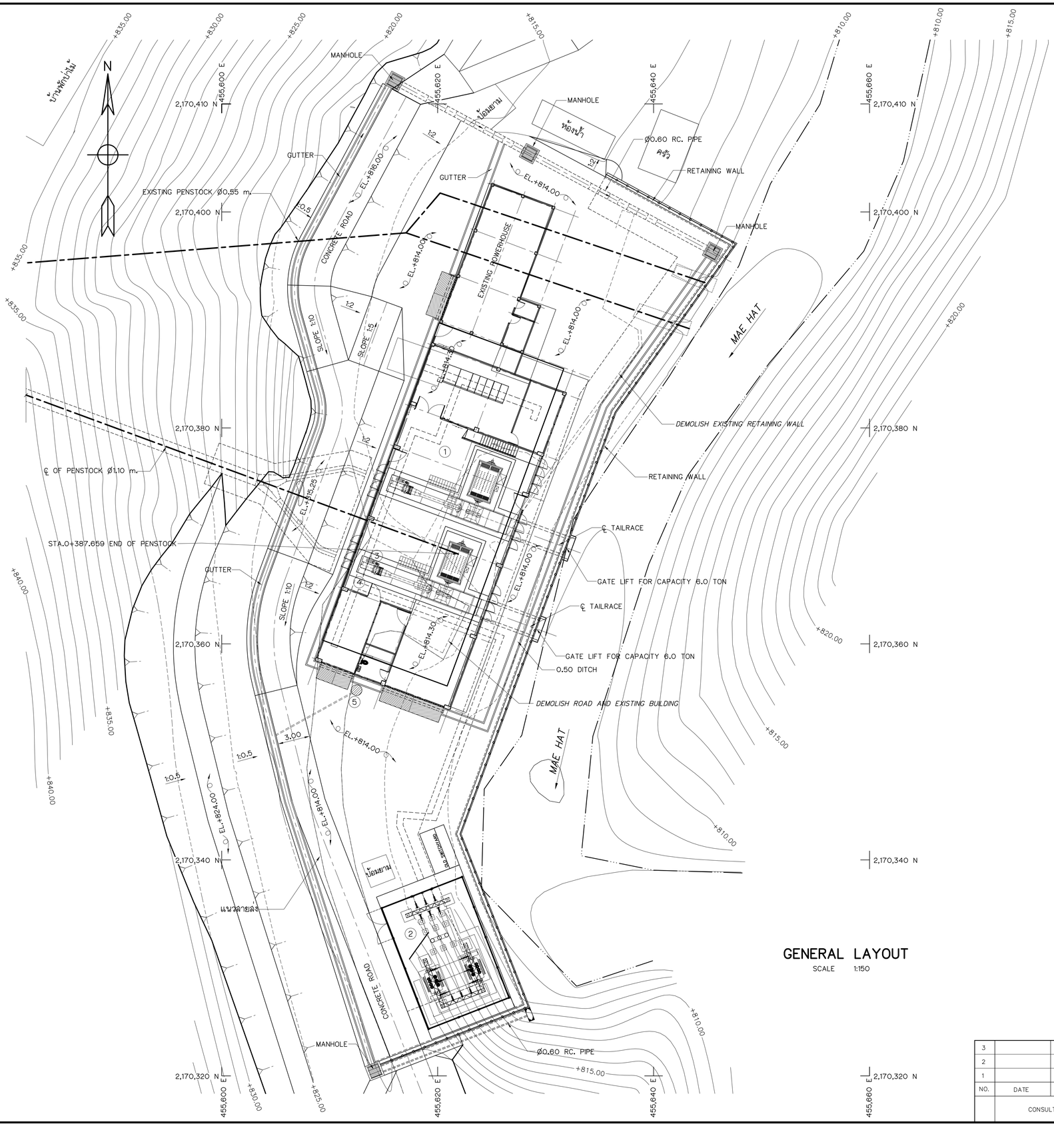


GENERAL LAYOUT

SCALE 1:150

LISTS :

1. POWERHOUSE
2. SWITCHYARD
3. GATE VALVE Ø3/4"
4. PRESSURE REDUCING VALVE
5. SEPTICK TANK

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. THE CONTRACTOR (C1) HAS TO SUBMIT THE SHOP DRAWINGS OF ALL HOUSING, GUARD HOUSE, ELEVATED TANK FLAG POLE, ENTRANCE GATE WITH, NAME BOARD AND GATE WIDTH 6.00 M. TO FIELD ENGINEER FOR APPROVAL, BEFORE CONSTRUCTION.

REFERENCE DRAWINGS :

1.	POWERHOUSE, PLAN 1st FLOOR AND PLAN 2st FLOOR	MH-PH-02
2.	POWERHOUSE, ELEVATIONS	MH-PH-04
3.	POWERHOUSE, SECTIONS (SHEET 1/2)	MH-PH-05
4.	POWERHOUSE, SECTIONS (SHEET 2/2)	MH-PH-06
5.	POWERHOUSE, DITCH AND MANHOLE DETAILS	MH-PH-19
6.	POWERHOUSE, RETAINING WALL REINFORCEMENT DETAILS	MH-PH-20

SCALE 1:150 METERS (0 2 4 6 8 10 12)

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
GENERAL LAYOUT

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				

CONSULTANTS | DEDE

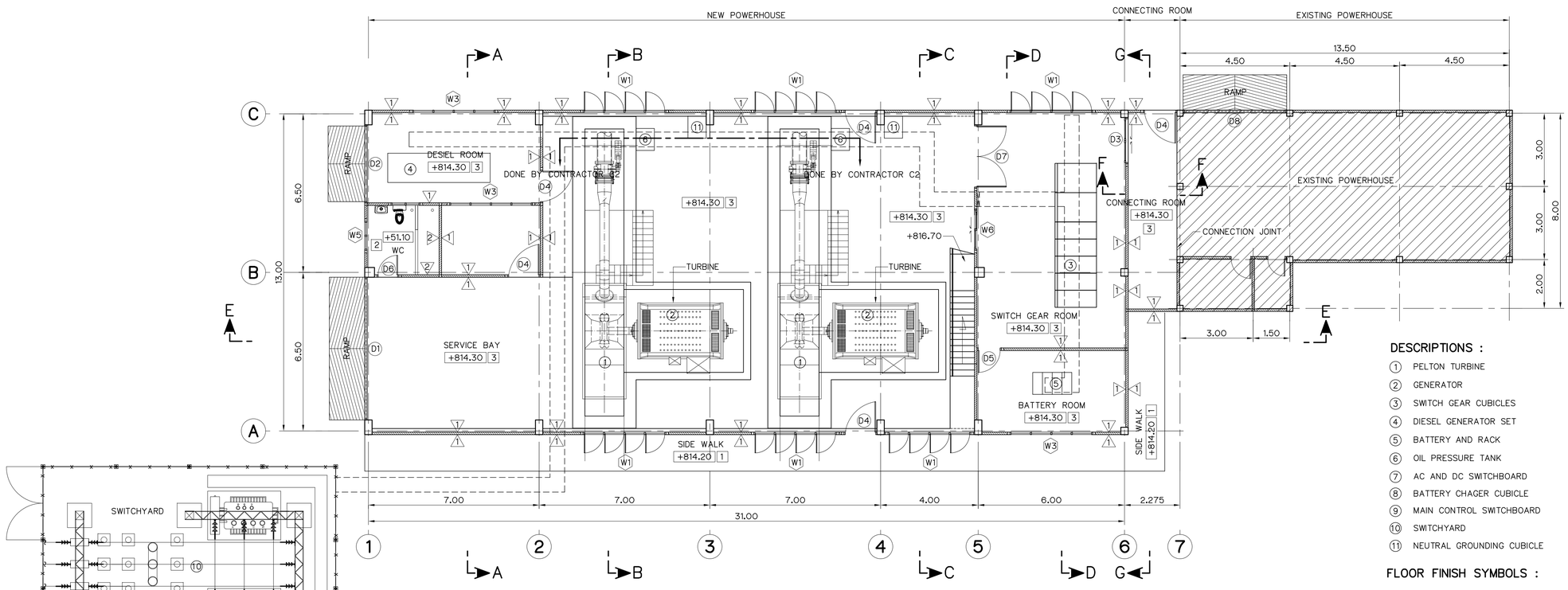
P&C MANAGEMENT CO.,LTD.

DESIGNED | DRAWN | CHECKED | PROJECT MANAGER 08/03/2559 DATE

REVIEWED | SUBMITTED | RECOMMENDED | APPROVED

DRAWING NO. MH-PH-01

SHEET NO. 84 OF 130



PLAN 1st FLOOR

SCALE 1:100

DESCRIPTIONS :

1. PELTON TURBINE
2. GENERATOR
3. SWITCH GEAR CUBICLES
4. DIESEL GENERATOR SET
5. BATTERY AND RACK
6. OIL PRESSURE TANK
7. AC AND DC SWITCHBOARD
8. BATTERY CHAGER CUBICLE
9. MAIN CONTROL SWITCHBOARD
10. SWITCHYARD
11. NEUTRAL GROUNDING CUBICLE

FLOOR FINISH SYMBOLS :

1. COARSE FINISHED
2. 12"x12" CERAMIC FLOOR TILES
3. COATED WITH EPOXY RESIN

WALL FINISH SYMBOLS :

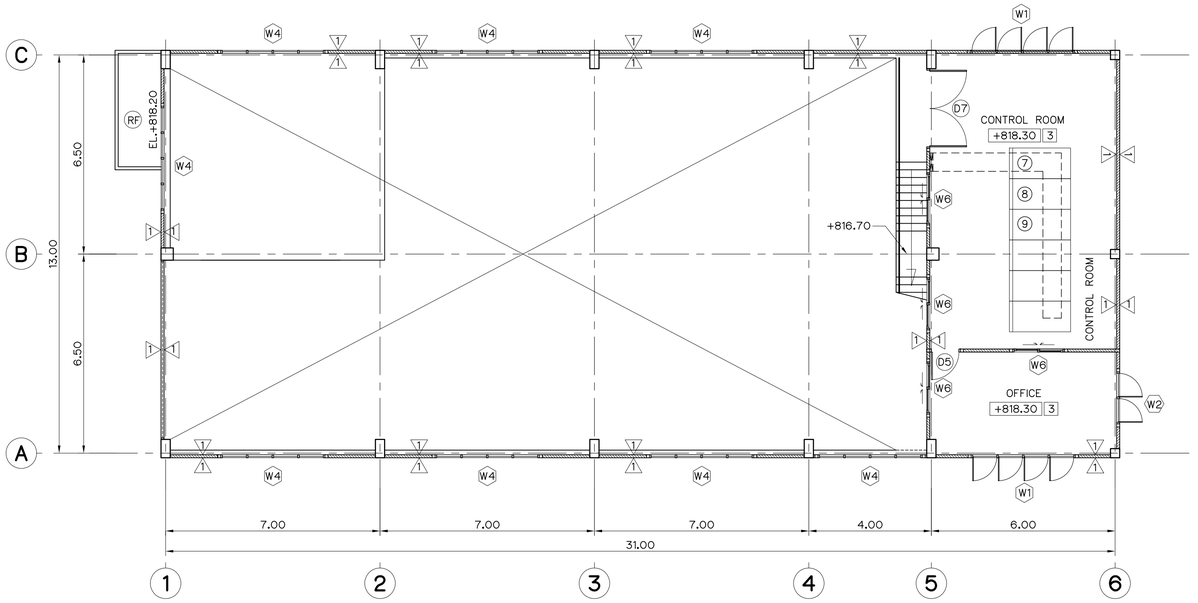
1. CEMENT PLASTER
2. 8"x8" CERAMIC WALL TILES
3. GLASS BLOCK

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONTRACT C1 OF INCLUDE PENSTOCK BEYOND POWERHOUSE WALL 1.00 M. (INCLUDE FLANGE)

REFERENCE DRAWINGS :

1. POWERHOUSE, GENERAL LAYOUT	MH-PH-01
2. POWERHOUSE, ELEVATIONS	MH-PH-04
3. POWERHOUSE, SECTIONS (SHEET 1/2)	MH-PH-05
4. POWERHOUSE, SECTIONS (SHEET 2/2)	MH-PH-06
5. POWERHOUSE, DETAILS OF TOILET, SEPTIC AND SEEPAGE TANK	MH-PH-07
6. POWERHOUSE, DETAIL OF DOORS, WINDOWS AND NAME PLATE	MH-PH-08



PLAN 2nd FLOOR

SCALE 1:100

0 1 2 3 4 5 6 7 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

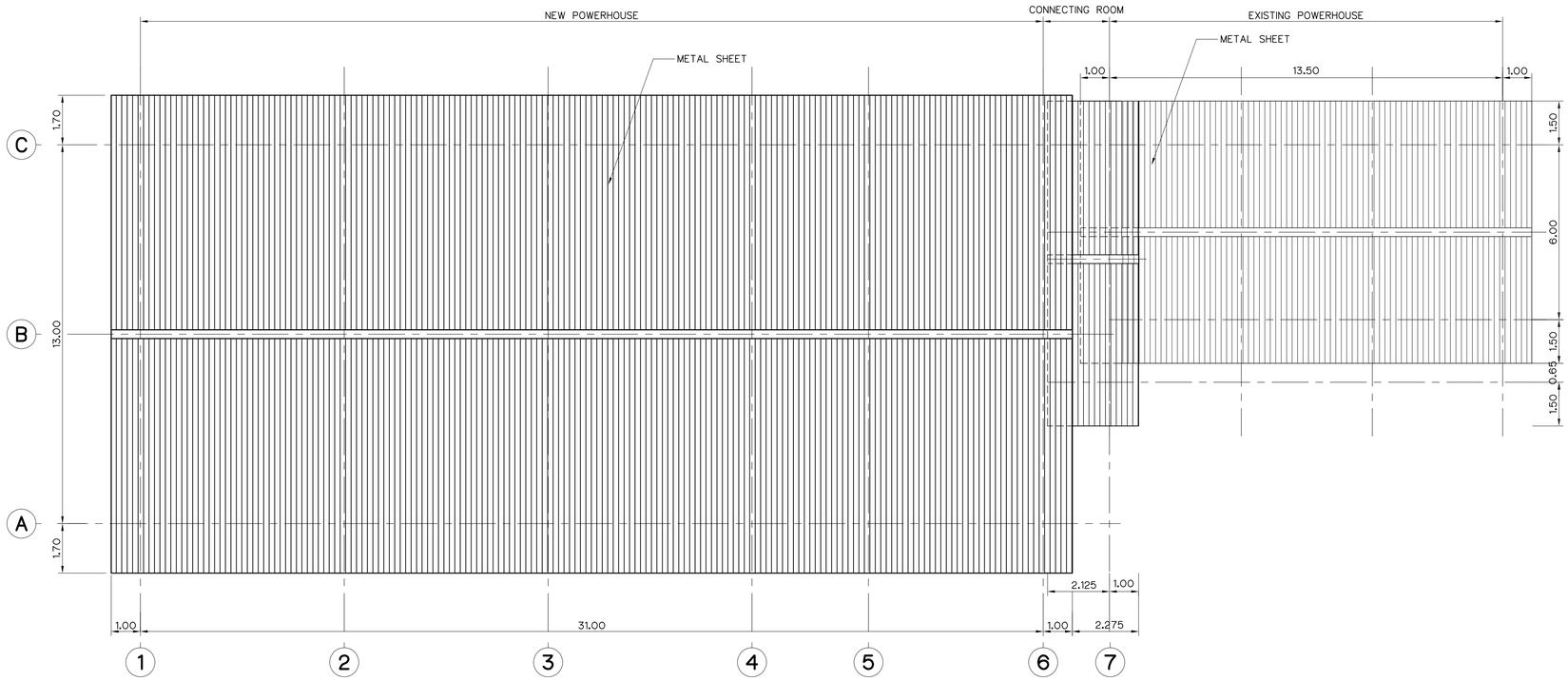
MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
PLAN 1st FLOOR AND PLAN 2nd FLOOR

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED	สมิต.64624	REVIEWED	
DRAWN	สมิต.6226	SUBMITTED	
CHECKED	สมิต.6226	RECOMMENDED	
PROJECT MANAGER	03/03/2559 DATE	APPROVED	
		DRAWING NO.	MH-PH-02
		SHEET NO.	85 OF 130



ROOF PLAN

SCALE 1:100

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. POWERHOUSE, GENERAL LAYOUT	MH-PH-01
2. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
3. POWERHOUSE, ELEVATIONS	MH-PH-04

0 1 2 3 4 5 6 7 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
ROOF PLAN

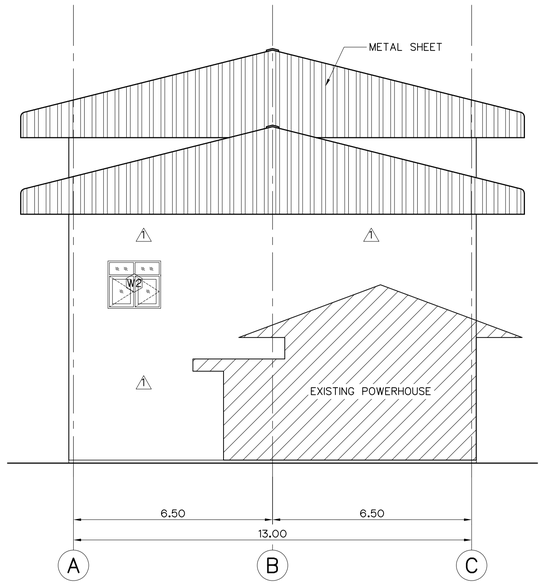
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

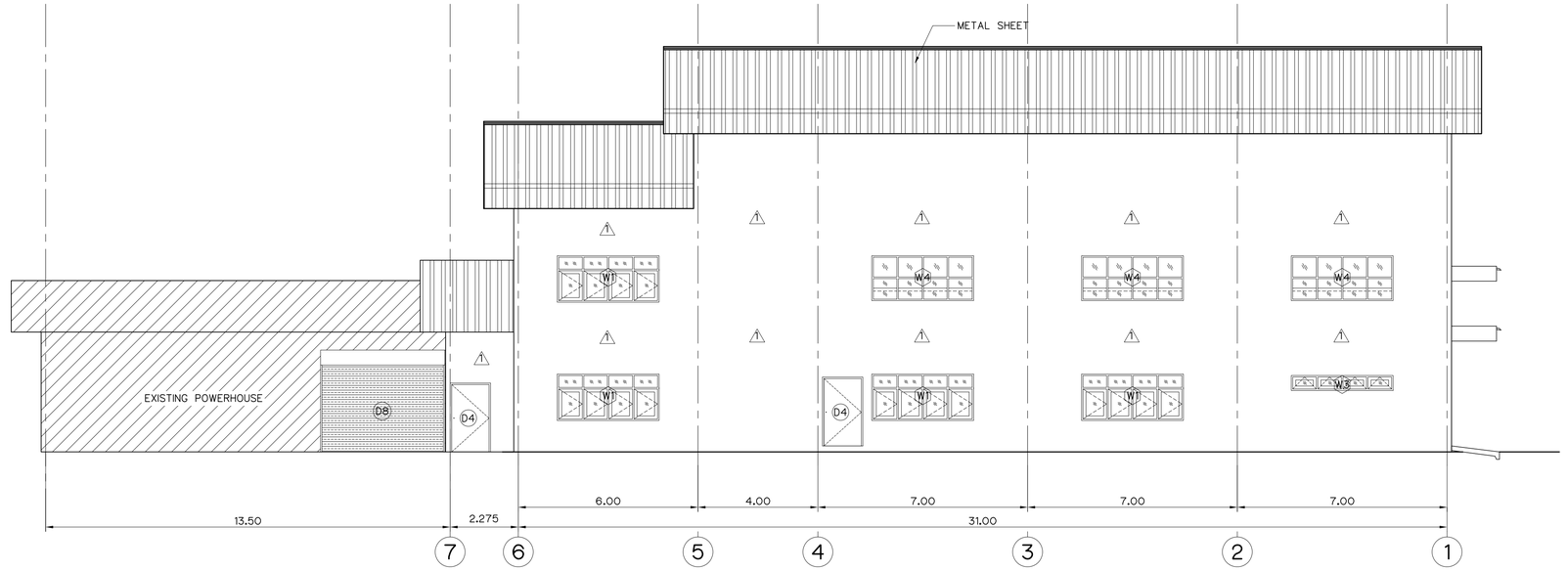
DESIGNED ภัสธ.64624 สธ.6226
DRAWN
CHECKED สธ.6226
PROJECT MANAGER 08/03/2559 DATE

