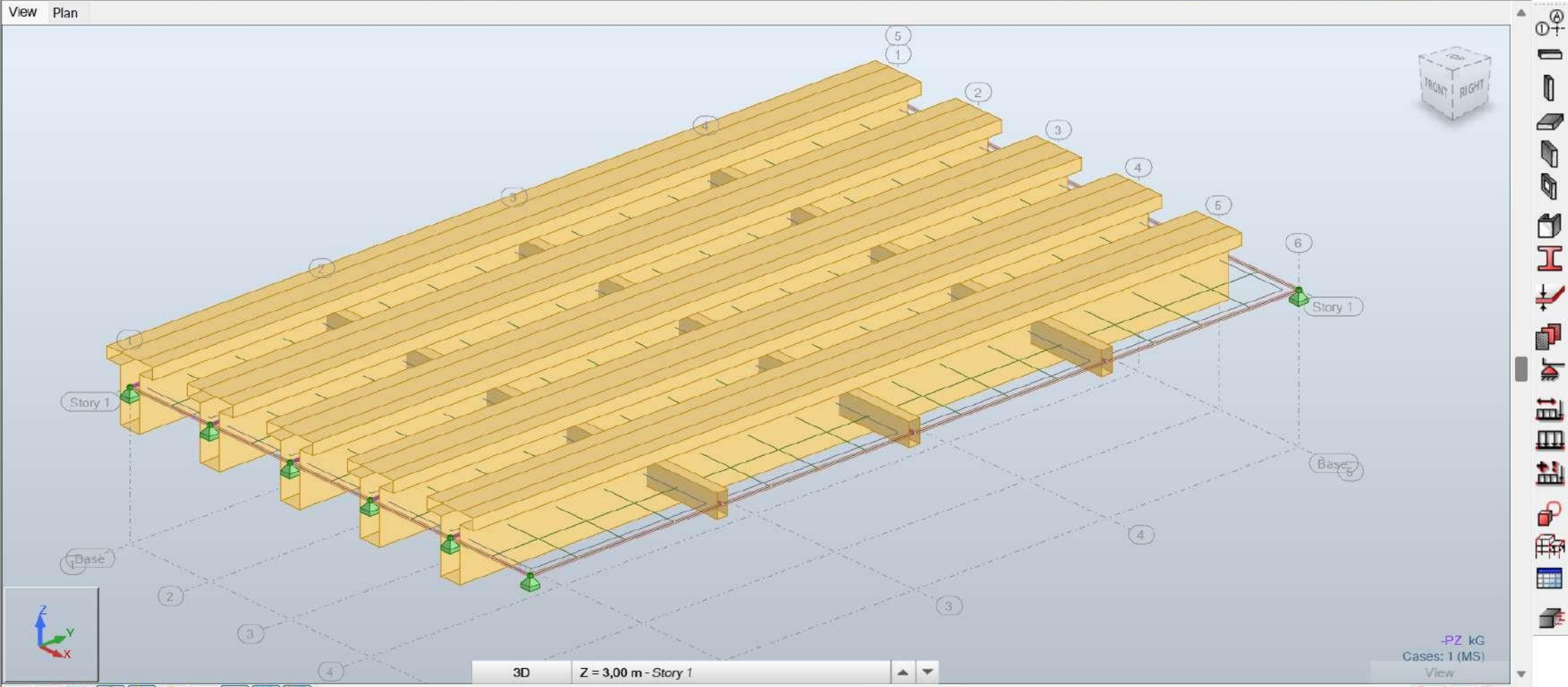
[m] [kN] [Deg]

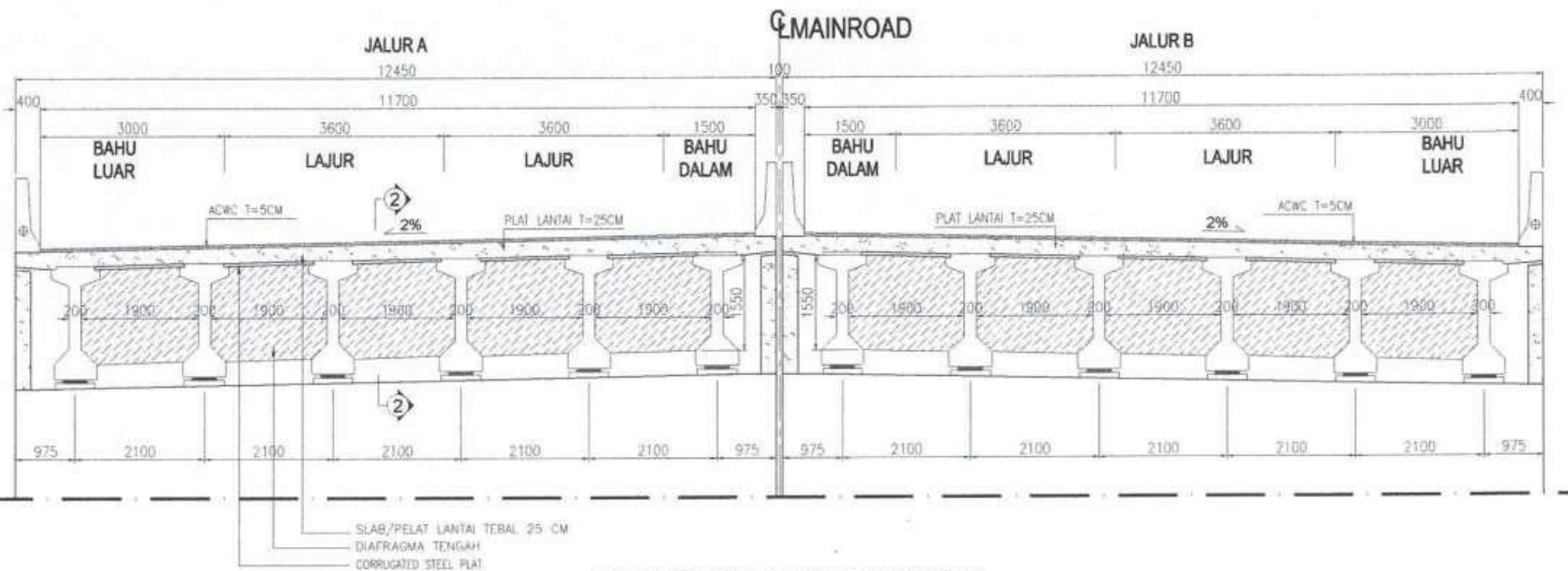
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Geometry