REVIEWED
SUBMITTED
RECOMMENDED
APPROVED P. Hanwit

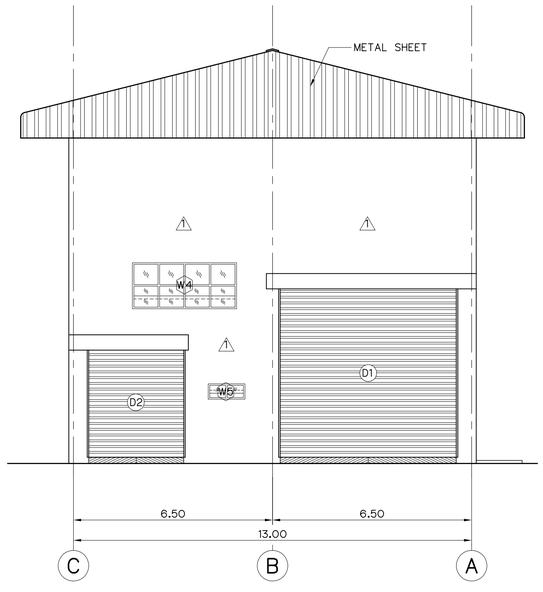
DRAWING NO. MH-PH-03
SHEET NO. 86 OF 130



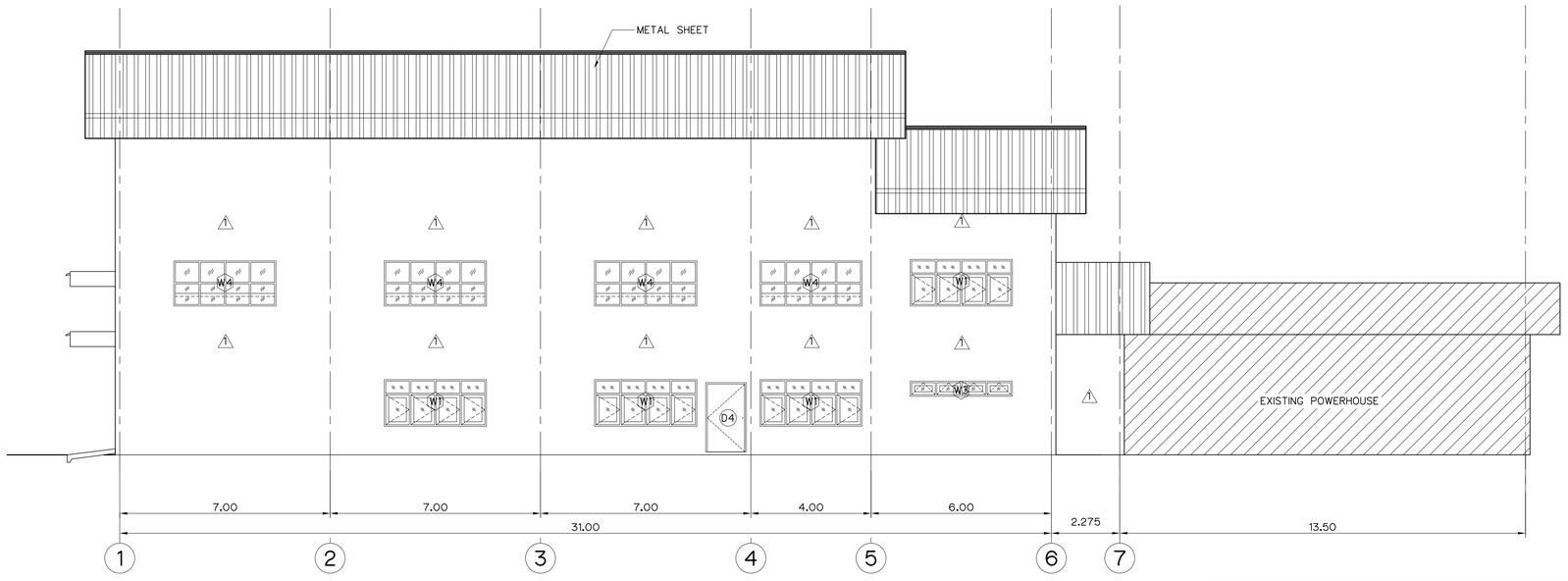
ELEVATION "A"
SCALE 1:100



ELEVATION "B"
SCALE 1:100



ELEVATION "C"
SCALE 1:100



ELEVATION "D"
SCALE 1:100

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
2. POWERHOUSE, SECTIONS (SHEET 1/2)	MH-PH-05
3. POWERHOUSE, SECTIONS (SHEET 2/2)	MH-PH-06

0 1 2 3 4 5 6 7 8
SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

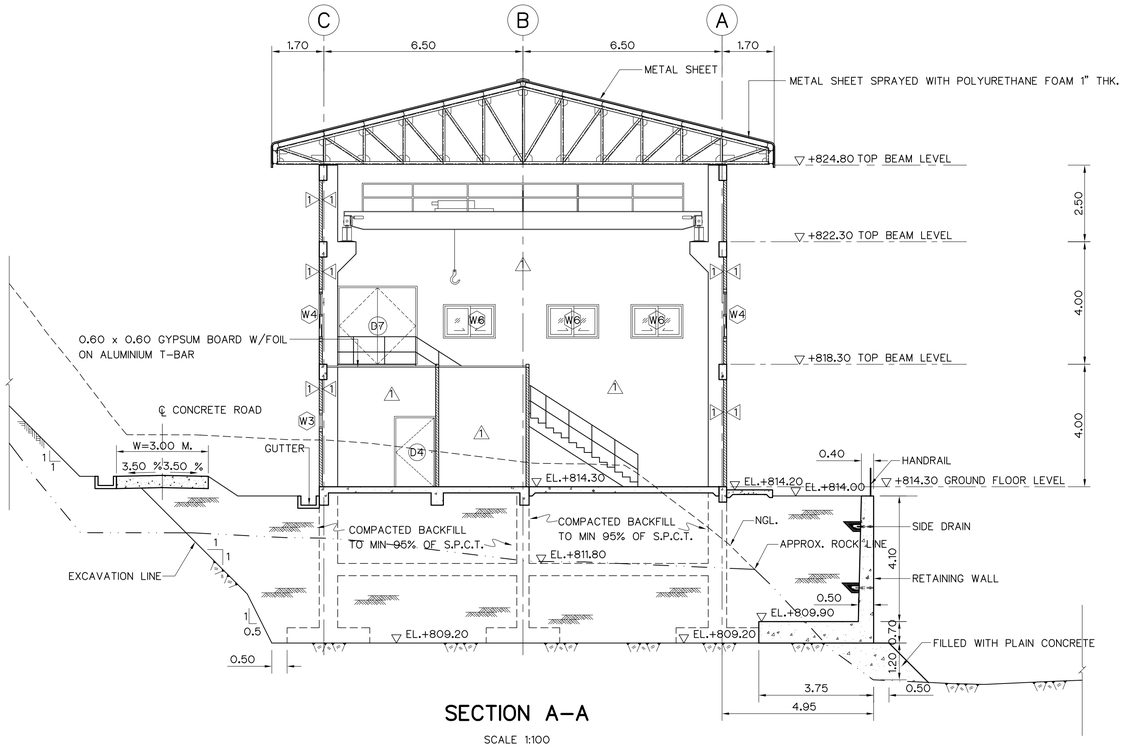
CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
ELEVATIONS

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

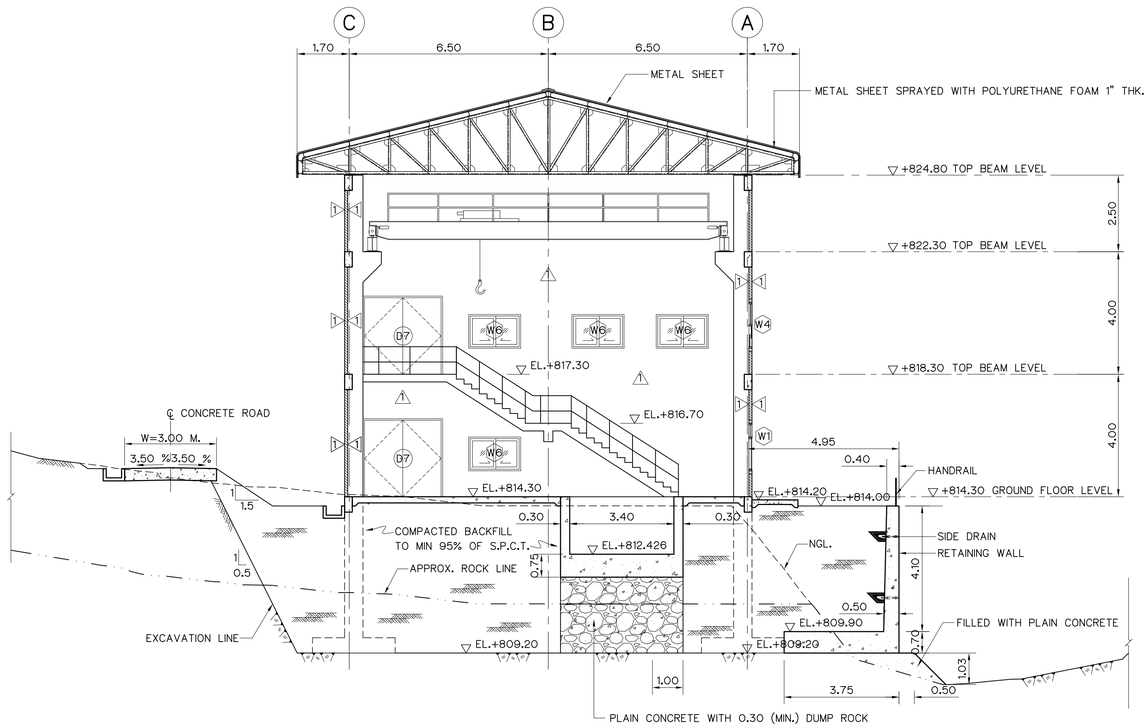
DESIGNED	วศ.64624	วศ.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED		วศ.6226	RECOMMENDED
PROJECT MANAGER		08/03/2559 DATE	APPROVED

DRAWING NO. MH-PH-04
SHEET NO. 87 OF 130



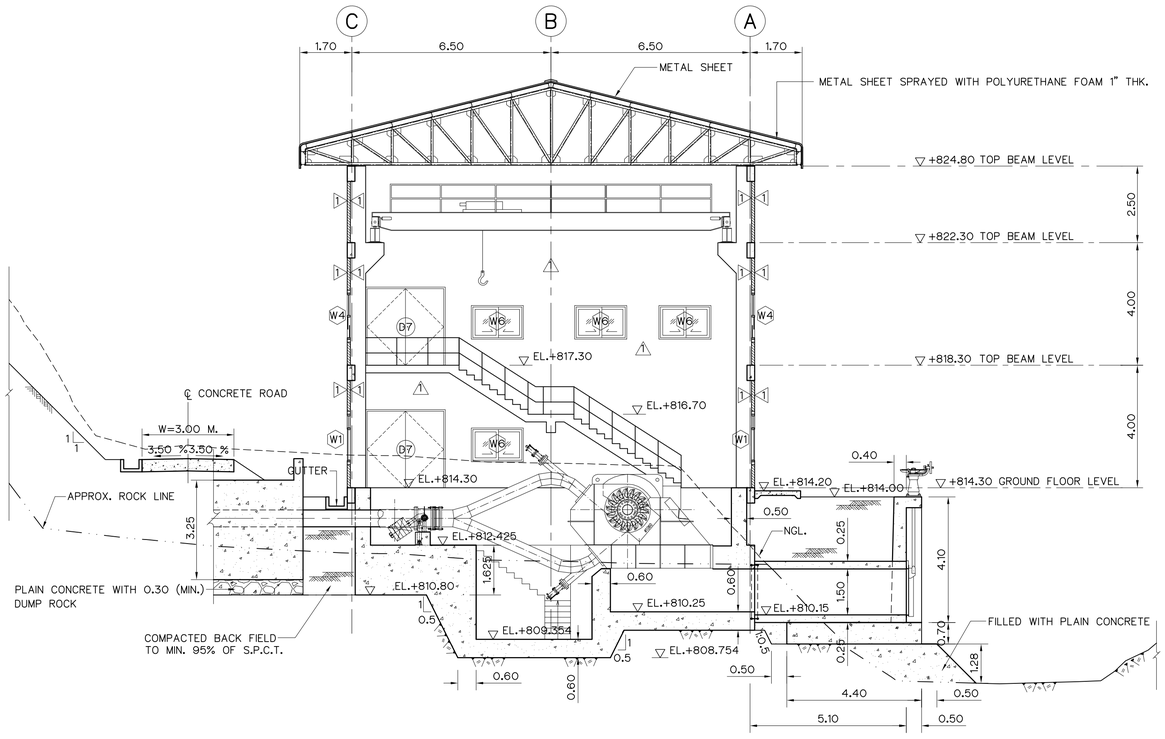
SECTION A–A

SCALE 1:100



SECTION C–C

SCALE 1:100



SECTION B–B

SCALE 1:100

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. PLAN 1st FLOOR AND PLAN 2st FLOOR	MH-PH-02
2. ELEVATIONS	MH-PH-04
3. RETAININGWALL REINFORCEMENT DETAILS	MH-PH-18

0 1 2 3 4 5 6 7 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

SECTIONS (SHEET 1/2)

P&C MANAGEMENT CO.,LTD.

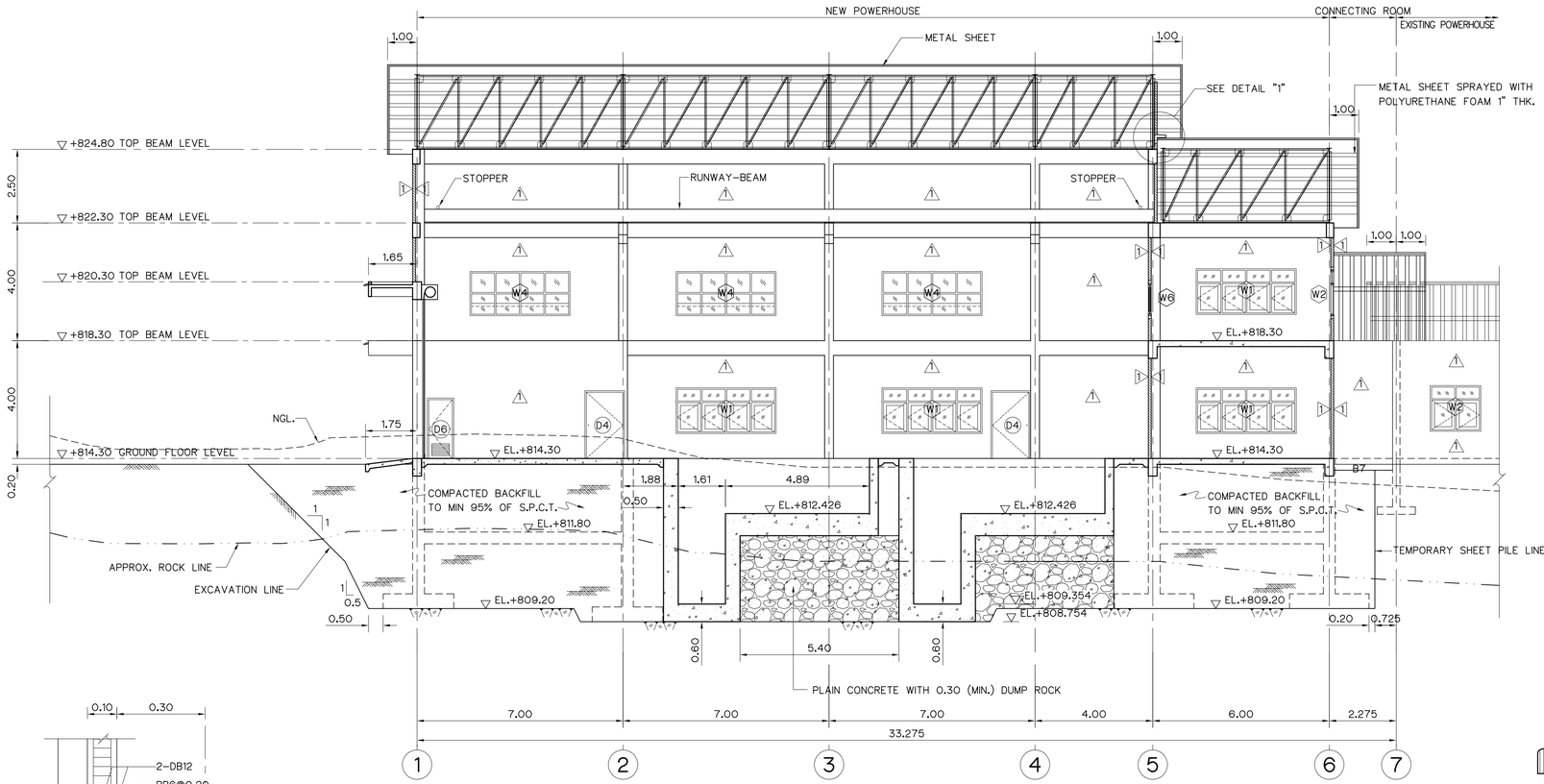
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED	สิริ.64624	สิริ.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED	สิริ.6226		RECOMMENDED
			APPROVED

PROJECT MANAGER — 08/03/2559 DATE

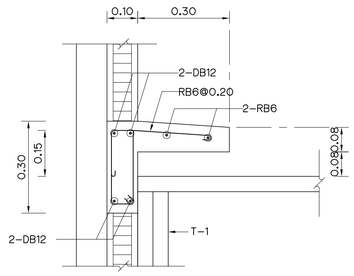
DRAWING NO. MH-PH-05

SHEET NO. 88 OF 130



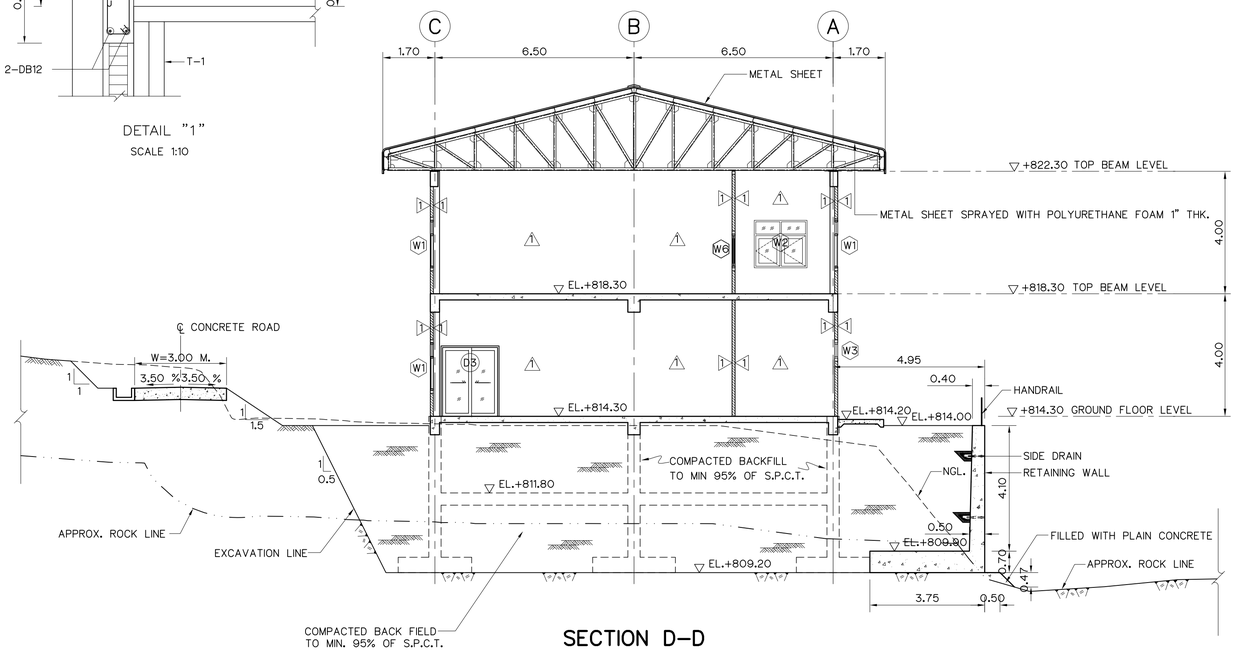
SECTION E–E

SCALE 1:100



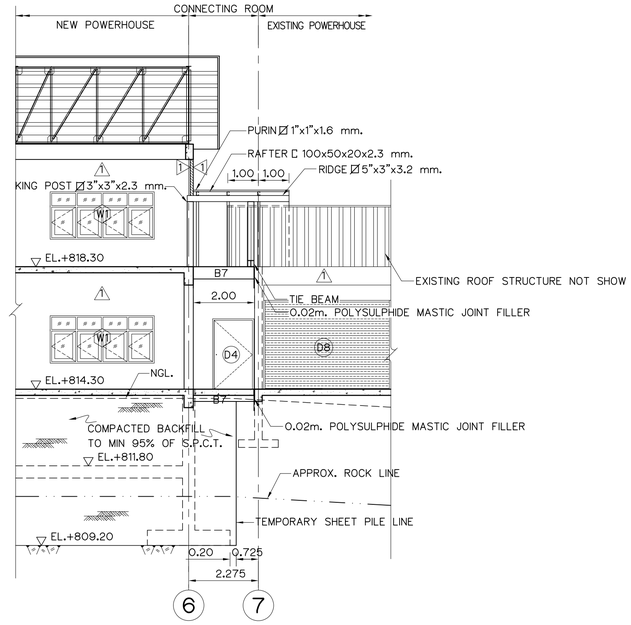
DETAIL "1"

SCALE 1:10



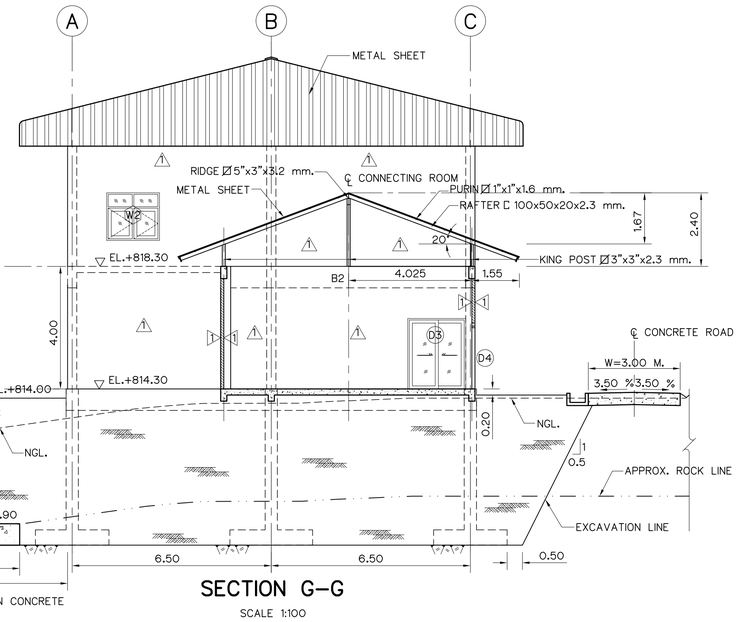
SECTION D–D

SCALE 1:100



SECTION F–F

SCALE 1:100



SECTION G–G

SCALE 1:100

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. PLAN 1st FLOOR AND PLAN 2st FLOOR	MH-PH-02
2. ELEVATIONS	MH-PH-04
3. RETAININGWALL REINFORCEMENT DETAILS	MH-PH-18

0 1 2 3 4 5 6 7 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

SECTIONS (SHEET 2/2)

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED ส.ต.64624 ส.ต.6226

DRAWN

CHECKED ส.ต.6226

REVIEWED

SUBMITTED

RECOMMENDED

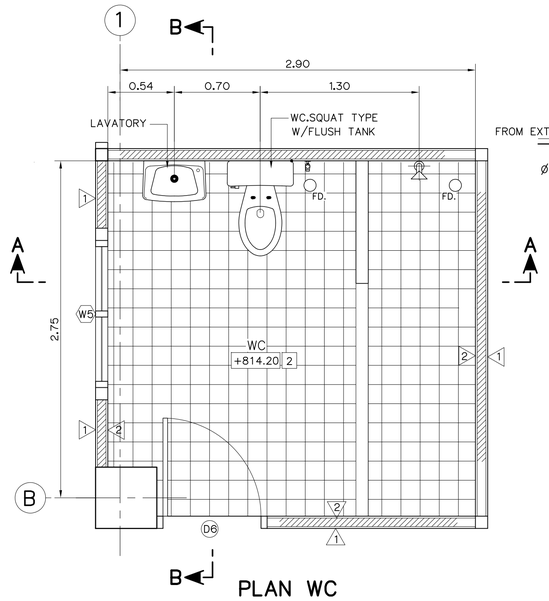
APPROVED

PROJECT MANAGER

DATE 05/03/2564

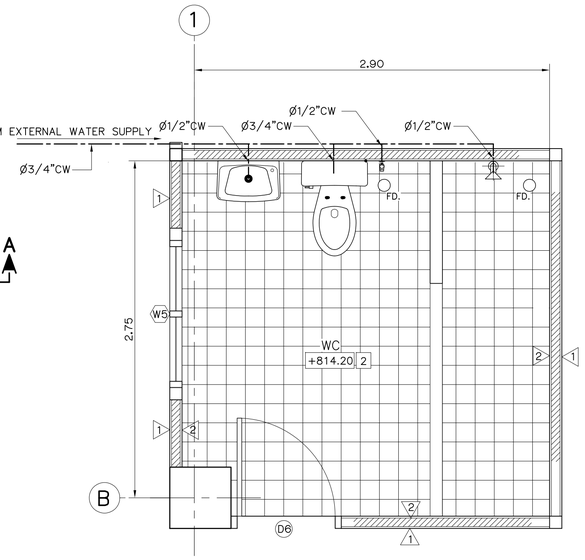
DRAWING NO. MH-PH-06

SHEET NO. 89 OF 130



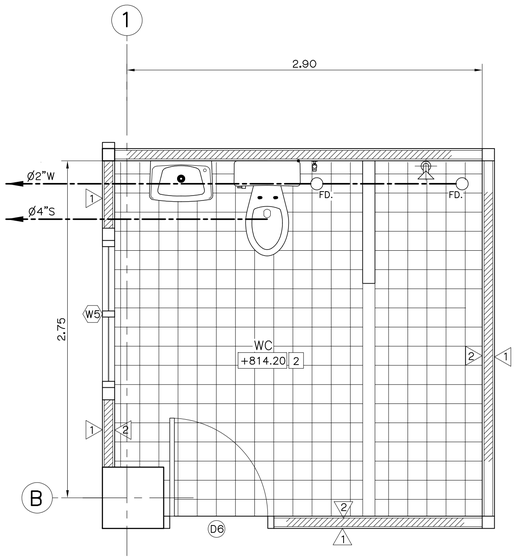
PLAN WC

SCALE 1:25



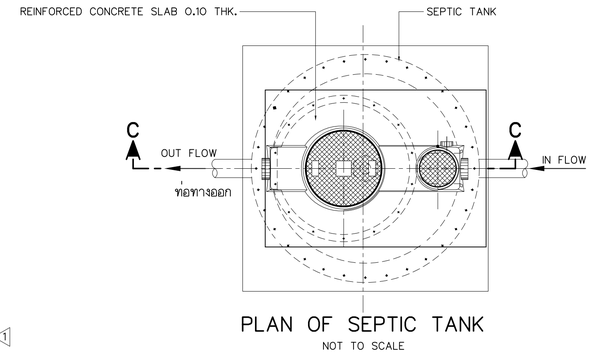
COLD WATER PIPING

SCALE 1:25



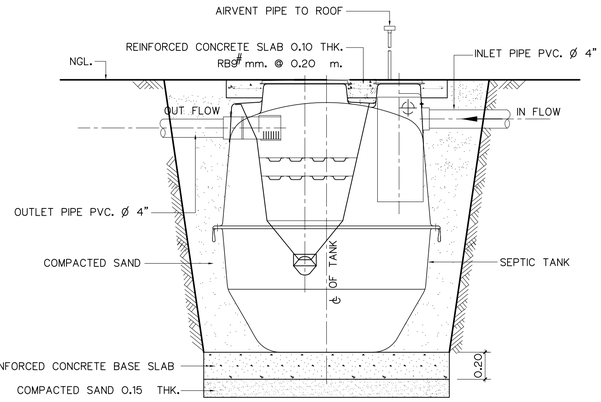
SOIL, WASTE AND VENT PIPING

SCALE 1:25



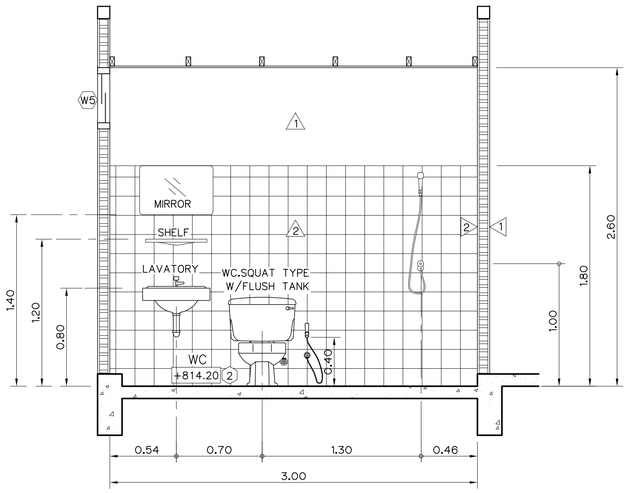
PLAN OF SEPTIC TANK

NOT TO SCALE



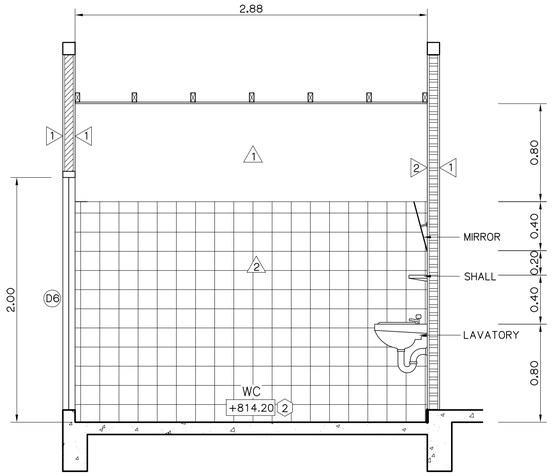
SECTION C–C

NOT TO SCALE



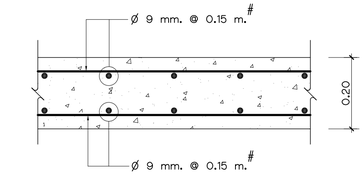
SECTION A–A

SCALE 1:25



SECTION B–B

SCALE 1:25



REINFORCEMENT OF BASE SLAB

NOT TO SCALE

APPLICATION AND DIMENSION OF SEPTIC TANK			
	VOLUMN		CONDITION
NO. OF USER	RESIDENTIAL	SOIL ONLY 60 LPCD	16
		TOTAL WASTE 200 LPCD	5

REMARK:LPCD = LITER PER CAPITAL PER DAY

MATERIAL AND APPLICATION OF SEPTIC TANK	
COMPONENTS	MATERIAL
1. TANK BODY	LLDEL (LINER LOW TYPE MEDIUM DENSITY)
2. MANHOLE COVER	ABS (ACRYLONITRILE–BUTADIENCE–STYRENE), IRON CAST
3. INLET, OUTLET PIPES	POLYETHYLENE
4. FLEX	FLEXIBLE FITTING ABS Ø 100 MM.
5. MEDIA	HDPE

SYMBOLS :

- SOIL PIPE
- WASTE PIPE
- COLD WATER PIPE
- VENT PIPE

0 0.5 1.0 1.5 2.0

SCALE 1:25 METERS

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH–GN–03

REFERENCE DRAWING :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH–PH–02

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
DETAILS OF TOILET, SEPTIC AND SEEPAGE TANK

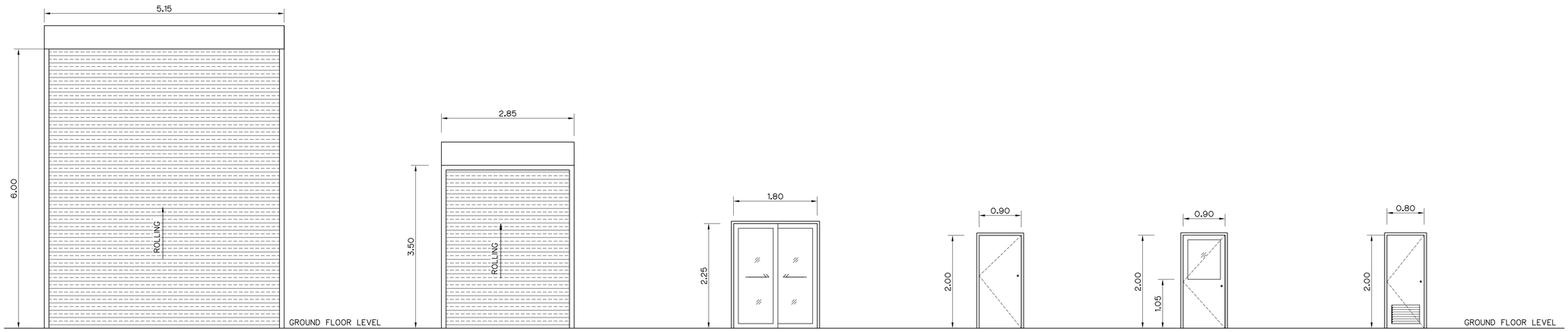
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED วิศ.64624 วิศ.6226
DRAWN
CHECKED วิศ.6226
PROJECT MANAGER 08/03/2559 DATE

REVIEWED
SUBMITTED
RECOMMENDED
APPROVED P. Hanwatt

DRAWING NO. MH–PH–07
SHEET NO. 90 OF 130



D1
ROLLING DOOR
SCALE 1:50

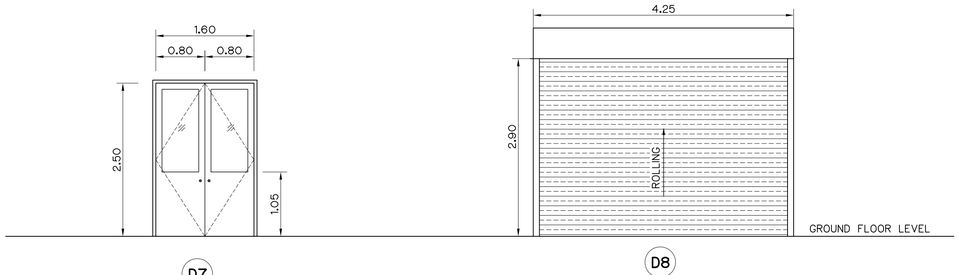
D2
ROLLING DOOR
SCALE 1:50

D3
SLIDE DOOR
SCALE 1:50

D4
OPENING DOOR
SCALE 1:50

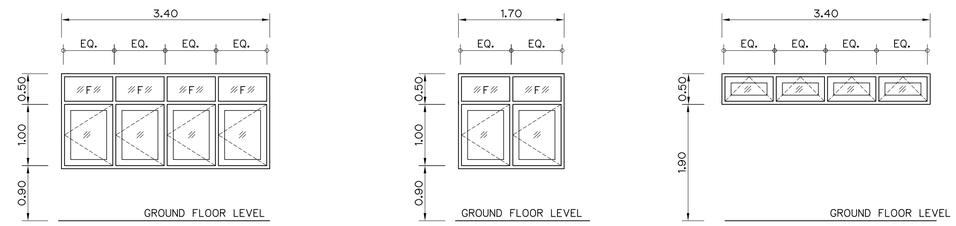
D5
OPENING DOOR
SCALE 1:50

D6
OPENING DOOR
SCALE 1:50



D7
OPENING DOOR
SCALE 1:50

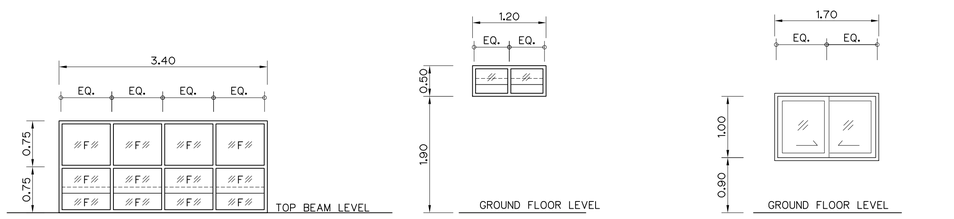
D8
ROLLING DOOR
SCALE 1:50



W1
OPENING WINDOW
SCALE 1:50

W2
OPENING WINDOW
SCALE 1:50

W3
OPENING WINDOW
SCALE 1:50



W4
FIX GRASS WINDOW
SCALE 1:50

W5
FIX GRASS WINDOW
SCALE 1:50

W6
SLIDING WINDOW
SCALE 1:50

SYMBOL	DESCRIPTIONS	SIZE		FRAME	PANEL	HINGE	LOCKSET	HANDLE	REMARKS
		WIDTH	HEIGHT						
D1	ROLLING DOOR (STEEL NO.18,1.2 mm. Thk.)	5.15	6.00	GALVANIZED STEEL	—	—	NORMAL KEY	—	MOTOR OPERATING
D2	ROLLING DOOR (STEEL NO.18,1.2 mm. Thk.)	2.85	3.50	GALVANIZED STEEL	—	—	NORMAL KEY	—	MOTOR OPERATING
D3	SLIDE DOOR	1.80	2.25	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	CYINDER LOCK	—	
D4	OPENING DOOR	0.90	2.00	HARDWOOD 2"x 4"	TEAK PLYWOOD	STAINLESS STEEL 4"x3"x2.5mm.	CYINDER LOCK	—	
D5	OPENING DOOR	0.90	2.00	HARDWOOD 2"x 4"	TEAK PLYWOOD & GLASS 5 mm.thk.	STAINLESS STEEL 4"x3"x2.5mm.	CYINDER LOCK	—	
D6	OPENING DOOR	0.80	2.00	P.V.C. 2"x 4"	P.V.C.	STAINLESS STEEL 4"x3"x2.5mm.	CYINDER LOCK	—	
D7	OPENING DOOR	1.60	2.25	HARDWOOD 2"x 4"	TEAK PLYWOOD & GLASS 5 mm.thk.	STAINLESS STEEL 4"x3"x2.5mm.	CYINDER LOCK	—	
D8	ROLLING DOOR (STEEL NO.18,1.2 mm. Thk.)	4.25	2.90	GALVANIZED STEEL	—	—	NORMAL KEY	—	MOTOR OPERATING
W1	OPENING WINDOW	3.40	1.50	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	●	●	●	FULL SET OF ACCESSORIES FROM MANUFACTURER
W2	OPENING WINDOW	1.70	1.50	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	—	—	
W3	OPENING WINDOW	3.40	0.50	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	—	—	
W4	FIXED GLASS WINDOW	3.40	1.50	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	—	—	
W5	FIXED GLASS WINDOW	1.20	0.50	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	—	—	
W6	SLIDING WINDOW	1.70	1.00	ALUMINIUM(NA) 2"x 4"	GLASS 5 mm.thk.	—	—	—	
●	SHALL BE USED SPACIFIED ACCESSORIES								

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. FOR PAINTING WORKS SEE TECHNICAL SPECIFICATION

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
2. POWERHOUSE, ELEVATIONS	MH-PH-04
3. POWERHOUSE, SECTIONS	MH-PH-05 TO PH-06

0 0.5 1.0 2.0 3.0 4.0
SCALE 1:50 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
DETAIL OF DOORS, WINDOWS AND NAME PLATE

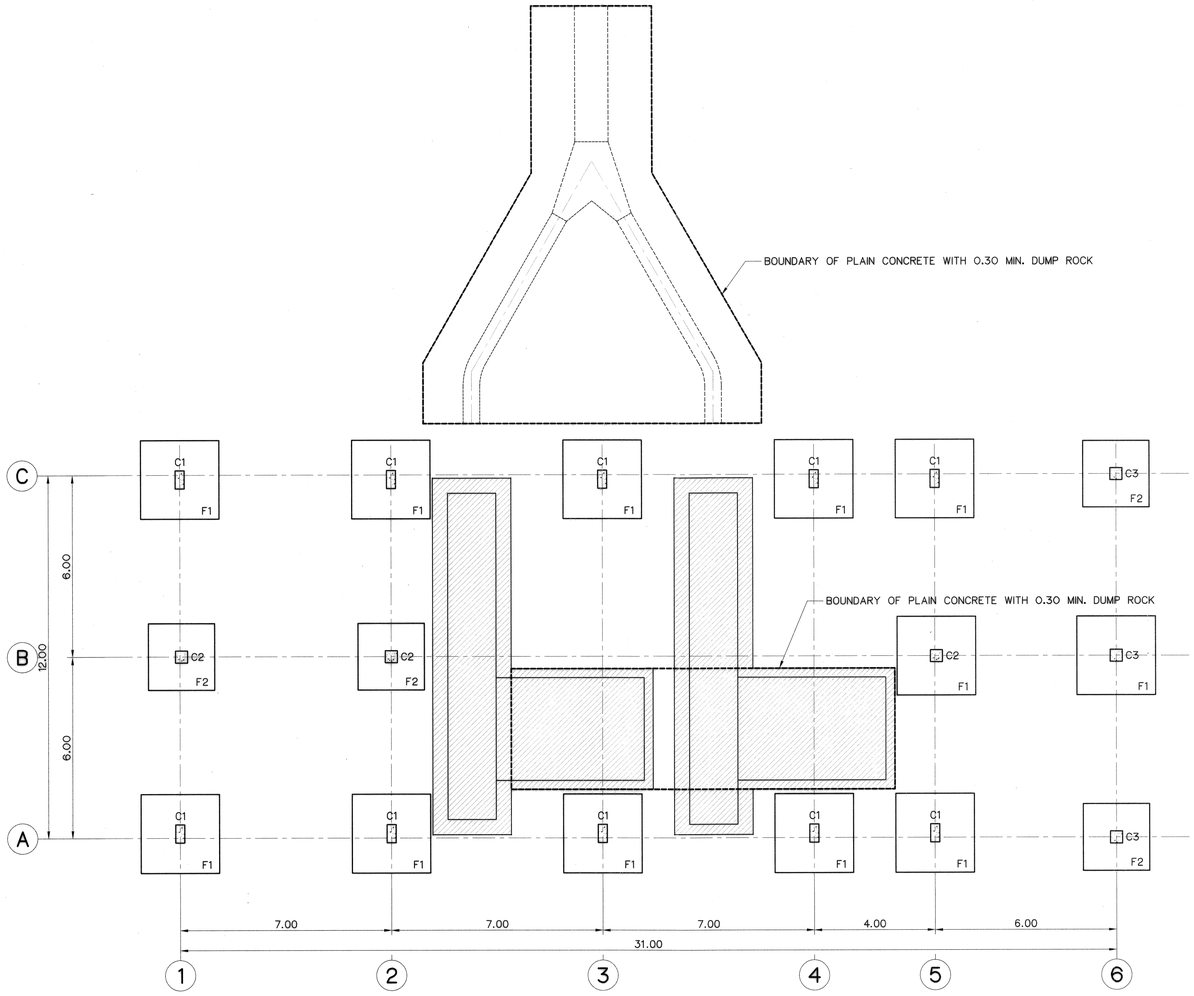
P&C MANAGEMENT CO.,LTD.