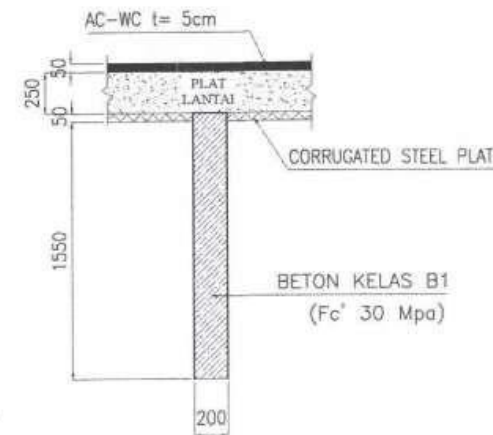
1: MS

Story 1





TAMPAK DEPAN DIAFRAGMA TENGAH
SKALA 1 : 100



POTONGAN 2-2
SKALA 1 : 40

SLAB/PELAT LANTAI TEBAL 25 CM
DIAFRAGMA TENGAH
CORRUGATED STEEL PLAT



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

07

AZIZAH AZ ZAHRAWAANI
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ARINI AVRILIA
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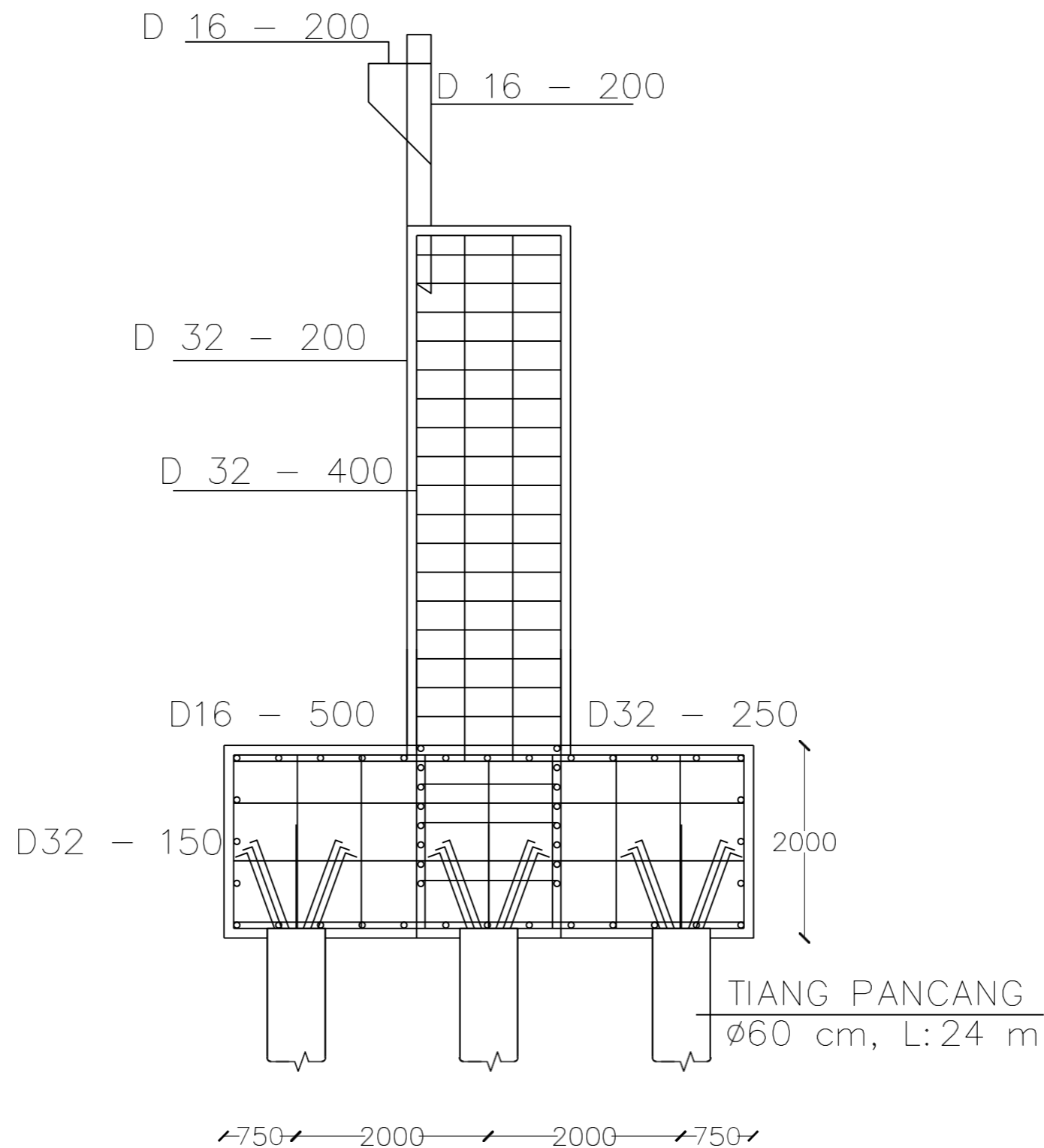
YURI KHAIRIZAL, S.T., M.T.
NIP 199212252022031009

PENULANGAN
ABUTMENT

JUMLAH
GAMBAR

10

SATUAN = MM
F_c' = 30 MPa
B_{JTS} = 420 MPa



SKEMATIK PENULANGAN ABUTMEN DAN PILECAP
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
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POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR 05

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DARMA PRABUDI, S.T.,M.T.
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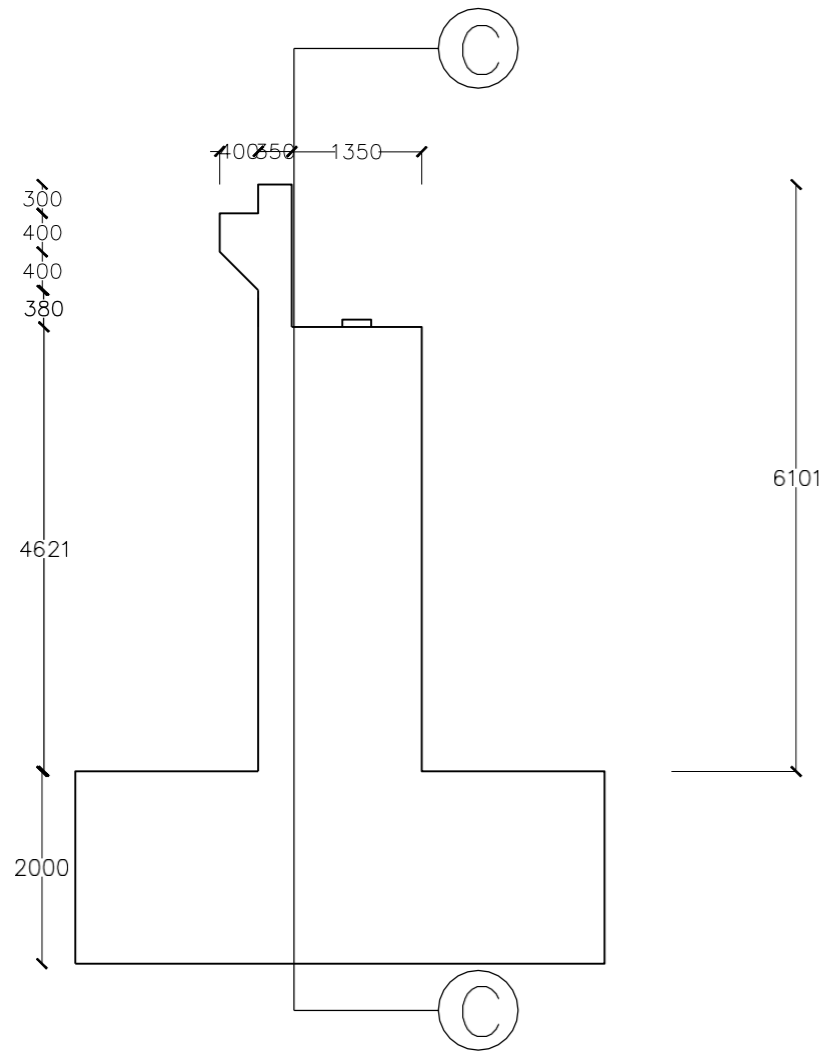
YURI KHAIRIZAL, S.T.,M.T.
NIP 199212252022031009