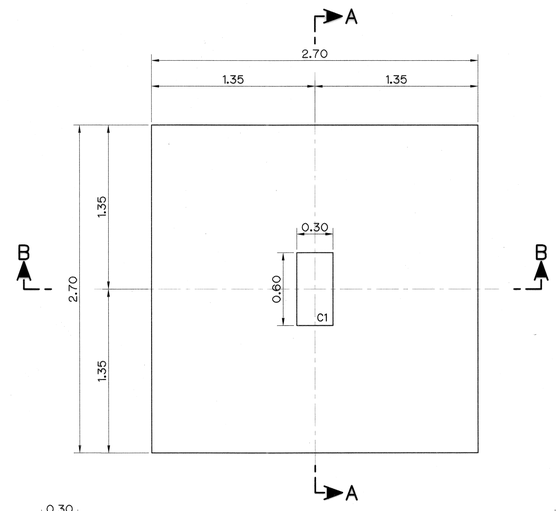
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

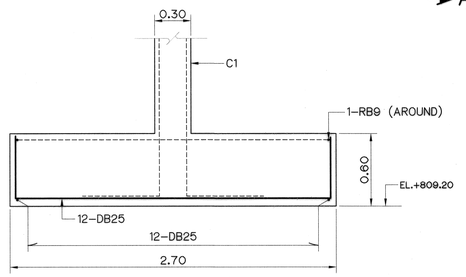
DESIGNED วศ.ภ.64624 ชัย.6226
DRAWN
CHECKED ชัย.6226
PROJECT MANAGER 01/03/2559 DATE

REVIEWED
SUBMITTED
RECOMMENDED
APPROVED

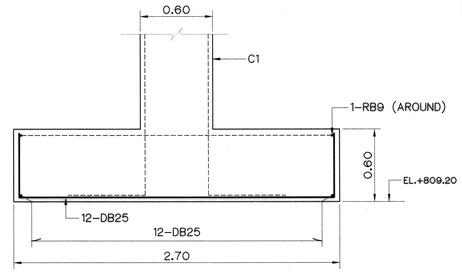
DRAWING NO. MH-PH-08
SHEET NO. 91 OF 130





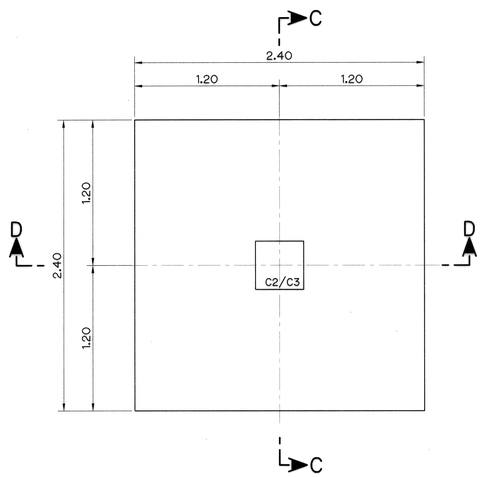


SECTION B–B

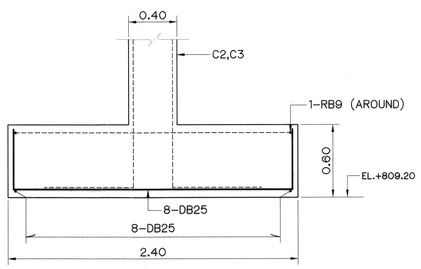


SECTION A–A

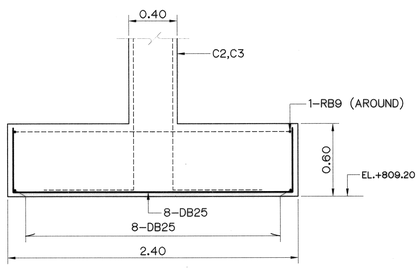
FOOTING (F1)
SCALE 1:25



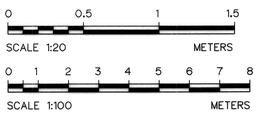
FOOTING (F2)
SCALE 1:25



SECTION C–C



SECTION D–D



NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER Ø0.15x0.30 m. TEST AT AGE 28 DAYS. UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
2. POWERHOUSE, COLUMN, BRACKET AND STAIR DETAILS	MH-PH-14

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

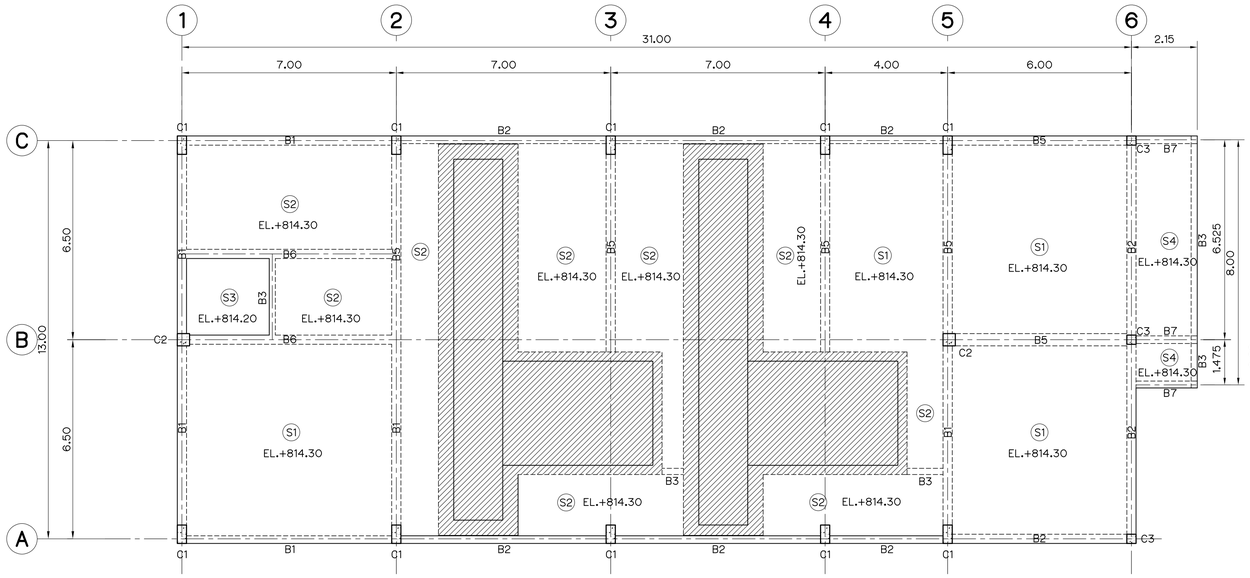
CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
PLAN OF FOOTING AND DETAILS

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

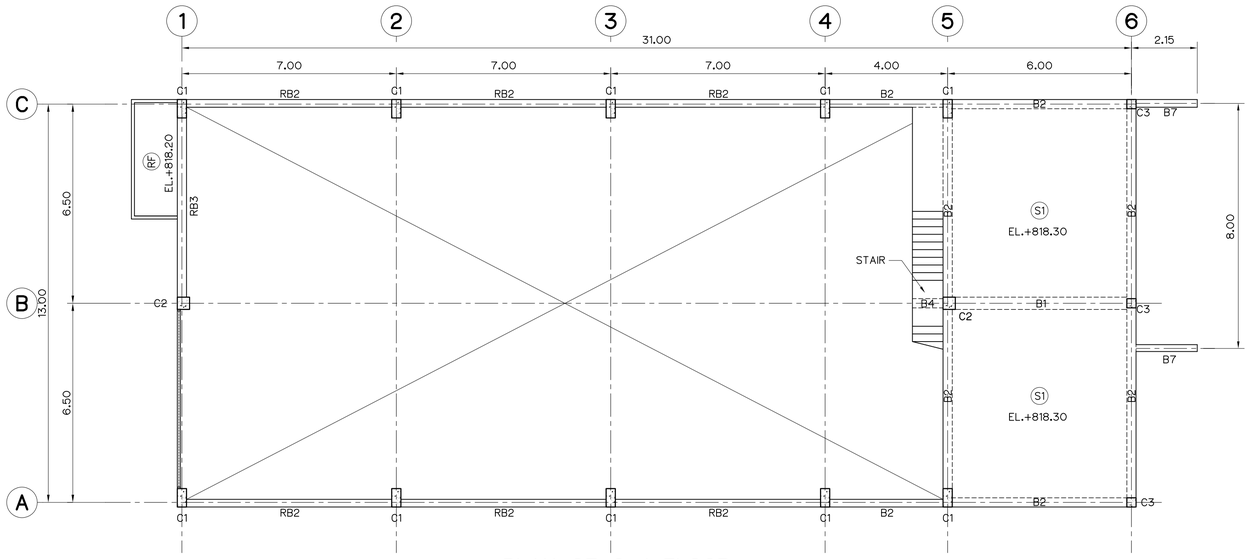
DESIGNED	วิชิต	วิชิต	REVIEWED
DRAWN			SUBMITTED
CHECKED	วิชิต		RECOMMENDED
PROJECT MANAGER		01/03/2559 DATE	APPROVED P. Hanwong

DRAWING NO. MH-PH-09
SHEET NO. 92 OF 130



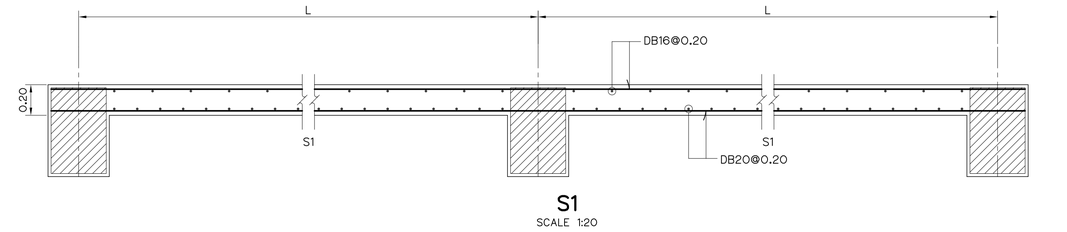
PLAN OF 1st FLOOR

SCALE 1:100



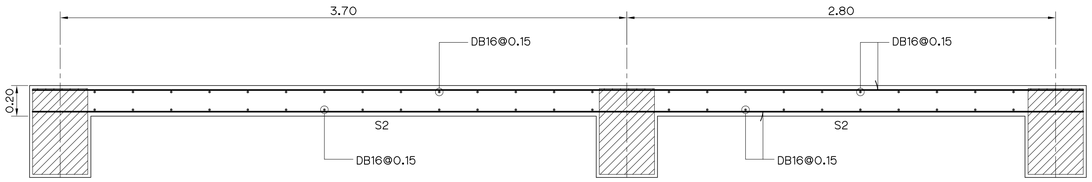
PLAN OF 2nd FLOOR

SCALE 1:100



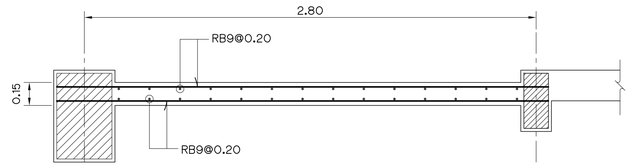
S1

SCALE 1:20



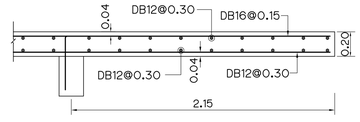
S2

SCALE 1:20



S3

SCALE 1:20



S4

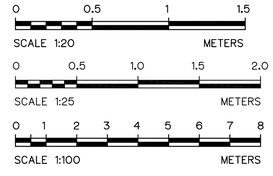
SCALE 1:25

NOTES :

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REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
2. POWERHOUSE, PLAN OF FOOTING AND DETAILS	MH-PH-09
3. COLUMN, BRACKET AND STAIR DETAILS	MH-PH-14



NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

PLAN OF SLAB AND DETAILS (1/2)

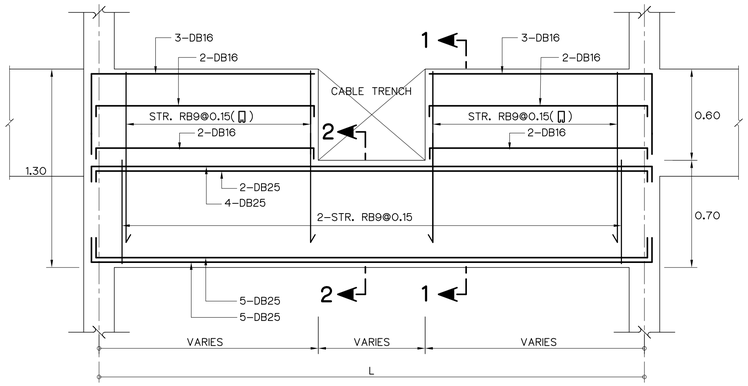
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED	วิศ.64624 วิศ.6226	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วิศ.6226	RECOMMENDED	
PROJECT MANAGER	05/03/2559 DATE	APPROVED	

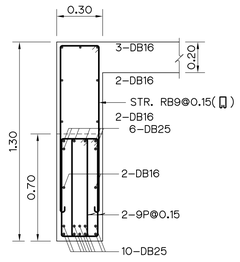
DRAWING NO. MH-PH-10

SHEET NO. 93 OF 130



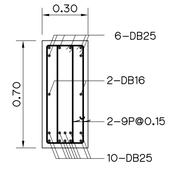
REINFORCEMENT DETAILS OF CABLE TRENCH AT BEAM B5

SCALE 1:20



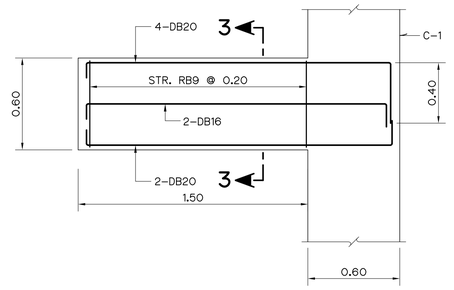
SECTION 1–1

SCALE 1:20



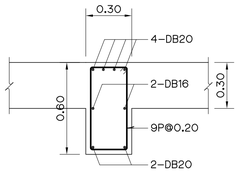
SECTION 2–2

SCALE 1:20



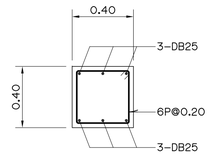
REINFORCEMENT DETAILS BEAM B4

SCALE 1:20



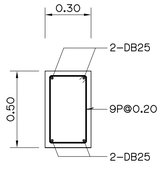
SECTION 3–3

SCALE 1:20



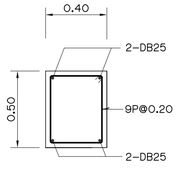
BRACING

SCALE 1:20



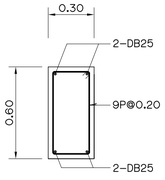
RB1–1

SCALE 1:20



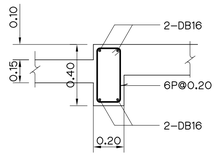
RB1–2

SCALE 1:20



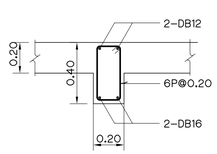
RB2

SCALE 1:20



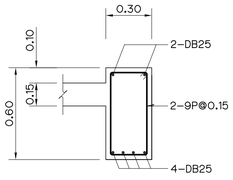
B3

SCALE 1:20



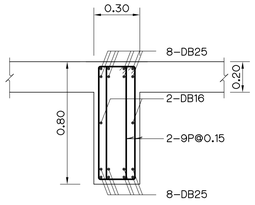
B3

SCALE 1:20



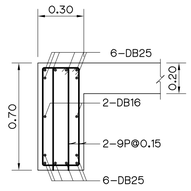
RB3

SCALE 1:20



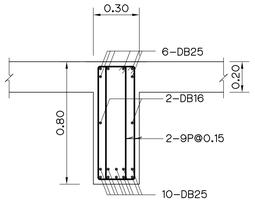
B1

SCALE 1:20



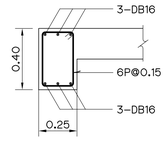
B2

SCALE 1:20



B6

SCALE 1:20



B7

SCALE 1:20

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER Ø0.15x0.30 m. TEST AT AGE 28 DAYS. UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2st FLOOR	MH-PH-02
2. POWERHOUSE, PLAN OF SLAB AND DETAILS	MH-PH-10
3. POWERHOUSE, COLUMN, BRACKET AND STAIR DETAILS	MH-PH-14

0 0.5 1 1.5

SCALE 1:20 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

BEAMS DETAILS (2/2)

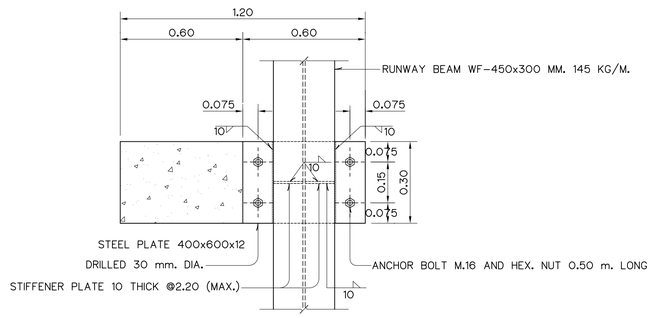
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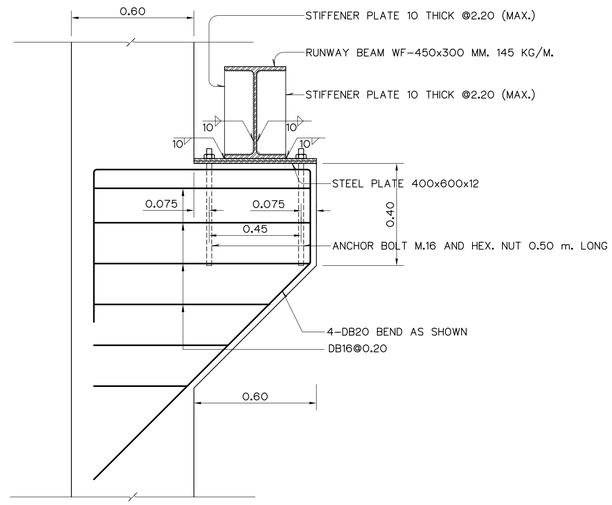
DESIGNED	วิศ.64624 วิศ.6226
DRAWN	
CHECKED	วิศ.6226
PROJECT MANAGER	DATE 02/03/2559
REVIEWED	
SUBMITTED	
RECOMMENDED	
APPROVED	
DRAWING NO.	MH-PH-13
SHEET NO.	96 OF 130

	C1	C2	C3
+824.80			
+822.30	0.30 / 0.60 / 14-DB25 2-9P@0.20	0.40 / 0.40 / 8-DB25 2-9P@0.20	
+814.30	0.30 / 0.60 / 14-DB25 2-9P@0.20	0.40 / 0.40 / 8-DB25 2-9P@0.20	0.30 / 0.30 / 8-DB16 2-6P@0.20
FOOTING	0.30 / 0.60 / 14-DB25 2-9P@0.20	0.40 / 0.40 / 8-DB25 2-9P@0.20	0.40 / 0.40 / 8-DB25 2-9P@0.20

COLUMN DETAIL
SCALE 1:25

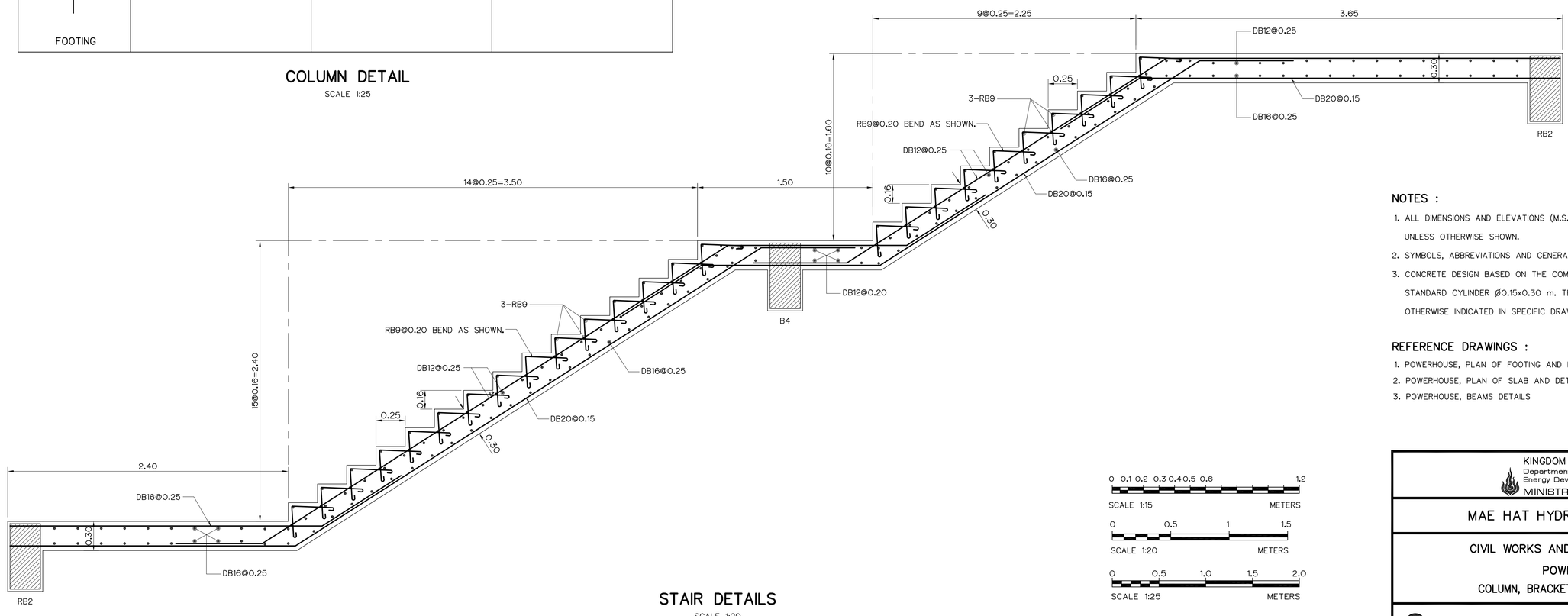


PLAN



SECTION

RUNWAY BEAM AND BRACKET
SCALE 1:15



STAIR DETAILS
SCALE 1:20

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
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3. CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER Ø0.15x0.30 m. TEST AT AGE 28 DAYS. UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN OF FOOTING AND DETAILS	MH-PH-09
2. POWERHOUSE, PLAN OF SLAB AND DETAILS	MH-PH-10
3. POWERHOUSE, BEAMS DETAILS	MH-PH-11

0 0.1 0.2 0.3 0.4 0.5 0.6 1.2
SCALE 1:15 METERS

0 0.5 1 1.5
SCALE 1:20 METERS

0 0.5 1.0 1.5 2.0
SCALE 1:25 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

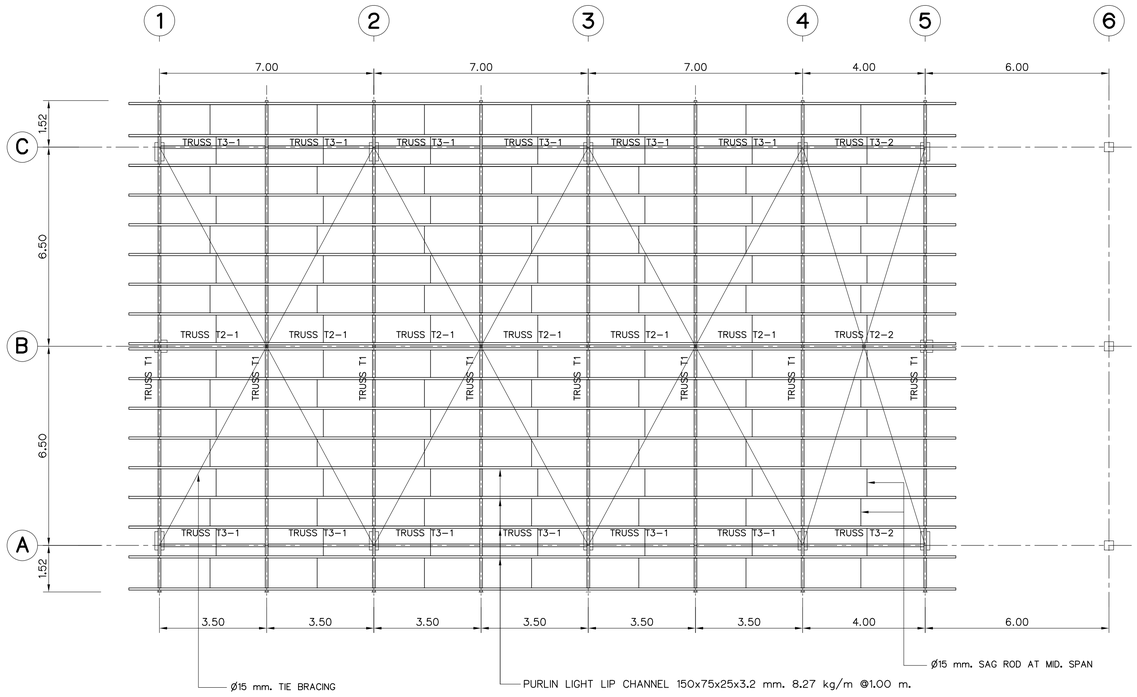
CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
COLUMN, BRACKET AND STAIR DETAILS

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

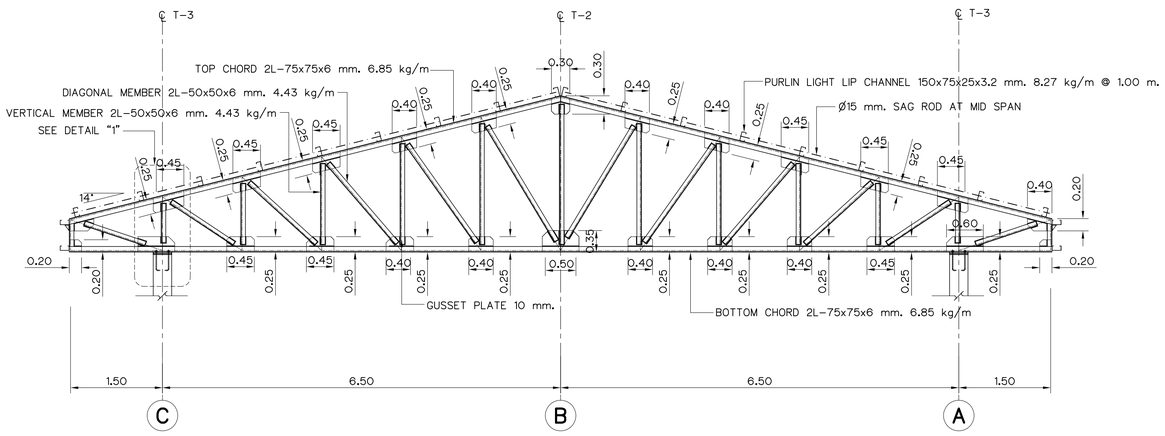
DESIGNED	นิติ.64624	สิน.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED		สิน.6226	RECOMMENDED
PROJECT MANAGER		DATE: 08/03/2559	APPROVED

DRAWING NO. MH-PH-14
SHEET NO. 97 OF 130



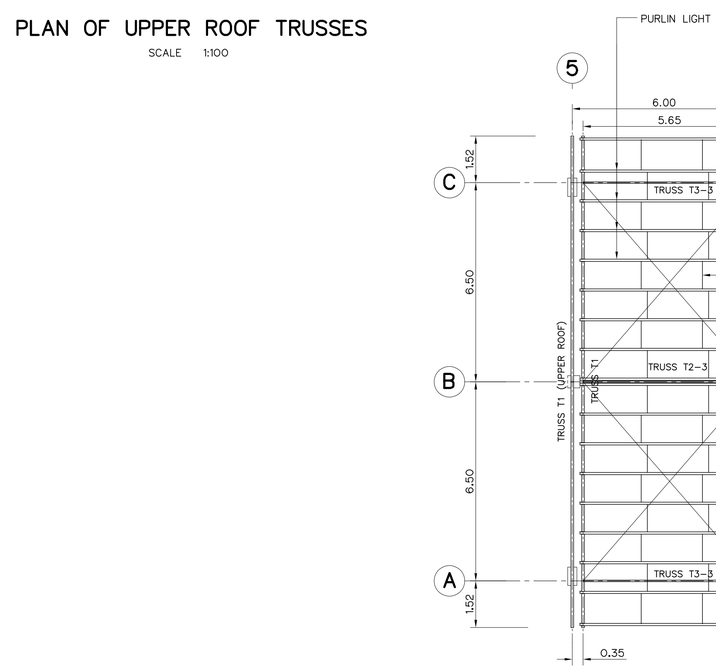
PLAN OF UPPER ROOF TRUSSES

SCALE 1:100



TRUSS T1

SCALE 1:50



PLAN OF LOWER ROOF TRUSSES

SCALE 1:100

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR	MH-PH-02
2. POWERHOUSE, SECTIONS (SHEET 1/2)	MH-PH-05
3. POWERHOUSE, SECTIONS (SHEET 2/2)	MH-PH-06
4. POWERHOUSE, TRUSS T2 AND DETAILS	MH-PH-16
5. POWERHOUSE, TRUSS T3 AND DETAILS	MH-PH-17

0 0.5 1 2 3 4
SCALE 1:50 METERS

0 1 2 3 4 5 6 7 8
SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

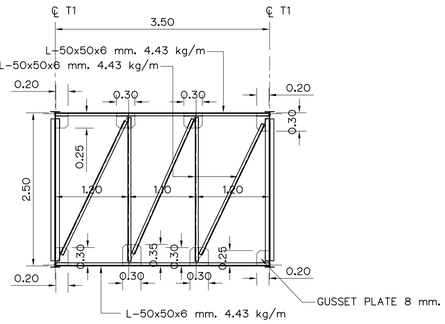
CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
PLAN OF TRUSS AND TRUSS T1 DETAILS

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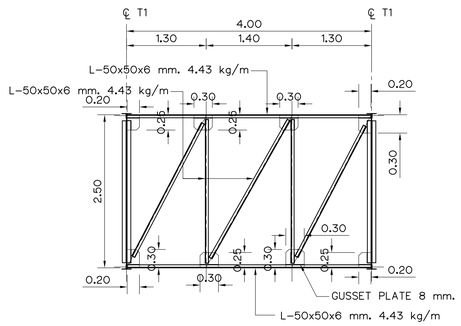
DESIGNED	วิศ.64624	วิศ.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED		วิศ.6226	RECOMMENDED
PROJECT MANAGER	08/03/2559 DATE		APPROVED

DRAWING NO. MH-PH-15
SHEET NO. 98 OF 130



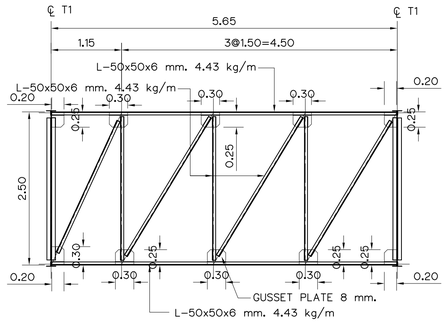
TRUSS T2-1

SCALE 1:50



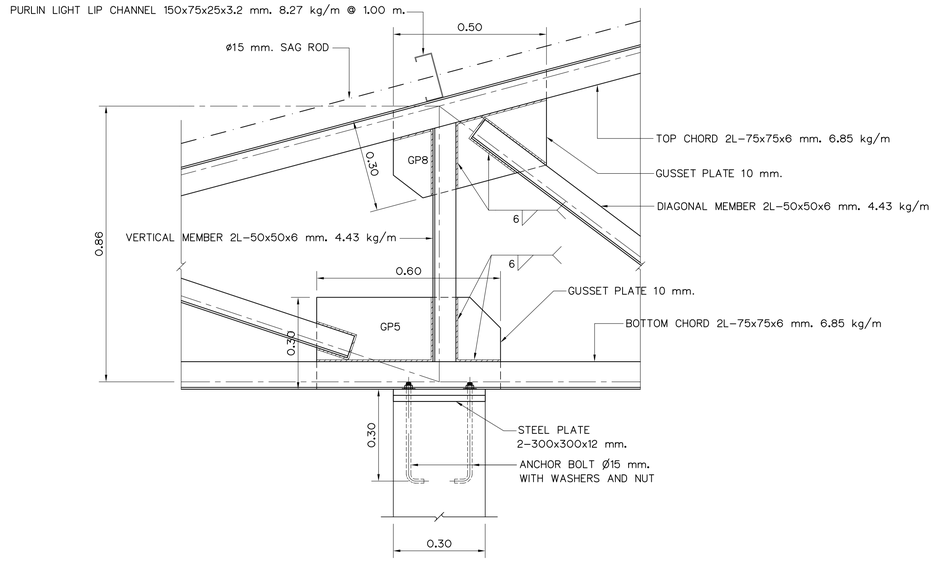
TRUSS T2-2

SCALE 1:50



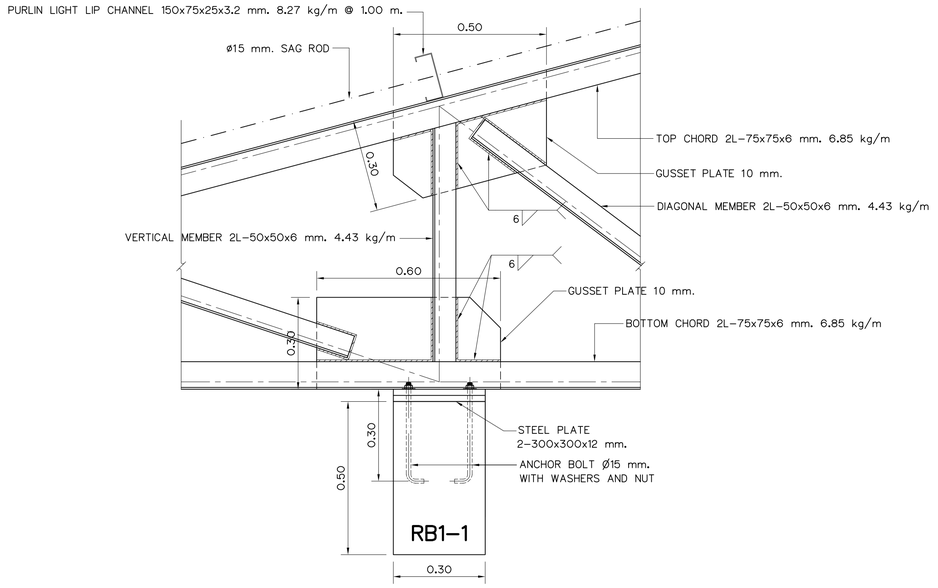
TRUSS T2-3

SCALE 1:50



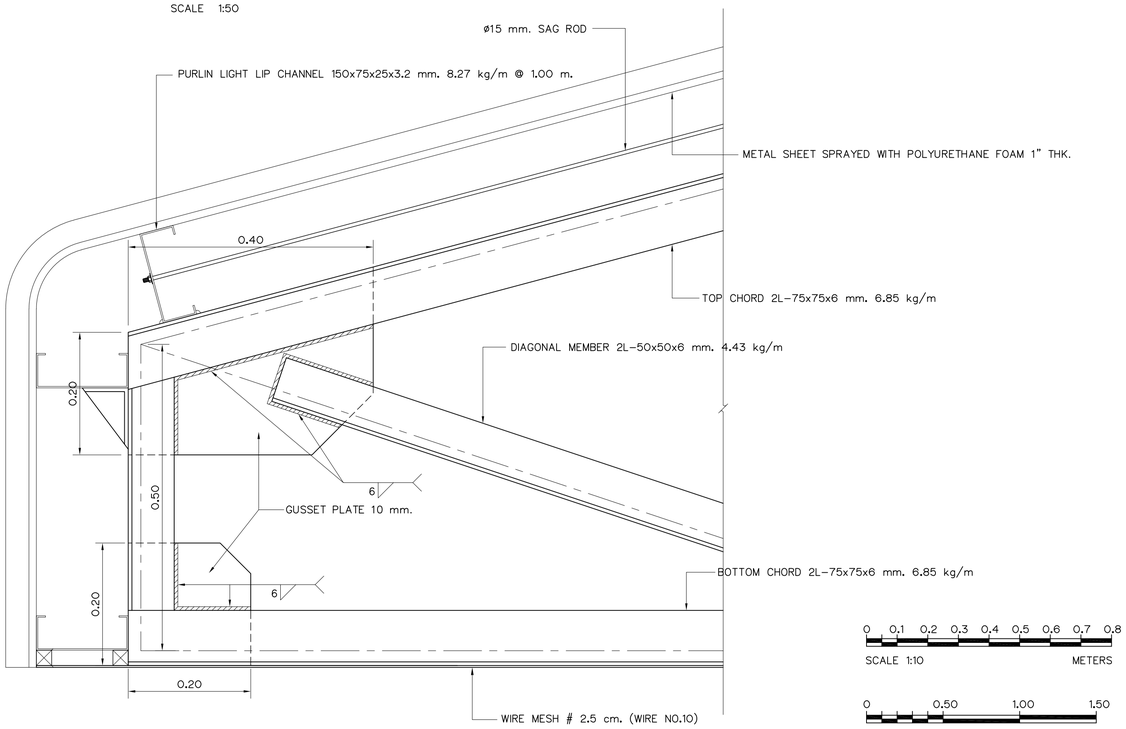
DETAILS "1" (Supported on Column)

SCALE 1:20



DETAILS "1" (Supported on Beam)

SCALE 1:20



EAVES DETAIL

SCALE 1:10

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8
SCALE 1:10 METERS

0 0.50 1.00 1.50
SCALE 1:20 METERS

0 0.5 1.0 2.0 3.0 2.5
SCALE 1:50 METERS

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. WELDING CONNECTION USE 6 MM., UNLESS OTHERWISE SHOWN.

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN OF TRUSS AND TRUSS T1 DETAILS MH-PH-15

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

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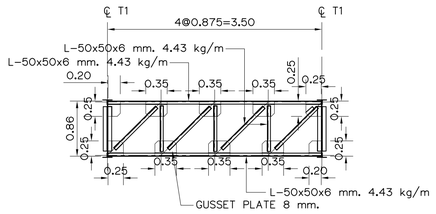
MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
TRUSS T2 AND DETAILS

P&C MANAGEMENT CO.,LTD.