ABUTMENT

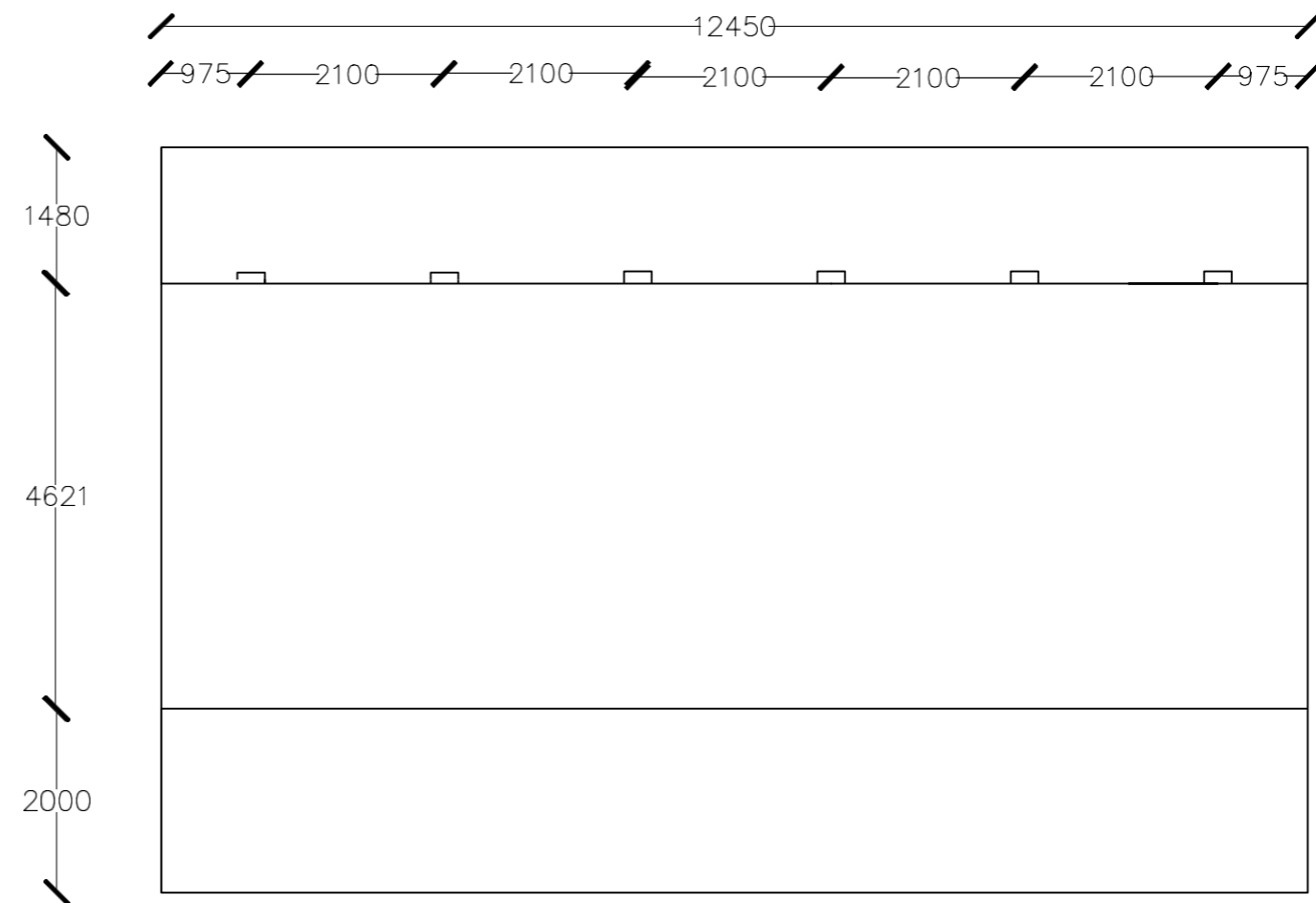
BEARING PAD

JUMLAH GAMBAR 10

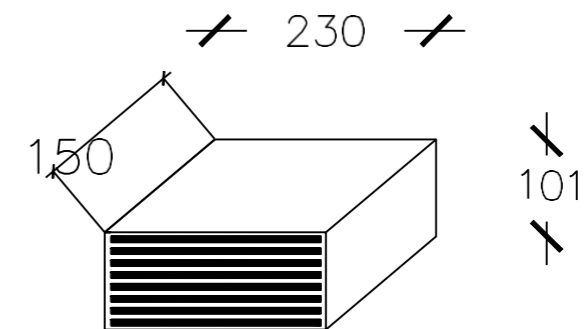
SATUAN = MM
F_c' = 30 MPa
B_{JTS} = 420 MPa



TAMPAK SAMPING ABUTMEN
SKALA 1:100



POTONGAN C-C
SKALA 1:100



BEARING PAD
SKALA 1:10



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

04

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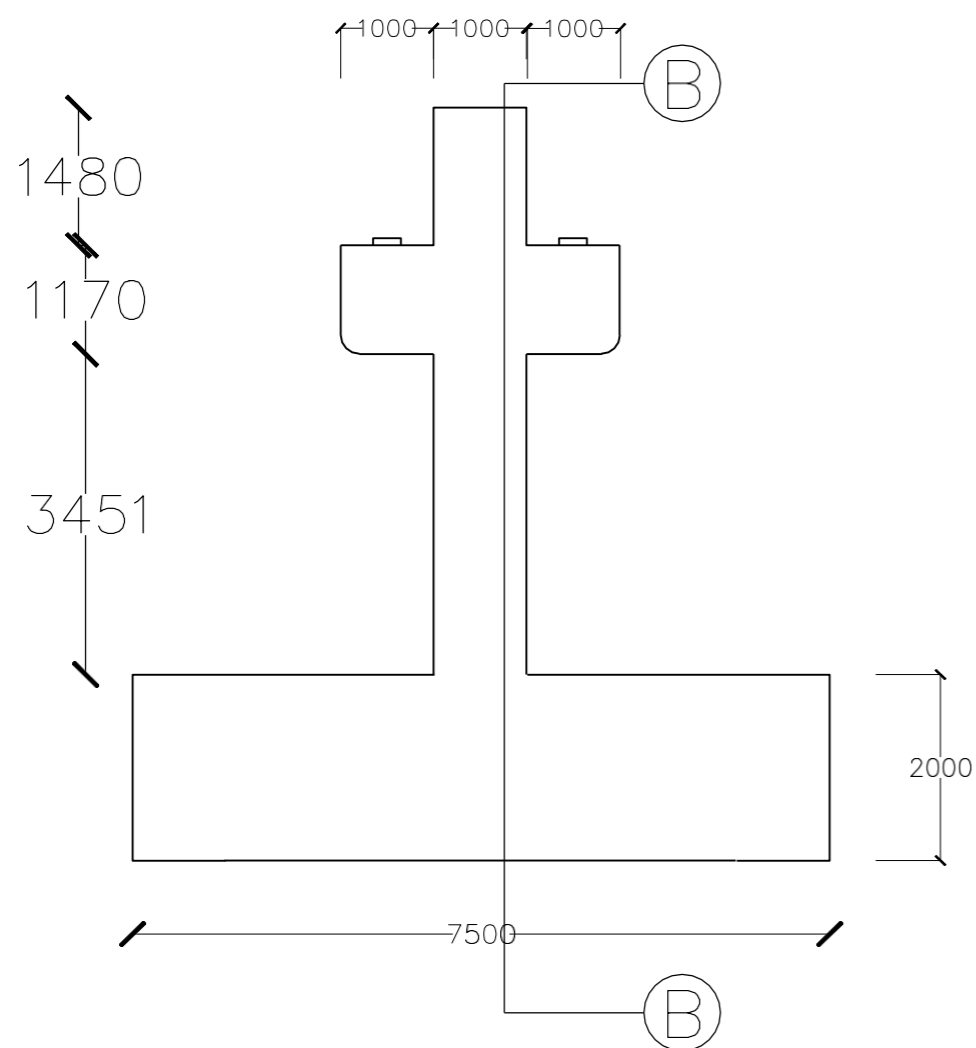
YURI KHAIRIZAL, S.T., M.T.
NIP 199212252022031009

DETAIL
PILAR

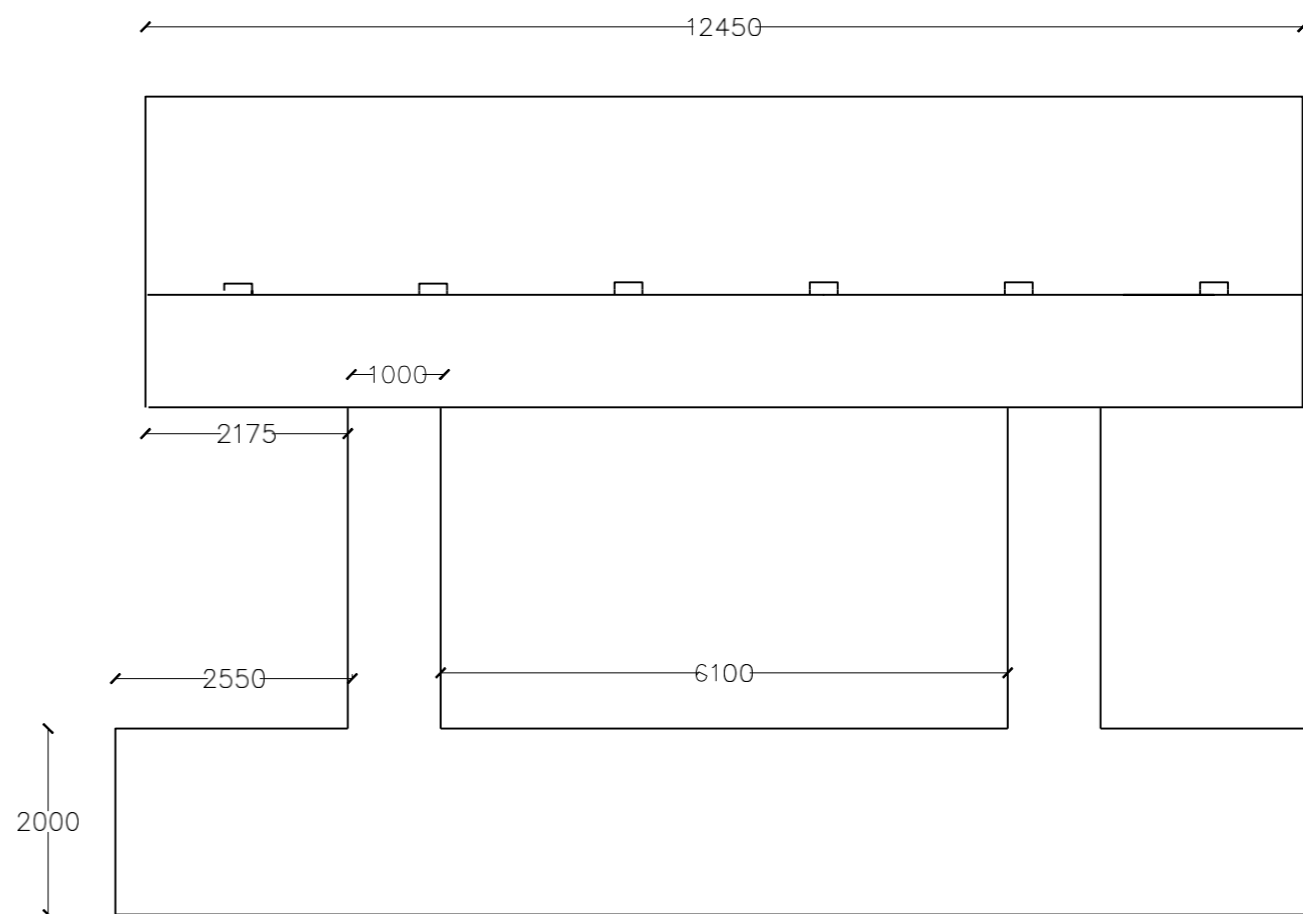
JUMLAH
GAMBAR

10

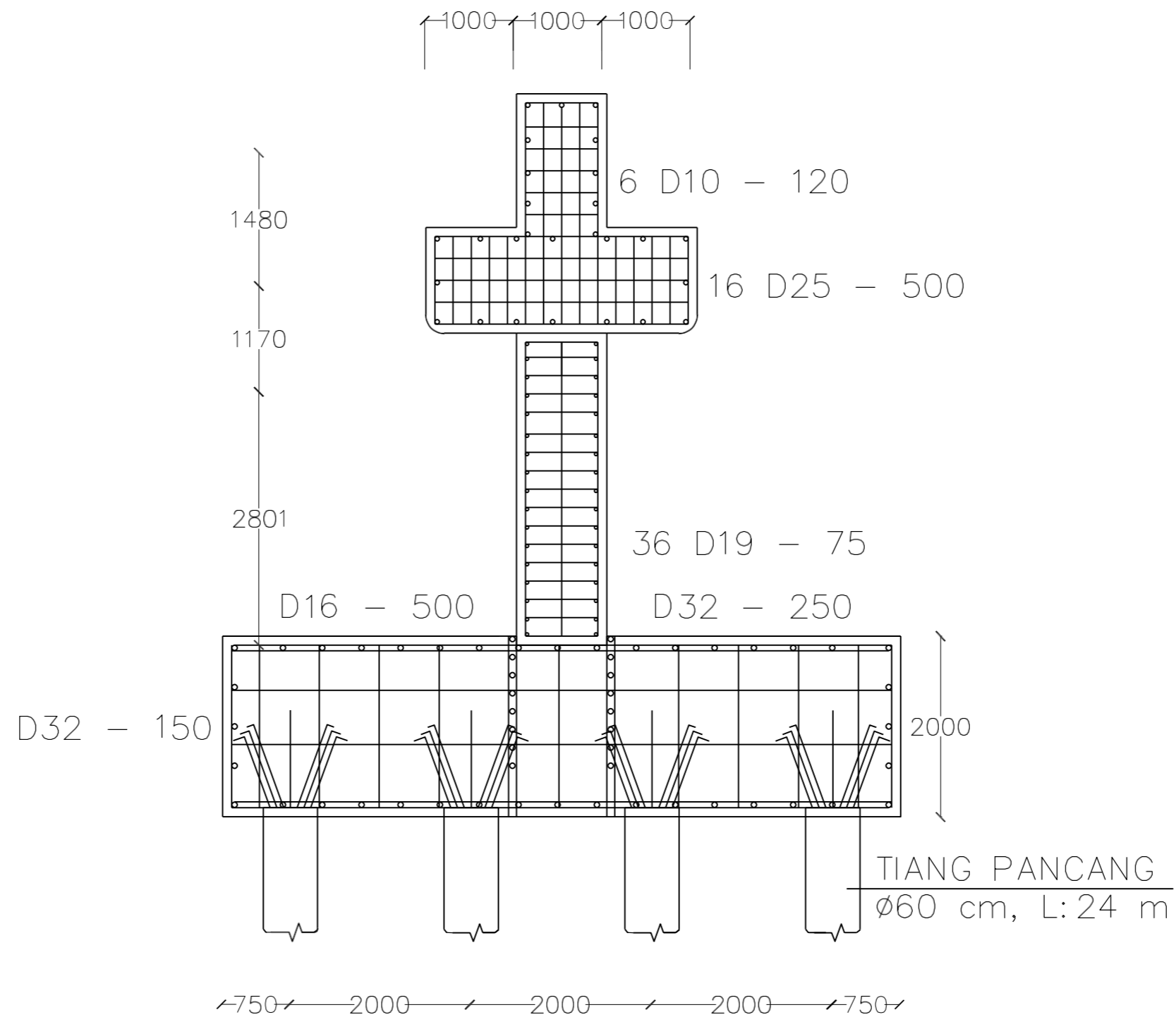
SATUAN = MM
F_c' = 30 MPa
B_{JTS} = 420 MPa



TAMPAK SAMPING
SKALA 1:100



POTONGAN B-B
SKALA 1:100



SKEMATIK PENULANGAN PILAR DAN PILECAP
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