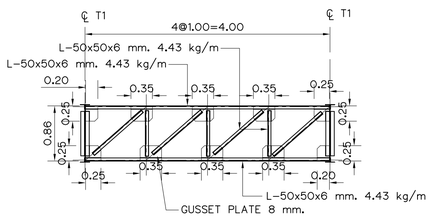
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED	วสิ.64624 วสิ.6226
DRAWN	
CHECKED	วสิ.6226
REVIEWED	
SUBMITTED	
RECOMMENDED	
APPROVED	
PROJECT MANAGER	DATE 08/03/2559
DRAWING NO.	MH-PH-16
SHEET NO.	99 OF 130



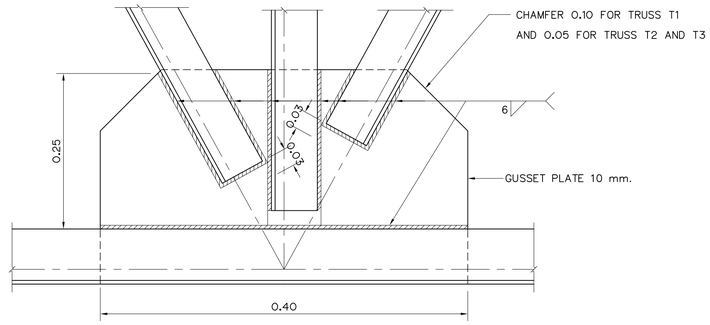
TRUSS T3-1

SCALE 1:50



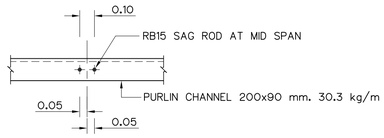
TRUSS T3-2

SCALE 1:50

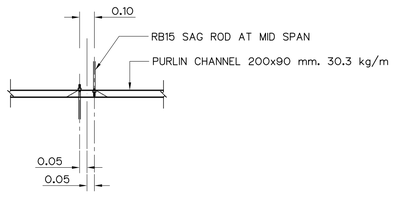


TYPICAL OF WELD DETAIL

SCALE 1:5



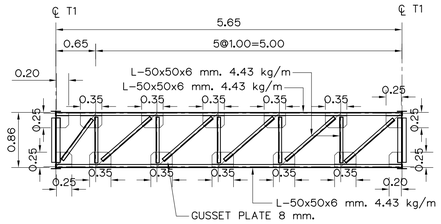
ELEVATION



PLAN

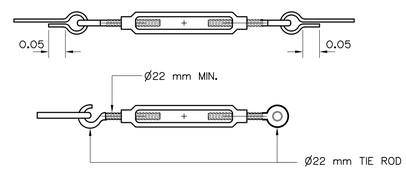
SAG ROD DETAILS

SCALE 1:20



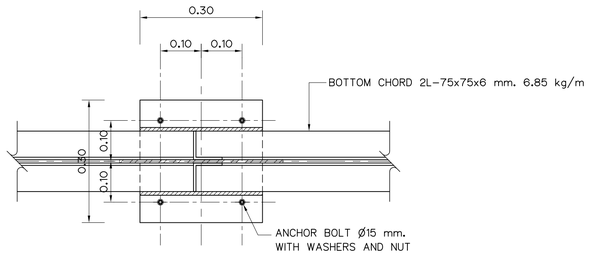
TRUSS T3-3

SCALE 1:50



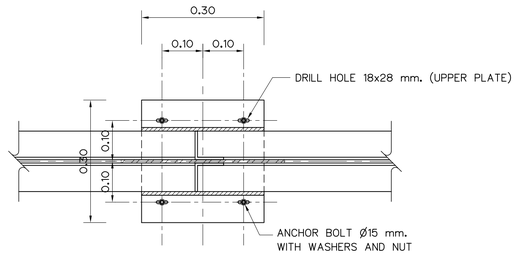
TURNBUCKLE

NOT TO SCALE



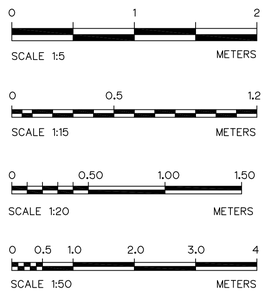
HINGE SUPPORT DETAIL

SCALE 1:15



ROLLER SUPPORT DETAIL

SCALE 1:15



NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. WELDING CONNECTION USE 6 MM., UNLESS OTHERWISE SHOWN.

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN OF TRUSS AND TRUSS T1 DETAILS MH-PH-15

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
TRUSS T3 AND DETAILS

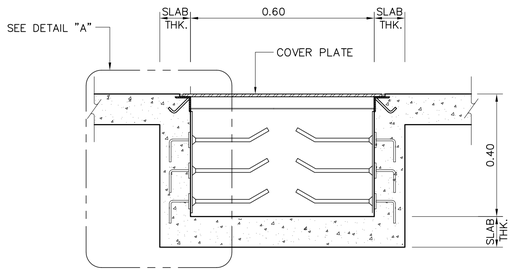
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED		REVIEWED	
DRAWN		SUBMITTED	
CHECKED		RECOMMENDED	
PROJECT MANAGER	01/03/2559 DATE	APPROVED	

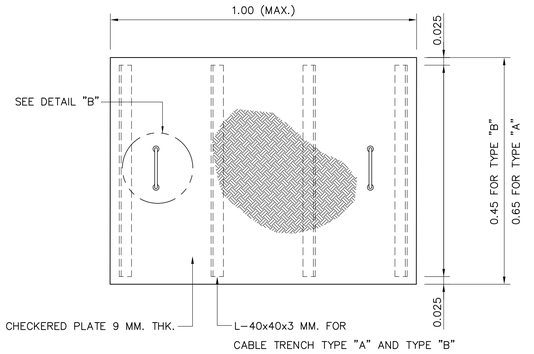
DRAWING NO. MH-PH-17

SHEET NO. 100 OF 130



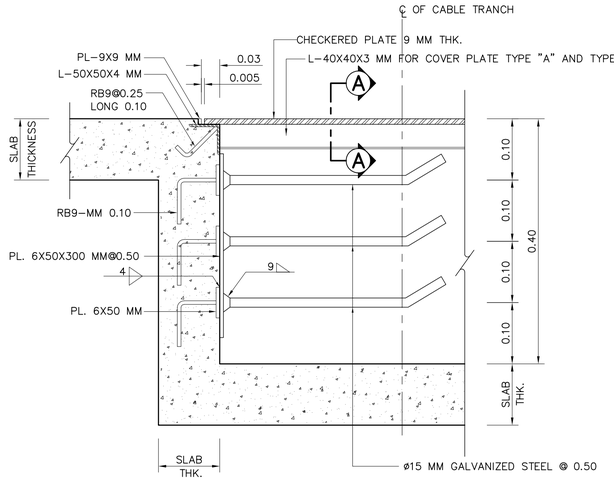
INDOOR CABLE TRENCH

SCALE 1:10



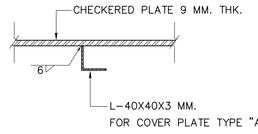
COVER PLATE FOR INDOOR

SCALE 1:10



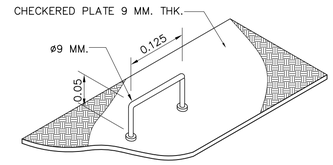
DETAIL "A"

SCALE 1:5



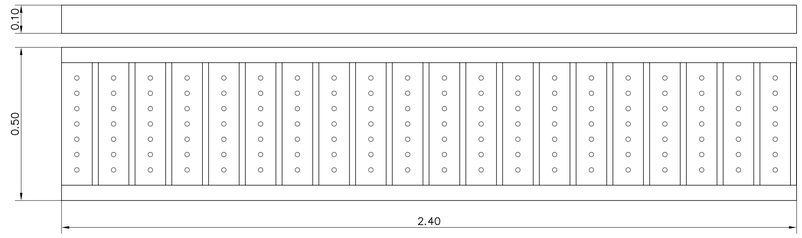
SECTION A-A

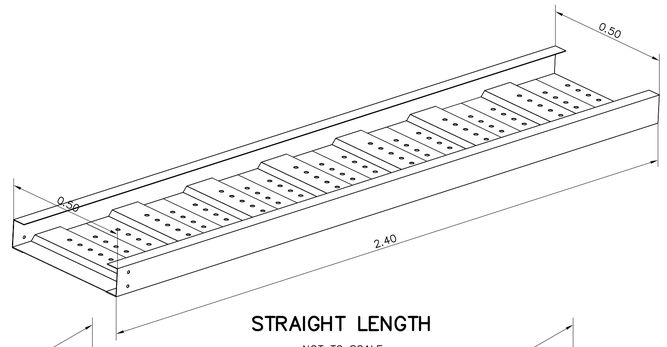
NOT TO SCALE



DETAIL "B"

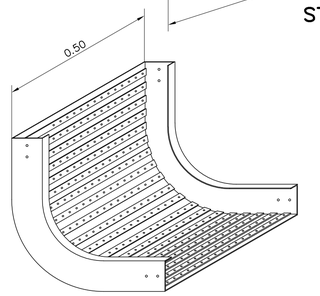
NOT TO SCALE





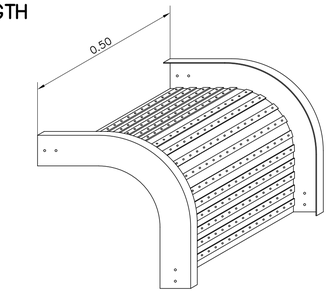
STRAIGHT LENGTH

NOT TO SCALE



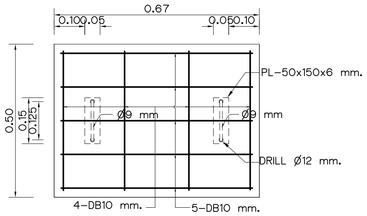
OUTSIDE VERTICAL RISERS

NOT TO SCALE



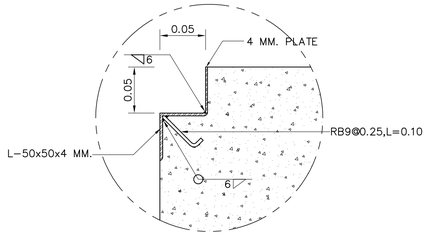
INSIDE VERTICAL RISERS

NOT TO SCALE



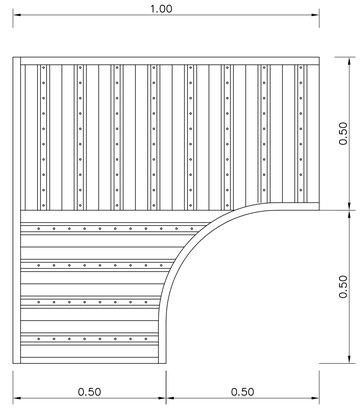
OUTDOOR COVER CABLE TRENCH

SCALE 1:10



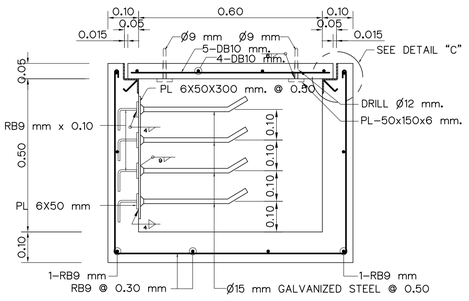
DETAIL "C"

NOT TO SCALE



HORIZONTAL 90 ELBOWS

NOT TO SCALE



OUTDOOR CABLE TRENCH

SCALE 1:10

NOTES :

1. ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATION AND GENERAL NOTES SEE DWG. No. MH-GN-03
3. STEEL COVER FOR IN DOOR TRENCH SHALL BE COATED WITH NON BLEEDING TYPE COAL TAR EPOXY

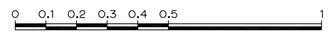
REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR

MATERIALS : SHEET STEEL 1.5MM.
SURFACE FINISH : POWDER
COATED IN TEXTURED RAL
7032 OR HOT-DIP GALVANIZED
(UPON YOU REQUIREMENTS)
ASSEMBLY : WELDING METHOD
APPLICATION : USING FOR INDOOR & OUTDOOR INSTALLATION WORK



SCALE 1:5 METERS



SCALE 1:10 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
CABLE TRENCH DETAILS

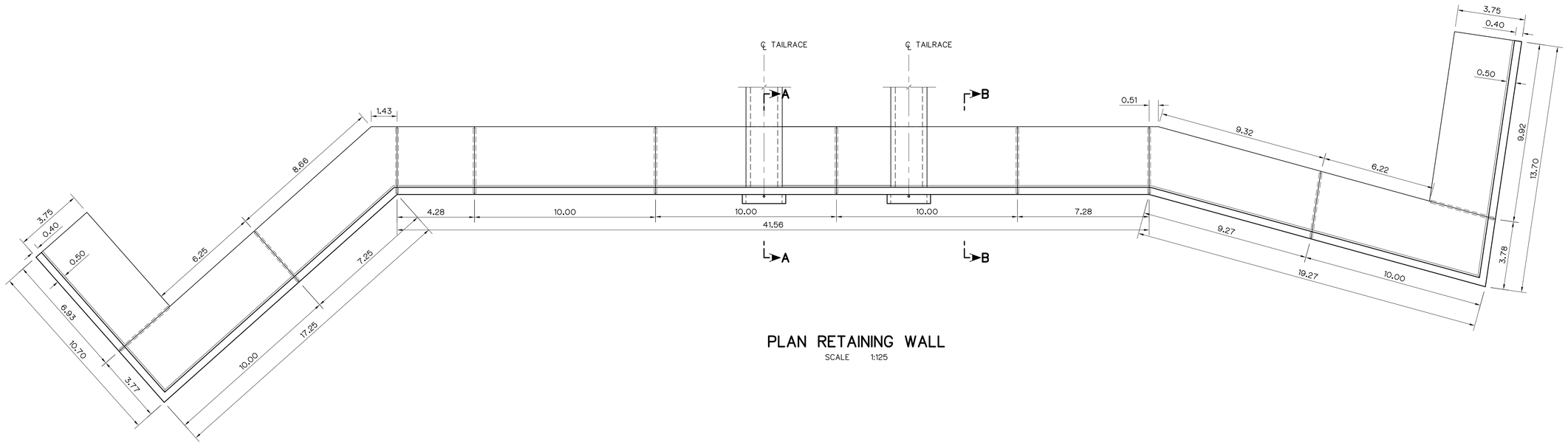
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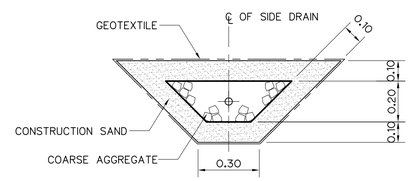
DESIGNED วสิ.64624 วสิ.6226
DRAWN
CHECKED วสิ.6226
PROJECT MANAGER 02/03/2559 DATE

REVIEWED
SUBMITTED
RECOMMENDED
APPROVED

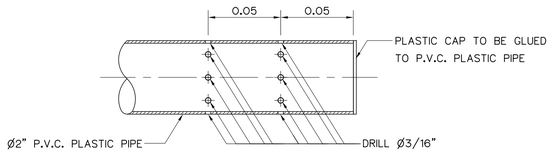
DRAWING NO. MH-PH-18
SHEET NO. 101 OF 130



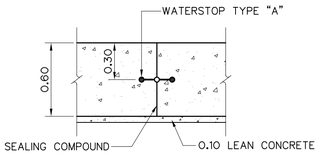
PLAN RETAINING WALL
SCALE 1:125



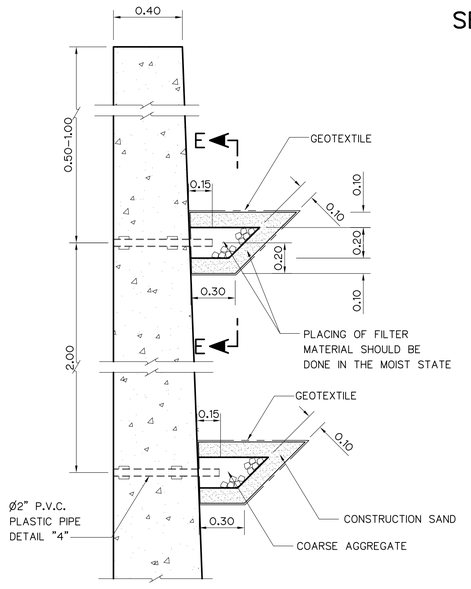
SECTION E – E
SCALE 1:15



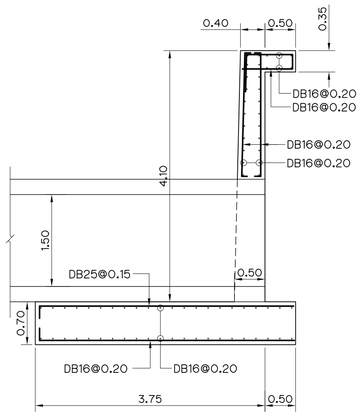
DETAIL "4"
NOT TO SCALE



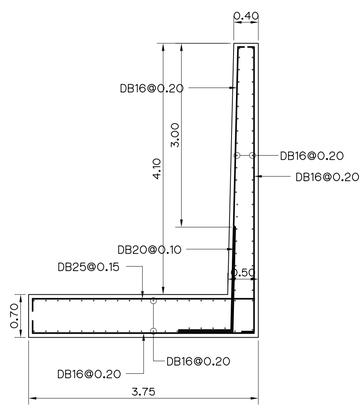
CONTRACTION JOINT AT FLOOR (NON GROOVE)
(FLOOR THK. CONSTANT)
SCALE 1:25



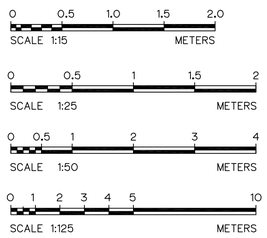
DETAIL OF SIDE DRAIN
NOT TO SCALE



RETAINING WALL SECTION A–A
SCALE 1:50



RETAINING WALL SECTION B–B
SCALE 1:50



NOTES :
1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. POWERHOUSE, GENERAL LAYOUT	MH-PH-01
2. POWERHOUSE, SECTIONS (SHEET 1/2)	MH-PH-05
3. POWERHOUSE, SECTIONS (SHEET 2/2)	MH-PH-06

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MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TAILRACE

RETAININGWALL REINFORCEMENT DETAILS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				

CONSULTANTS | DEDE

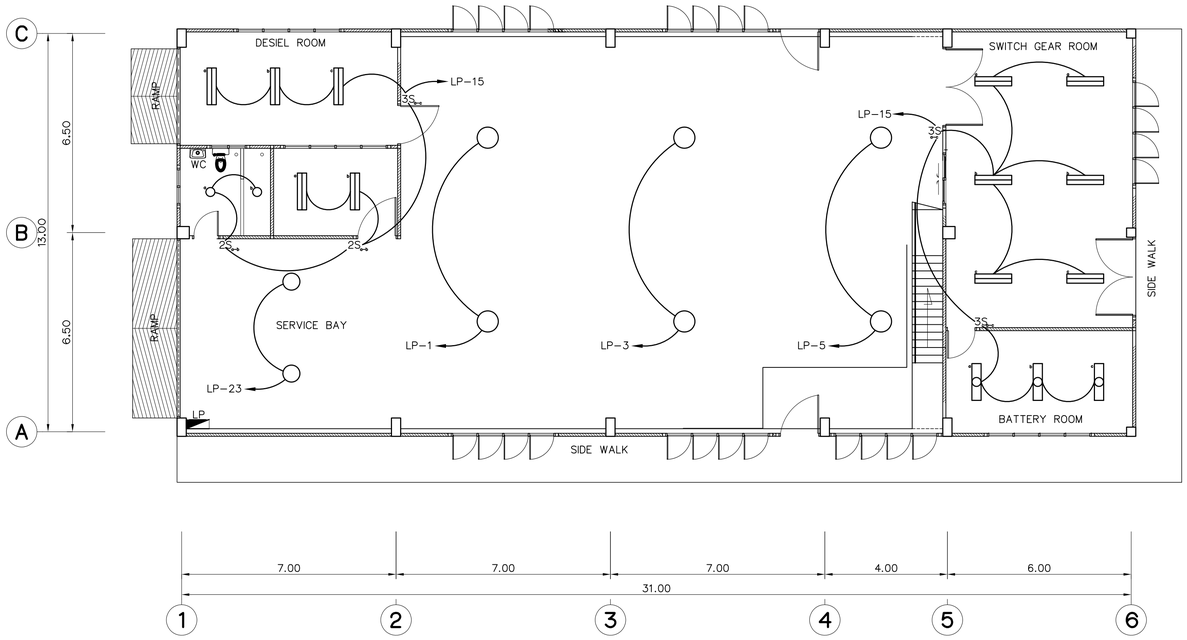
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED สิริ.64624 สิ.6226
DRAWN
CHECKED สิ.6226
PROJECT MANAGER 08/03/2559 DATE