04

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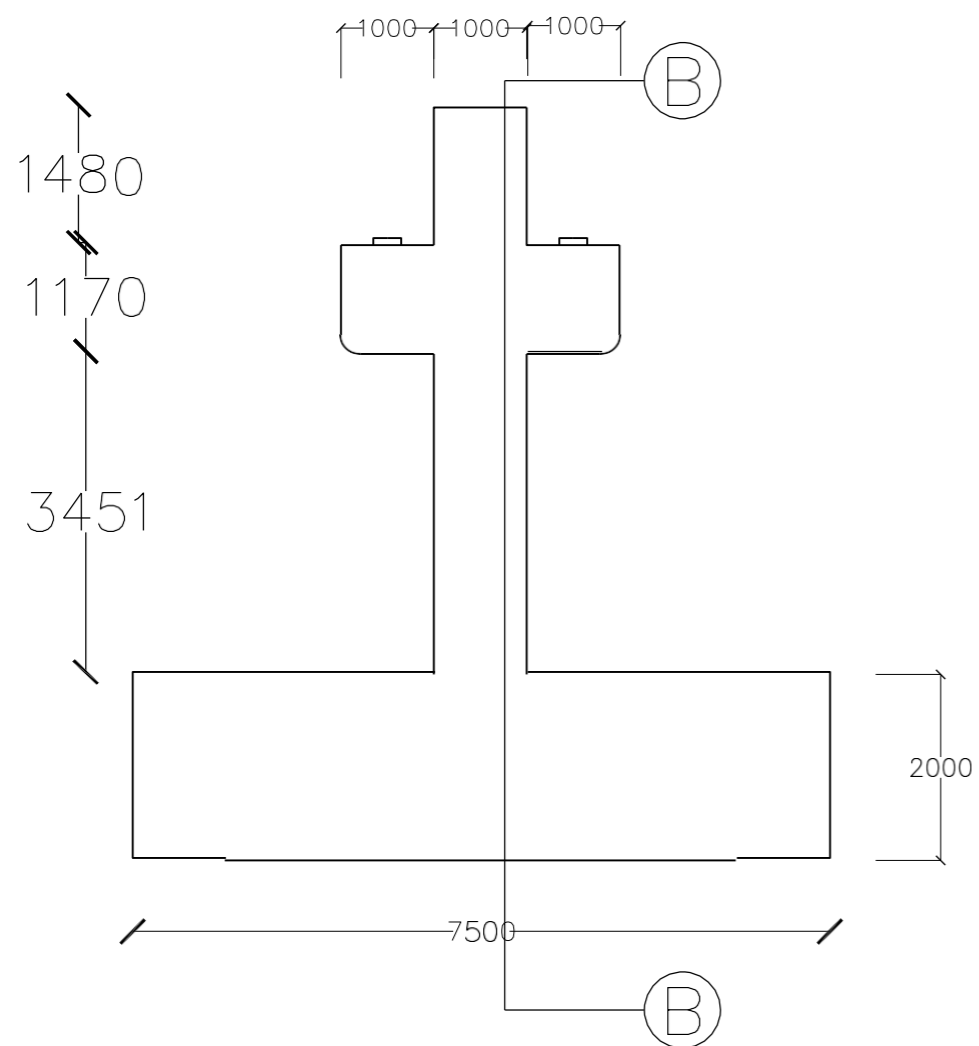
YURI KHAIRIZAL, S.T.,M.T.
NIP 199212252022031009

DETAIL
PILAR

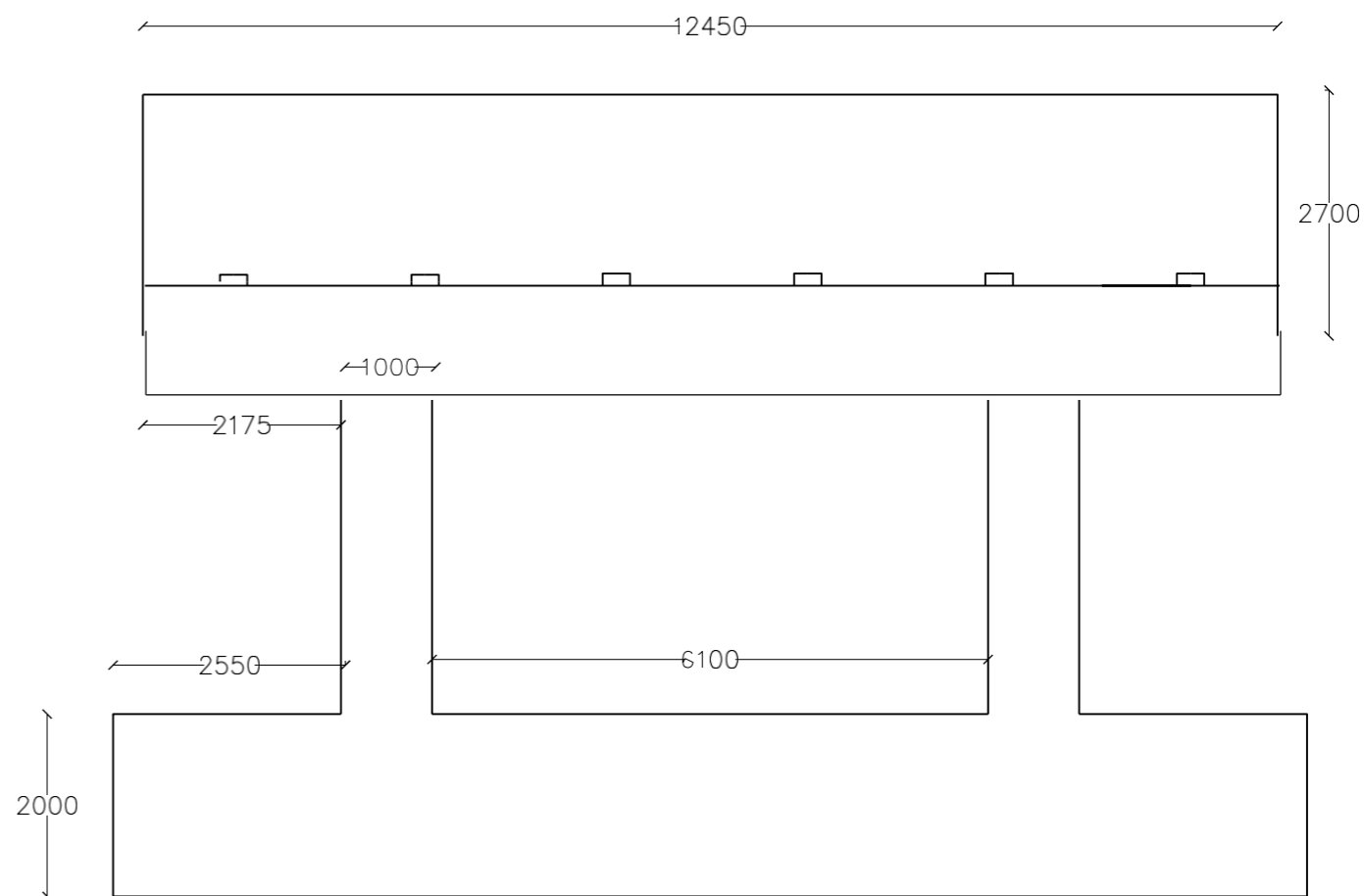
JUMLAH
GAMBAR

10

SATUAN = MM
F_c' = 30 MPa
B_{JTS} = 420 MPa



TAMPAK SAMPING
SKALA 1:100



POTONGAN B-B
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

03

AZIZAH AZ ZAHRAWAANI
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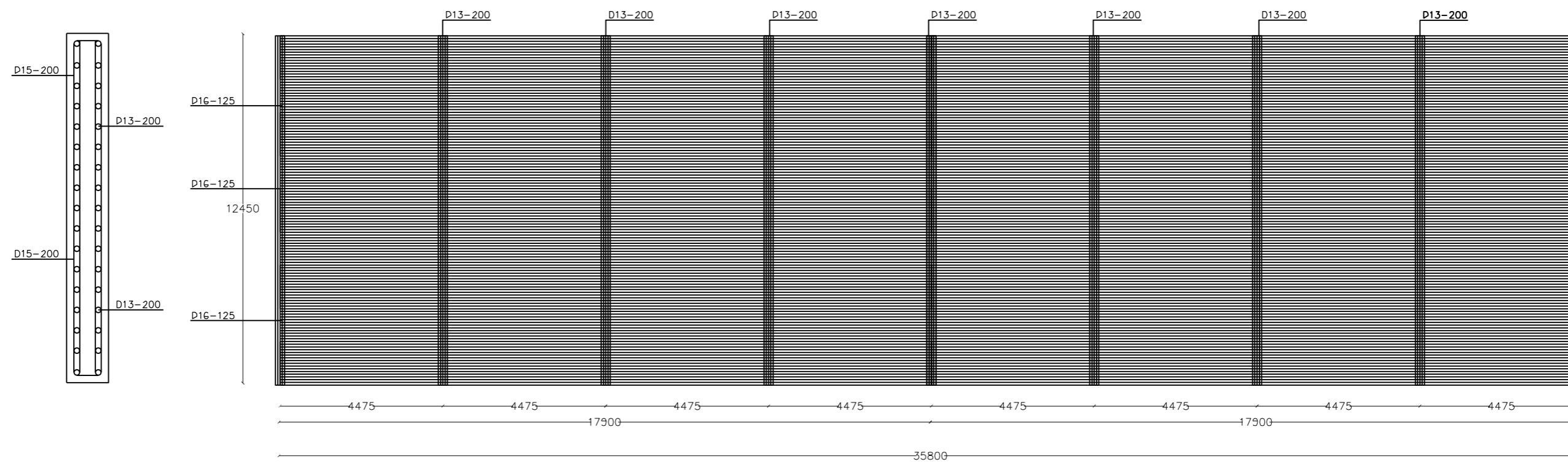
YURI KHAIIRIZAL, S.T.,M.T.
NIP 199212252022031009

DETAIL
PELAT
LANTAI

JUMLAH
GAMBAR

10

SATUAN = MM
F_c' = 30 MPa
B_{JTS} = 420



DETAIL PENULANGAN PLAT LANTAI
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

02

AZIZAH AZ ZAHRAWAANI
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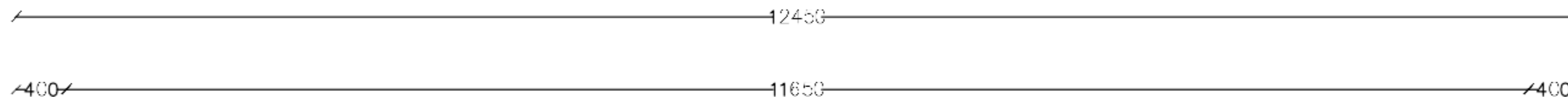
YURI KHAIRIZAL, S.T.,M.T.
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DIAFRAGMA
GELAGAR T

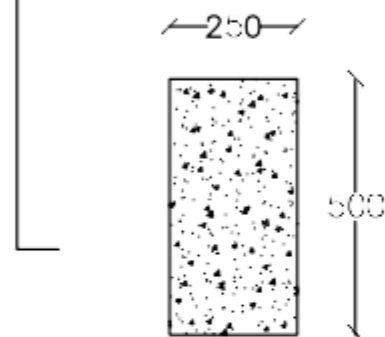
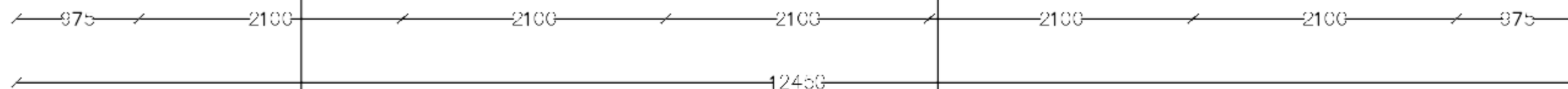
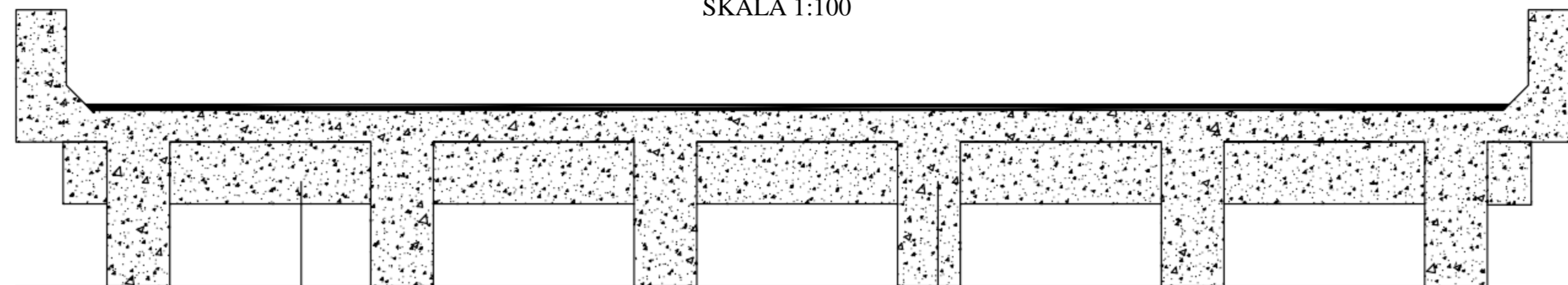
JUMLAH
GAMBAR

10

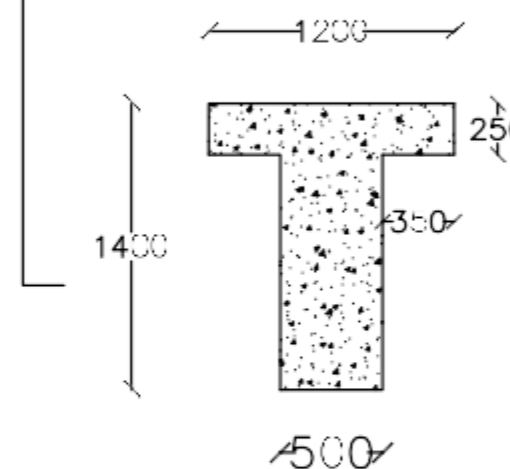
SATUAN = MM
Fc' = 30 MPa
Bjts = 420



POTONGAN A-A
SKALA 1:100



DETAIL DIAFRAGMA
SKALA 1:40



DETAIL GELAGAR T
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

01

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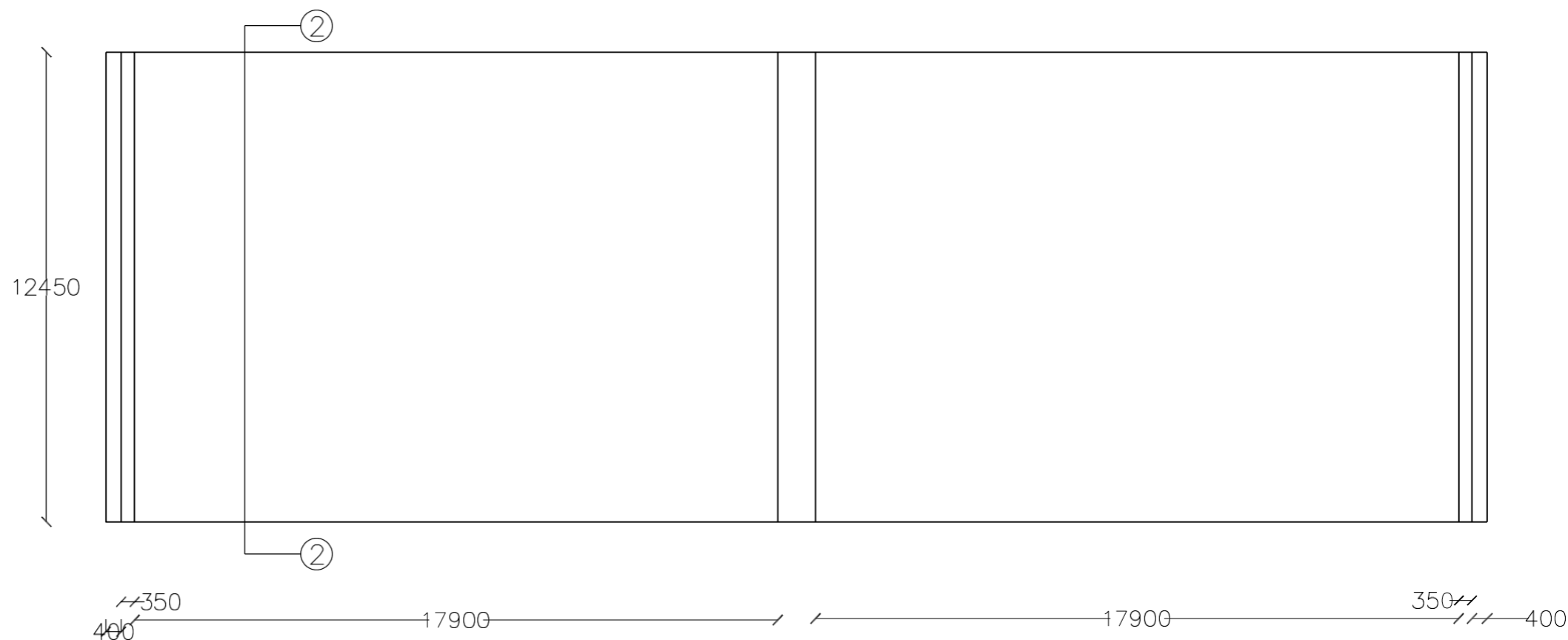
TAMPAK ATAS
TAMPAK SAMPING