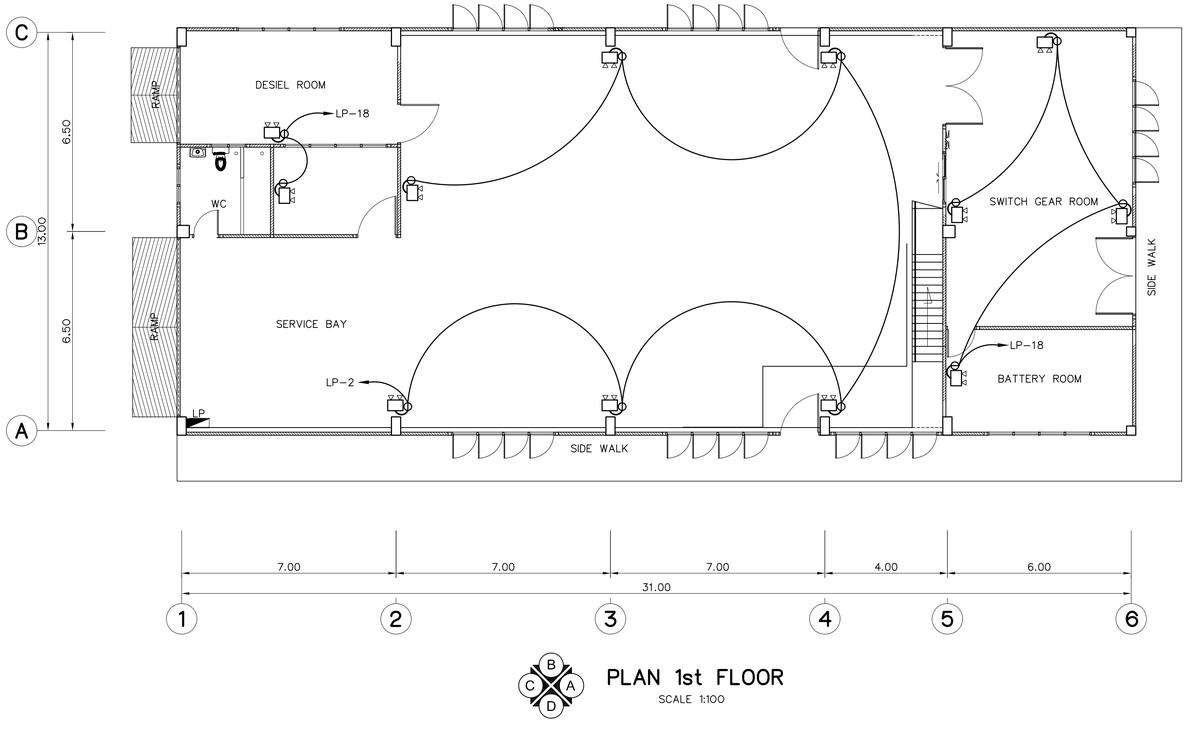
REVIEWED
SUBMITTED
RECOMMENDED
APPROVED P. Hanwell

DRAWING NO. MH-PH-20
SHEET NO. 103 OF 130



PLAN 1st FLOOR

SCALE 1:100



PLAN 1st FLOOR

SCALE 1:100

LEGENDS :

- 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
- 1x36 W. FLUORESCENT LAMP (HANGING CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR, AT SWITCH "a"
- 1x20 W. COMPACT FLUORESCENT (WALL TYPE, OUTDOOR IP54)
- $3S_{a-c}$ SWITCH "3" SETS FOR SWITCH "a" TO "c"
- S" TWO-WAYS SWITCH
- SIMPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- 20 W. COMPACT FLUORESCENT
- (F) EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- POWER RECEPCTACLE 3P+N+E 32 A. 400 VAC.
- HIGH BAY FIXTURE 1x400 W. HIGH PRESSURE SODIUM
- HIGH BAY FIXTURE 1x250 W. HIGH PRESSURE SODIUM
- EMERGENCY LIGHTING 2x55 W. HALOGEN W/SEALED LEAD ACID BATTERY BACKUP 2 HOURS
- A/C AIR CONDITIONING, SPLIT TYPE
- LP LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LCP1 LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT

0 1 2 4 6 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
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	CONSULTANTS		DEDE	

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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

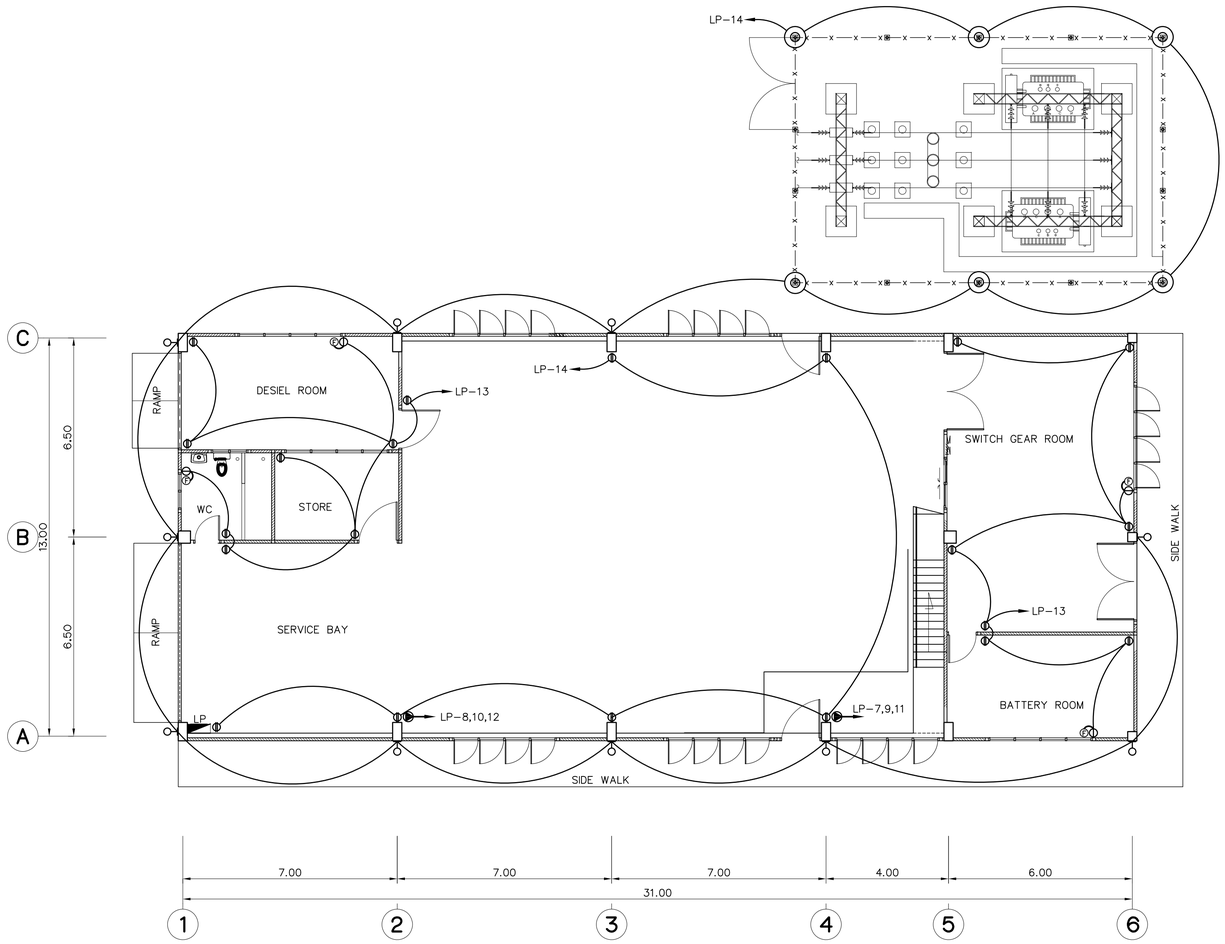
MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

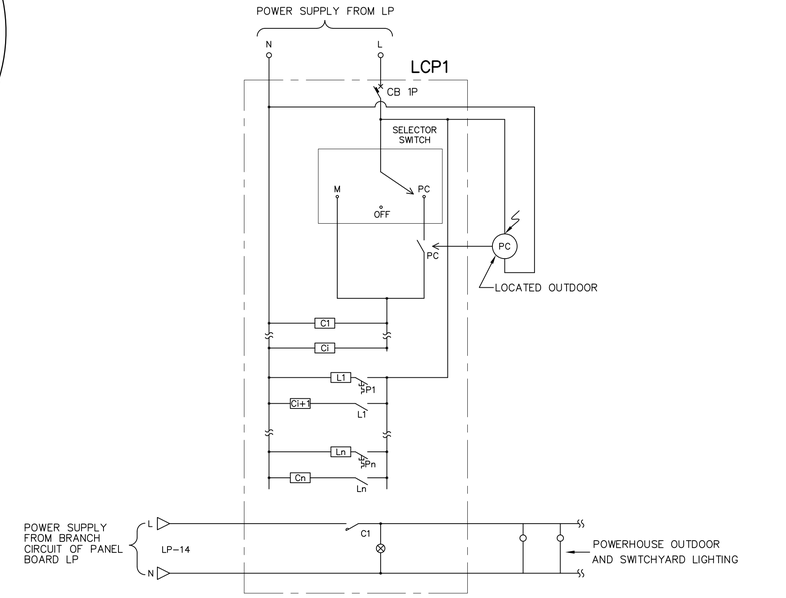
ELECTRIC AND LIGHTING SYSTEMS (SHEET 1/4)

P&C MANAGEMENT CO.,LTD.	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED ว่าที่ ร.ต. 604	REVIEWED
DRAWN	SUBMITTED
CHECKED ว่าที่ ร.ต. 604	RECOMMENDED
PROJECT MANAGER	APPROVED P. Hanwill.
03/03/2559 DATE	DRAWING NO. MH-PH-21
	SHEET NO. 104 OF 130



PLAN 1st FLOOR

SCALE 1:100



LIGHTING CONTROL PANEL(LCP1) DIAGRAM

LEGENDS :

- 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
- 1x36 W. FLUORESCENT LAMP (HANGING CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR, AT SWITCH "a"
- 1x20 W. COMPACT FLUORESCENT (WALL TYPE, OUTDOOR IP54)
- $3S_{a-c}$ SWITCH "3" SETS FOR SWITCH "a" TO "c"
- S" TWO-WAYS SWITCH
- SIMPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- 20 W. COMPACT FLUORESCENT
- EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- POWER RECEPCTACLE 3P+N+E 32 A. 400 VAC.
- HIGH BAY FIXTURE 1x400 W. HIGH PRESSURE SODIUM
- HIGH BAY FIXTURE 1x250 W. HIGH PRESSURE SODIUM
- EMERGENCY LIGHTING 2x55 W. HALOGEN W/SEALED LEAD ACID BATTERY BACKUP 2 HOURS
- A/C AIR CONDITIONING, SPLIT TYPE
- LP LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LCP1 LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT

LEGEND :

- PC = PHOTO CELL
- PC = PHOTO CELL SWITCH CONTACT
- Cn = MAGNETIC CONTACTOR n : 1, 2, 3...
- Ln = LATCHING CONTACTOR n : 1, 2, 3...
- Pn = PUSH BUTTON SWITCH, NON-LATCHED TYPE
- Cn = MAGNETIC RELAY n : 1, 2, 3...
- Ln = LATCHING RELAY n : 1, 2, 3...

0 1 2 4 6 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
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	CONSULTANTS		DEDE	

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Department of Alternative Energy Development and Efficiency
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MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

ELECTRIC AND LIGHTING SYSTEMS (SHEET 2/4)

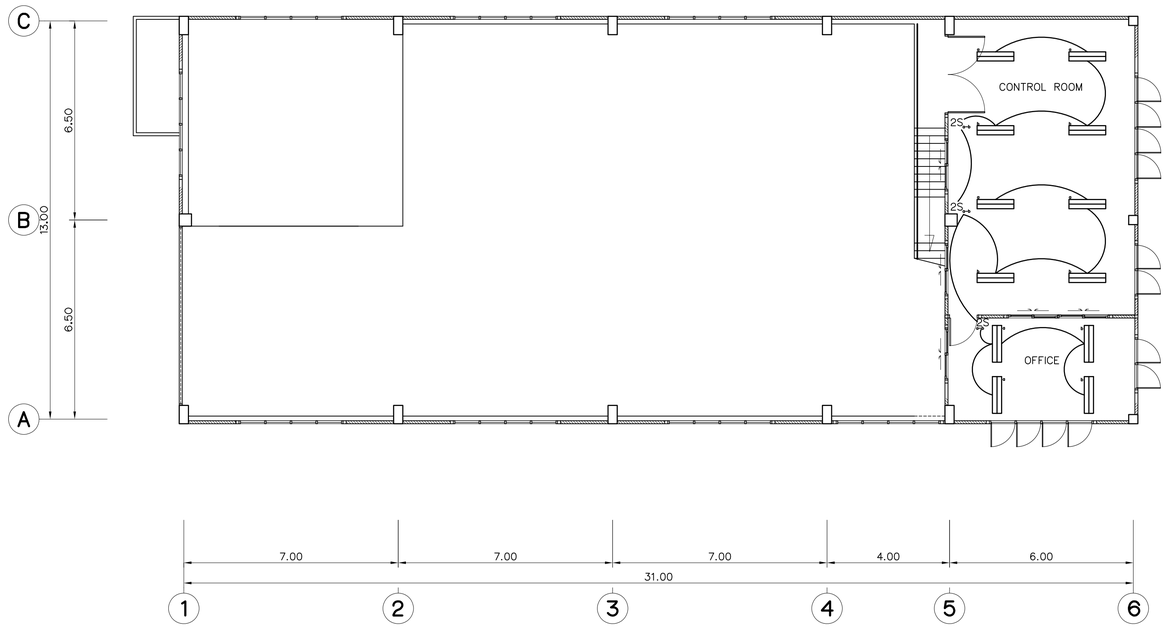
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DESIGNED	วิทวัฒน์	REVIEWED	
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CHECKED	วิทวัฒน์	RECOMMENDED	
PROJECT MANAGER	08/03/2559 DATE	APPROVED	

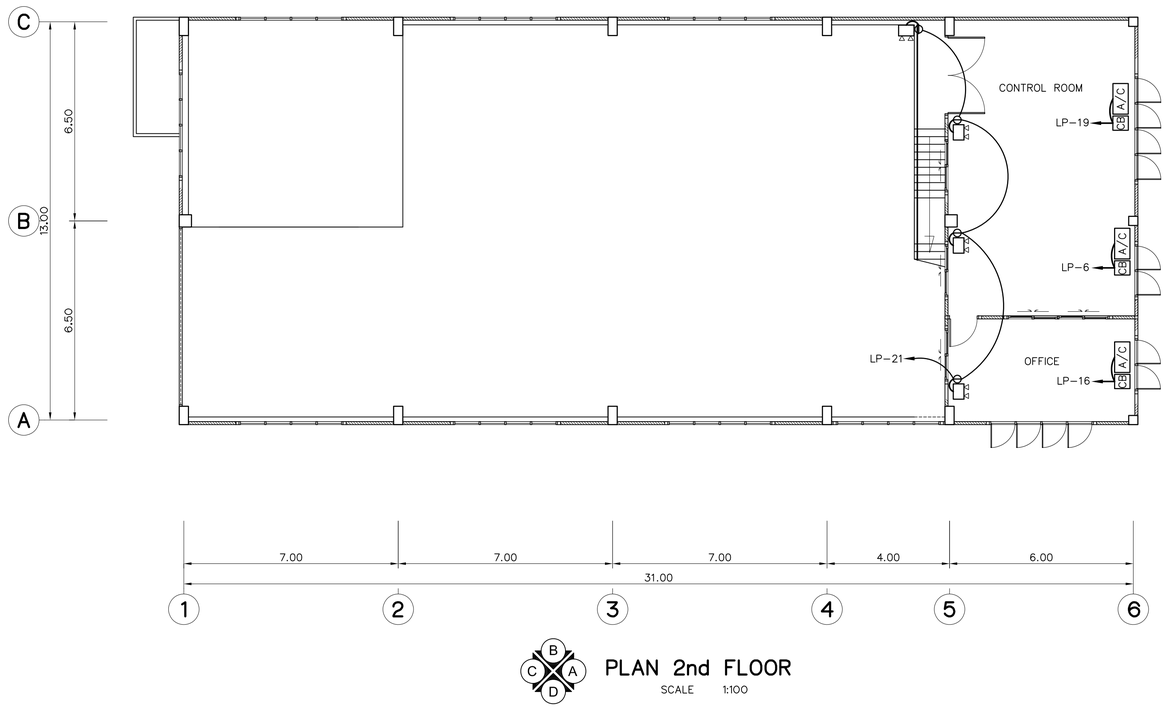
DRAWING NO. MH-PH-22

SHEET NO. 105 OF 130



PLAN 2nd FLOOR

SCALE 1:100



PLAN 2nd FLOOR

SCALE 1:100

LEGENDS :

- a — 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
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- 20 W. COMPACT FLUORESCENT
- (F) — EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
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- A/C — AIR CONDITIONING, SPLIT TYPE
- LP — LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LCP1 — LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT

0 1 2 4 6 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
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	CONSULTANTS		DEDE	

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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

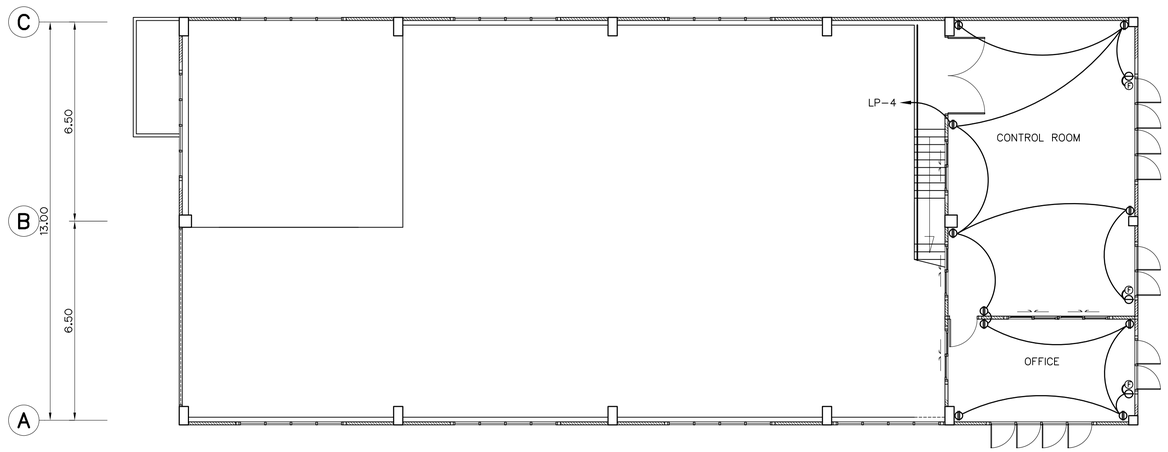
MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
POWERHOUSE
ELECTRIC AND LIGHTING SYSTEMS (SHEET 3/4)

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
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DESIGNED	วิฑูรย์	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วิฑูรย์	RECOMMENDED	
PROJECT MANAGER		APPROVED	P. Hanwill.
	08/03/2559 DATE	DRAWING NO.	MH-PH-23
		SHEET NO.	106 OF 130



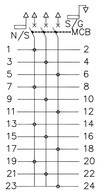
PLAN 2nd FLOOR

SCALE 1:100

LOAD SCHEDULE OF PANEL BOARD 3Ph 400V 50Hz

PANEL NO.LP — LOCATION : POWERHOUSE

CCT No.	DESCRIPTION	LOAD IN VA R	LOAD IN VA S	LOAD IN VA T	CIRCUIT BREAKER P	CIRCUIT BREAKER AT	CIRCUIT BREAKER AF	CIRCUIT BREAKER kA.
LP-1	MACHINE HALL LIGHTING 1 (250W HIGHBAY LUMINAIRE)	600			1	10	60	10
LP-3	MACHINE HALL LIGHTING 2 (250W HIGHBAY LUMINAIRE)		600		1	10	60	10
LP-5	MACHINE HALL LIGHTING 3 (250W HIGHBAY LUMINAIRE)			600	1	10	60	10
LP-7	MACHINE HALL POWER RECEPTACLE 1	2,309						
LP-9			2,309		3	16	60	10
LP-11				2,309				
LP-13	THE FIRST FLOOR RECEPTACLE	3,800			1	25	60	10
LP-15	THE FIRST FLOOR LIGHTING		1,410		1	10	60	10
LP-17	THE SECOND FLOOR LIGHTING			1,120	1	10	60	10
LP-19	CONTROL ROOM AIR CONDITION NO.2 36,000 BTU/HR	4,250			1	25	60	10
LP-21	THE SECOND FLOOR EMERGENCY LIGHTING		800		1	10	60	10
LP-23	SERVICE BAY LIGHTING (150W HIGHBAY LUMINAIRE)			400	1	10	60	10
LP-2	MACHINE HALL EMERGENCY LIGHTING	1,200			1	10	60	10
LP-4	THE SECOND FLOOR RECEPTACLE		2,800		1	16	60	10
LP-6	CONTROL ROOM AIR CONDITION NO.1 36,000 BTU/HR			4,250	1	25	60	10
LP-8	MACHINE HALL POWER RECEPTACLE 2	2,309						
LP-10			2,309		3	16	60	10
LP-12				2,309				
LP-14	OUTDOOR LIGHTING	400			1	10	60	10
LP-16	OFFICE ROOM AIR CONDITION 24,000 BTU/HR		2,295		1	16	60	10
LP-18	THE FIRST FLOOR EMERGENCY LIGHTING			1,200	1	10	60	10
LP-20	MACHINE HALL RECEPTACLE	1,200			1	10	60	10
LP-22	SPARE		4,600		1	25	60	10
LP-24	SPARE			4,600	1	25	60	10
	TOTAL LOAD IN VA	16,668	16,443	16,868	3	100	250	25
			49,979					