JUMLAH
GAMBAR

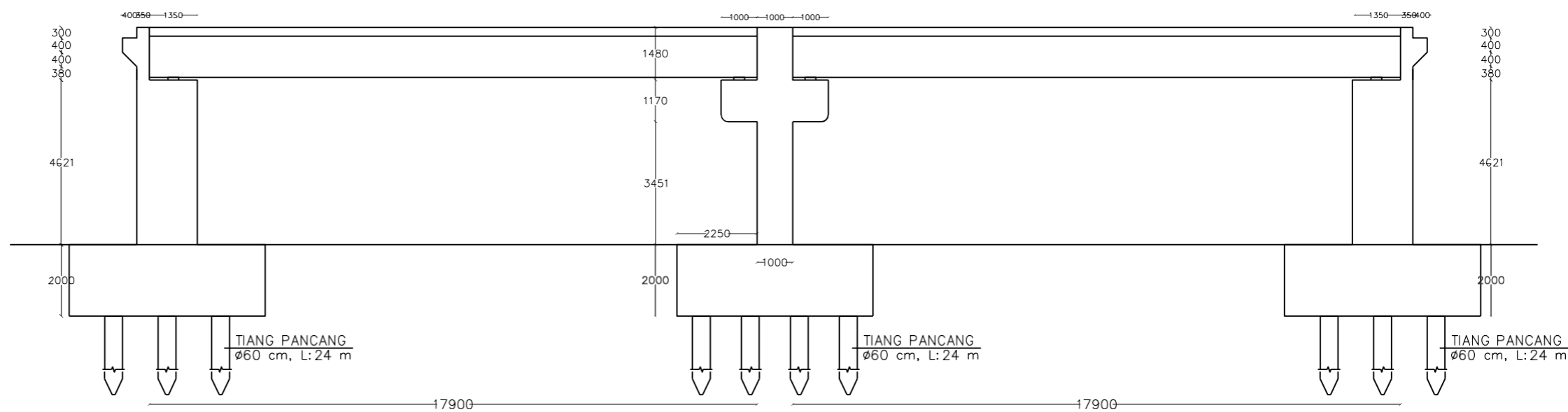
10

SATUAN = MM
FC' = 30 MPa
BJTS = 420

TAMPAK ATAS
SKALA 1:100



TAMPAK SAMPING
SKALA 1:100





PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

10

AZIZAH AZ ZAHRAWAANI
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NIM 062230100119

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NIP 197601272005011004

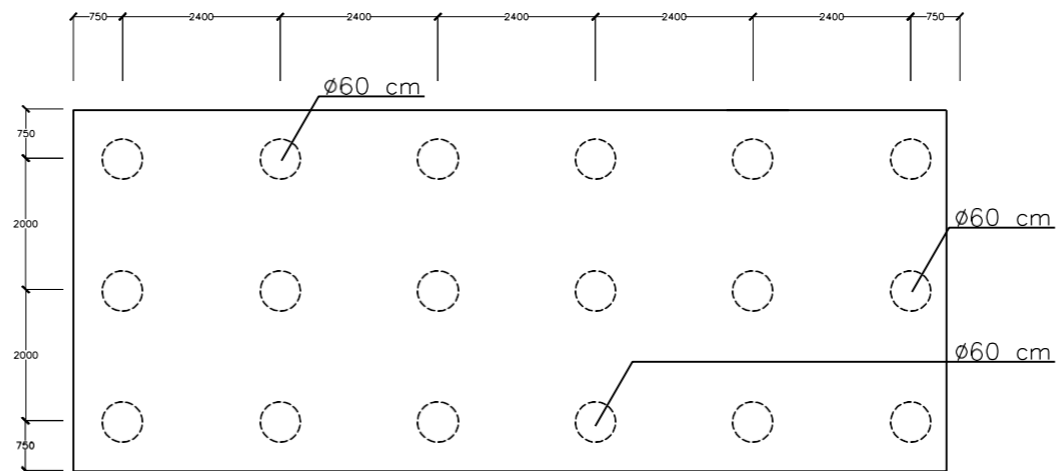
YURI KHARIZAL, S.T.,M.T.
NIP 199212252022031009

**PANCANG
ABUTMENT
PILAR**

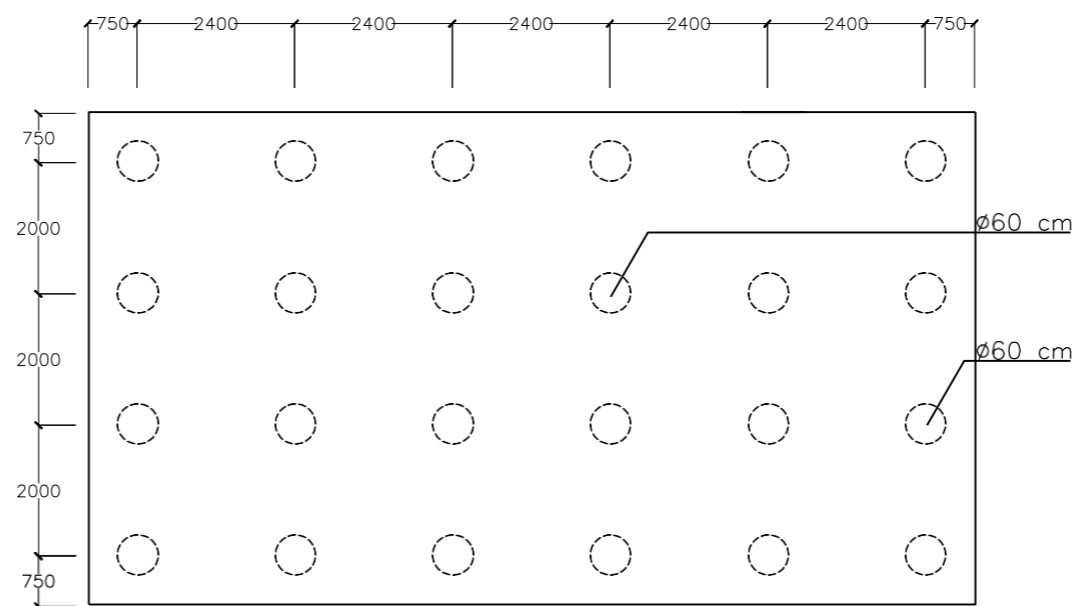
JUMLAH
GAMBAR

10

SATUAN = MM
Fc' = 30 MPa
BJTS = 420



DENAH PONDASI ABUTMEN
SKALA 1:100



DENAH PONDASI PILAR
SKALA 1:100



PROGRAM STUDI DIPLOMA III
TEKNIK SIPIL
JURUSAN TEKNIK SIPIL
POLITEKNIK NEGERI SRIWIJAYA

PERENCANAAN JEMBATAN BETON BERTULANG PADA RUAS JALAN
TOL KAYU AGUNG - PALEMBANG - BETUNGSTA 46+846

DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR

09

AZIZAH AZ ZAHRAWAANI
NIM 062230100120

ARINI AVRILIA
NIM 062230100119

DARMA PRABUDI, S.T.,M.T.
NIP 197601272005011004

YURI KHARIZAL, S.T.,M.T.
NIP 199212252022031009

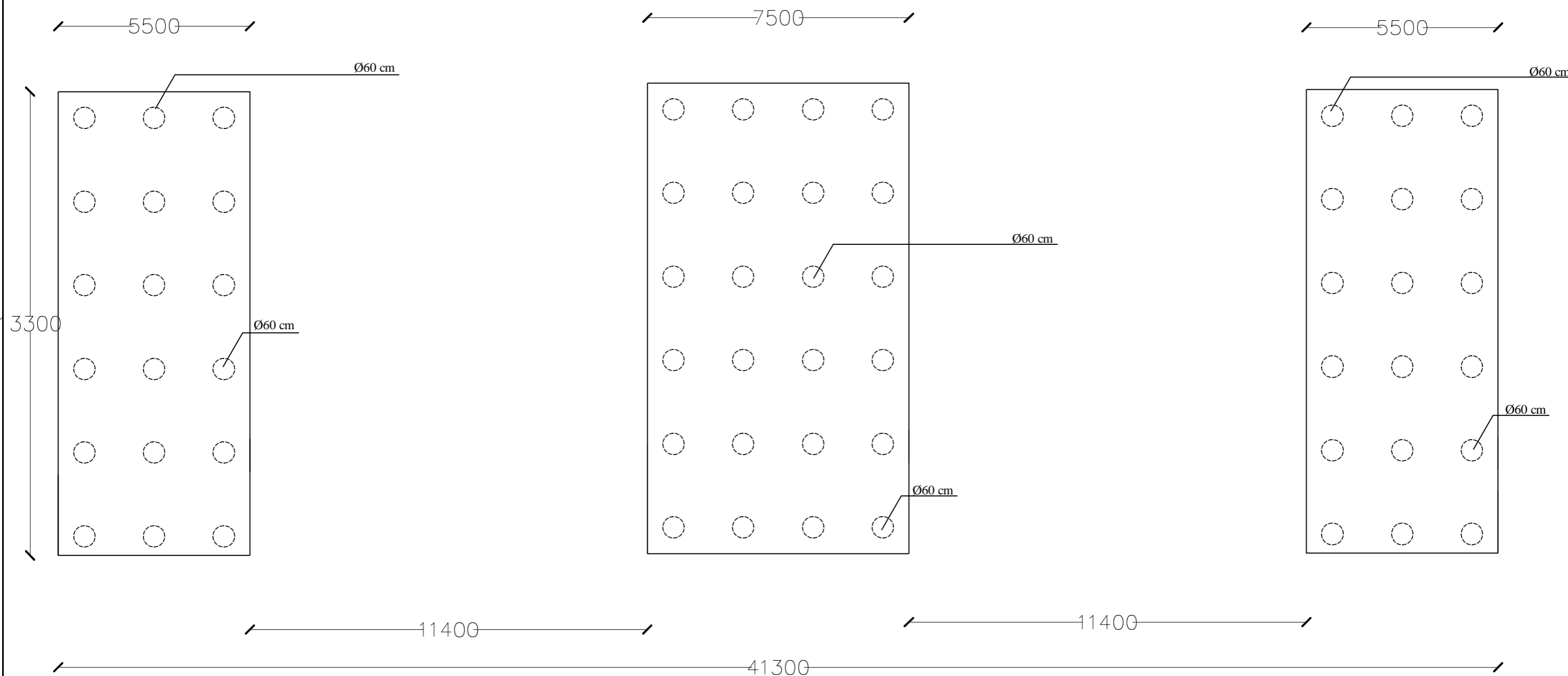
**DENAH
TITIK
PANCANG**

JUMLAH
GAMBAR

10

SATUAN = MM
Fc' = 30 MPa
BJTS = 420

DENAH TITIK PANCANG SKALA 1:100





PROGRAM STUDI DIPLOMA III
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DIGAMBAR OLEH

DOSEN PEMBIMBING

JUDUL GAMBAR

NO. GAMBAR 08

AZIZAH AZ ZAHRAWAANI
NIM 062230100120

ARINI AVRILIA
NIM 062230100119

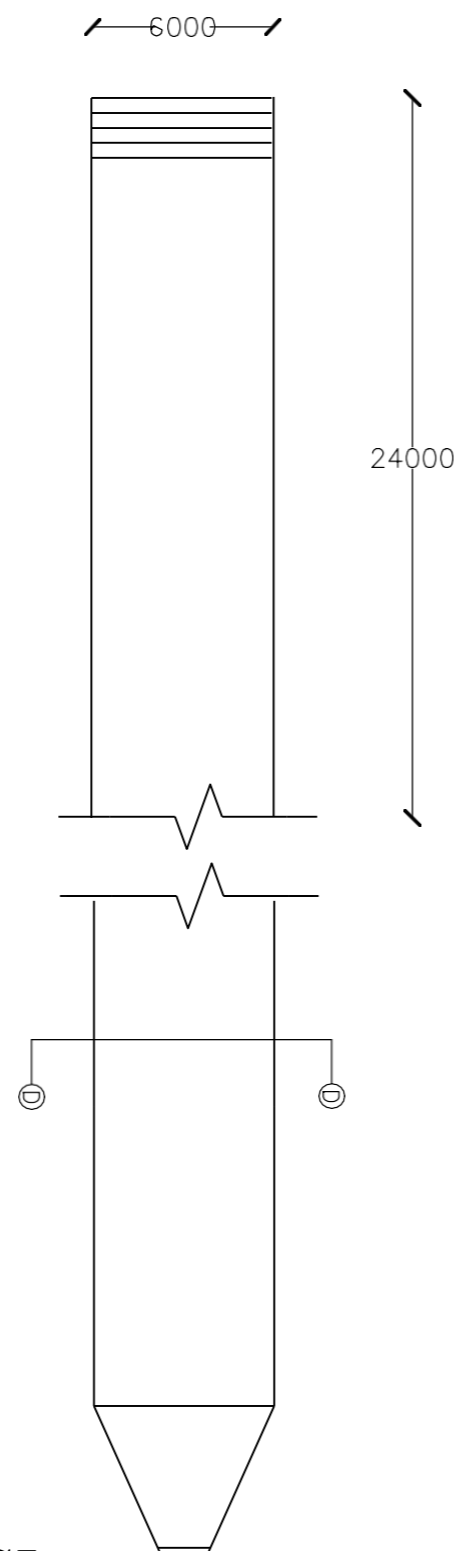
DARMA PRABUDI, S.T.,M.T.
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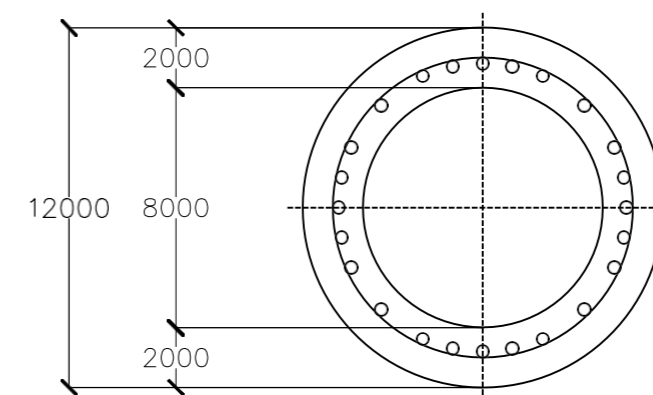
DETAIL
PONDASI PANCANG

JUMLAH
GAMBAR 10

SATUAN = MM
Fe' = 30 MPa
BJTS = 420 MPa



PONDASI
SKALA 1:25



POTONGAN D-D
SKALA 1:5