LEGENDS :

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- UNDERGROUND WIRING IN CONDUIT

SCALE 1:100 — 0 1 2 4 6 8 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
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MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

ELECTRIC AND LIGHTING SYSTEMS (SHEET 4/4)

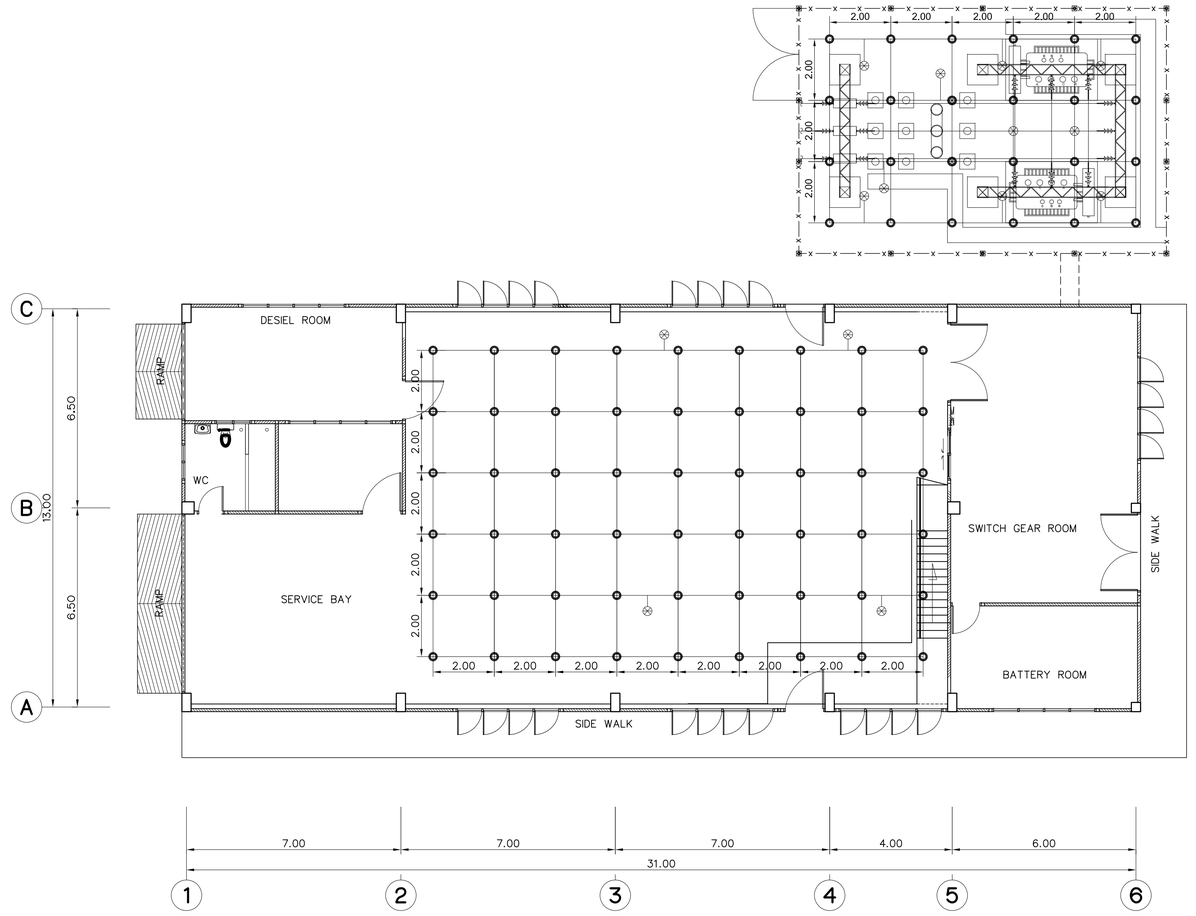
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CHECKED	ชัชวาล	RECOMMENDED	
PROJECT MANAGER	03/03/2559 DATE	APPROVED	P. Hemwall

DRAWING NO. MH-PH-24

SHEET NO. 107 OF 130



PLAN 1st FLOOR

SCALE 1:100

LEGENDS :

- GROUND ROD
- GROUND POINT FOR POWER PLANT EQUIPMENT GROUNDING
- BARE CUPPER CONDUCTOR

NOTE

1. GROUNDING SYSTEM DONE BY CONTRACTOR C2
2. GROUNDING CONDUCTOR, TAP AND RISER FROM GROUNDING NETWORK TO POWER EQUIPMENT SHALL BE FORMED BY BARE COPPER CONDUCTOR NOT LESS THAN 95 SQ.MM.
3. GROUNDING SYSTEM RESISTANCE WILL NOT EXCEED 5 OHM.
4. CONNECTOR TO WITH IN & BETWEEN THE GROUNDING NETWORK TO POWER PLANT EQUIPMENT WILL BE MADE BY THERMAL CADWELD
5. GROUND ROD WILL BE COPPER COVER STEEL DIAMETER 15.87 MM. 2,400 MM. LONG
6. THIS DRAWING USE FOR GUIDE ONLY

0 1 2 4 6 8

SCALE 1:100 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

POWERHOUSE

GROUNDING SYSTEMS

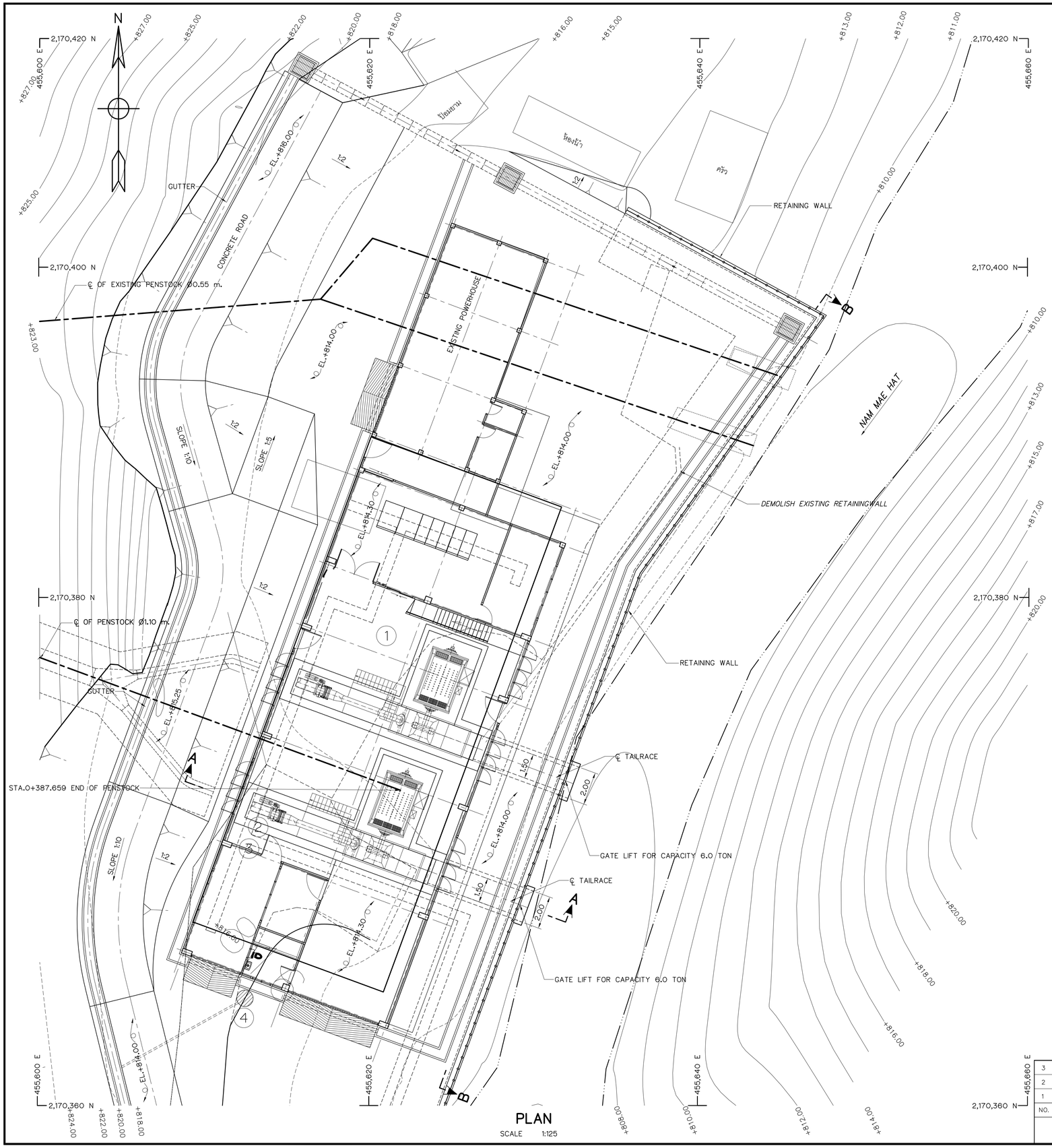
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DESIGNED	วิทวัฒน์	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วิทวัฒน์	RECOMMENDED	
PROJECT MANAGER	08/03/2559 DATE	APPROVED	

DRAWING NO. MH-PH-25

SHEET NO. 108 OF 130



PLAN

SCALE 1:125

LISTS :

1. POWERHOUSE
2. GATE VALVE Ø3/4"
3. PRESSURE REDUCING VALVE
4. SEPTICK TANK

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. NMH-GN-03
3. THE CONTRACTOR (C1) HAS TO SUBMIT THE SHOP DRAWINGS OF ALL HOUSING, GUARD HOUSE, ELEVATED TANK FLAG POLE, ENTRANCE GATE WITH, NAME BOARD AND GATE WIDTH 6.00 M. TO FIELD ENGINEER FOR APPROVAL, BEFORE CONSTRUCTION.

REFERENCE DRAWINGS :

1.	TAILRACE, SECTIONS AND DETAILS	MH-TR-02

0 1 2 4 6 8 10

SCALE 1:125 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
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CONSULTANTS — DEDE

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MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
TAILRACE
PLAN

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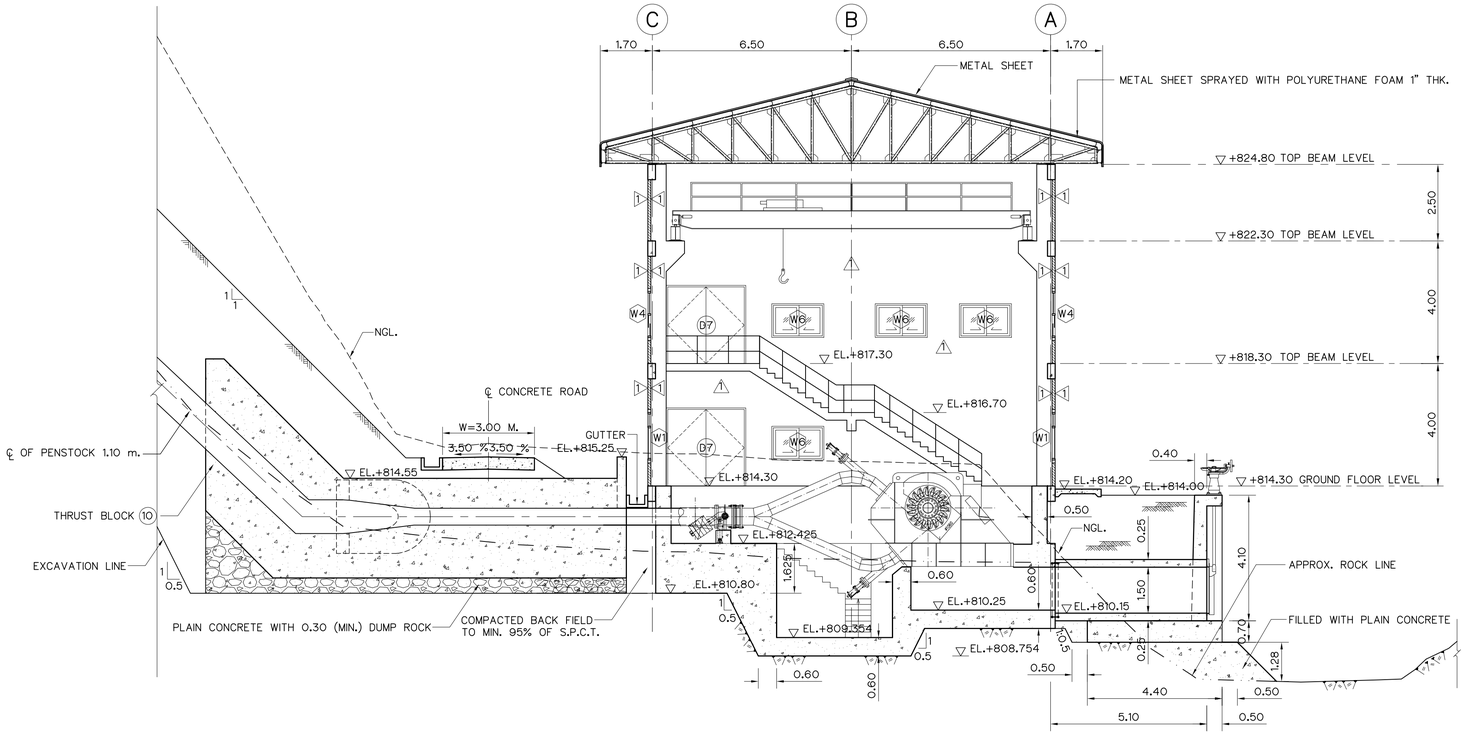
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

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CHECKED	วศ.จิรวัฒน์	วศ.ชัยวัฒน์	
PROJECT MANAGER		DATE	08/03/2559

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APPROVED P. Hanwell

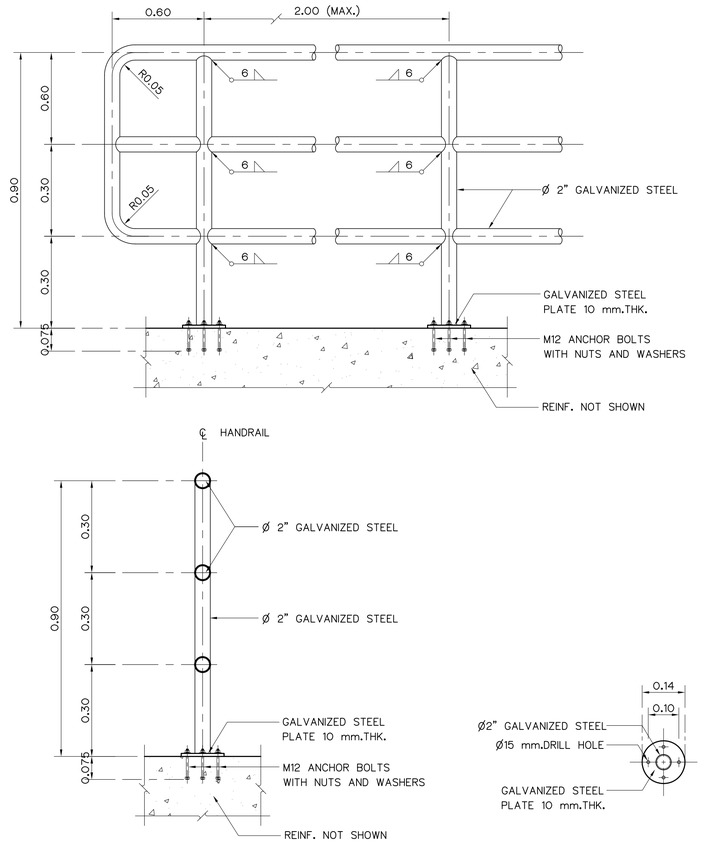
DRAWING NO. MH-TR-01

SHEET NO. 109 OF 130



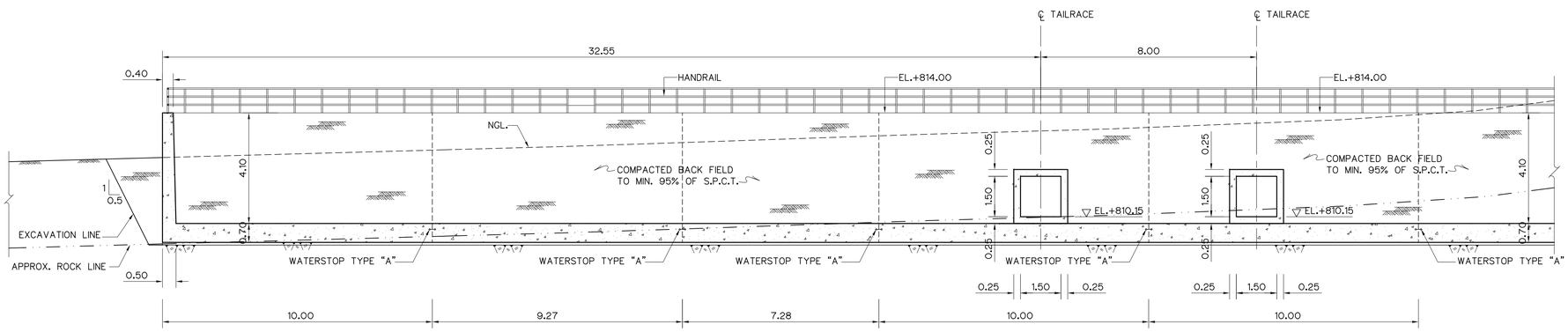
SECTION A–A

SCALE 1:100



DETAIL OF HANDRAIL

SCALE 1:20



SECTION B–B

SCALE 1:100

0 0.5 1 1.5
SCALE 1:20 METERS

0 1 2 3 4 5 6 7 8
SCALE 1:100 METERS

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH–GN–03

REFERENCE DRAWINGS :

1. TAILRACE PLAN	MH–TR–01
2. TAILRACE REINFORCEMENT DETAILS	MH–TR–03
3. WEIR 1.50x1.50 m. VERTICAL GATE (GATE INSTALLATION)	MH–WE–06
4. WEIR PEDESTAL SCREW LIFT CAPACITY 6.5 TONS	MH–WE–09
4. PENSTOCK THRUST BLOCK PLAN, SECTIONS REINFORCEMENT DETAILS 4/4	MH–PS–05

NO.	DATE	REVISIONS	CHECKED	APPROVED
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MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TAILRACE

SECTIONS AND DETAIL

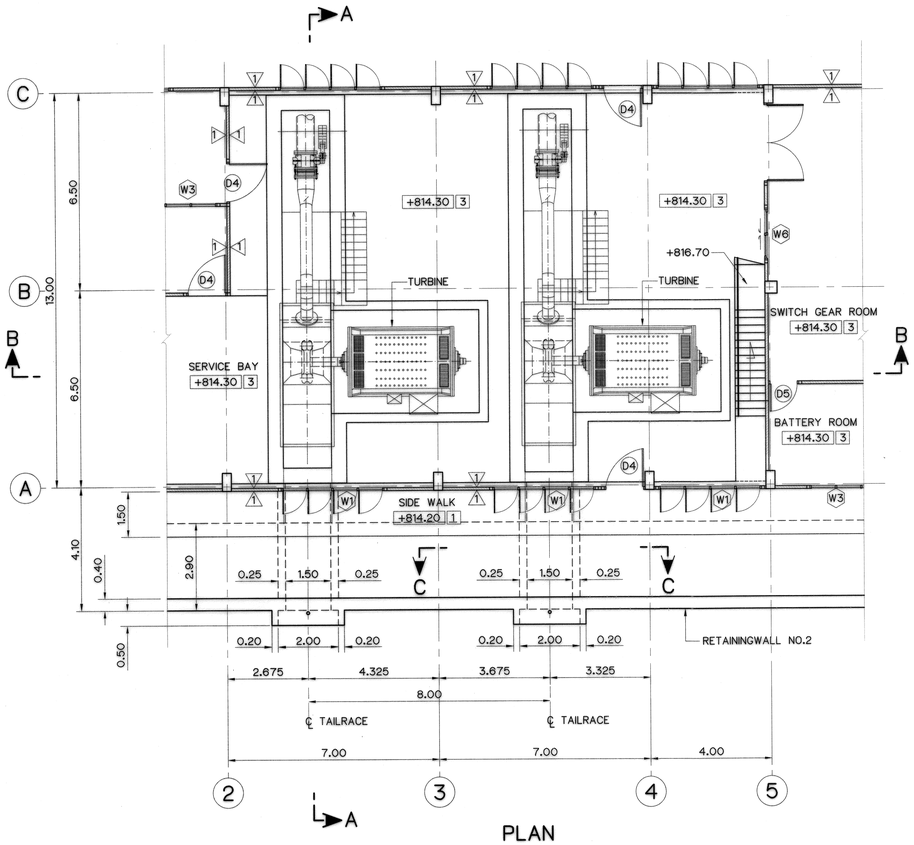
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MINISTRY OF ENERGY

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DRAWN
CHECKED สิน.6226
PROJECT MANAGER 03/03/2559 DATE

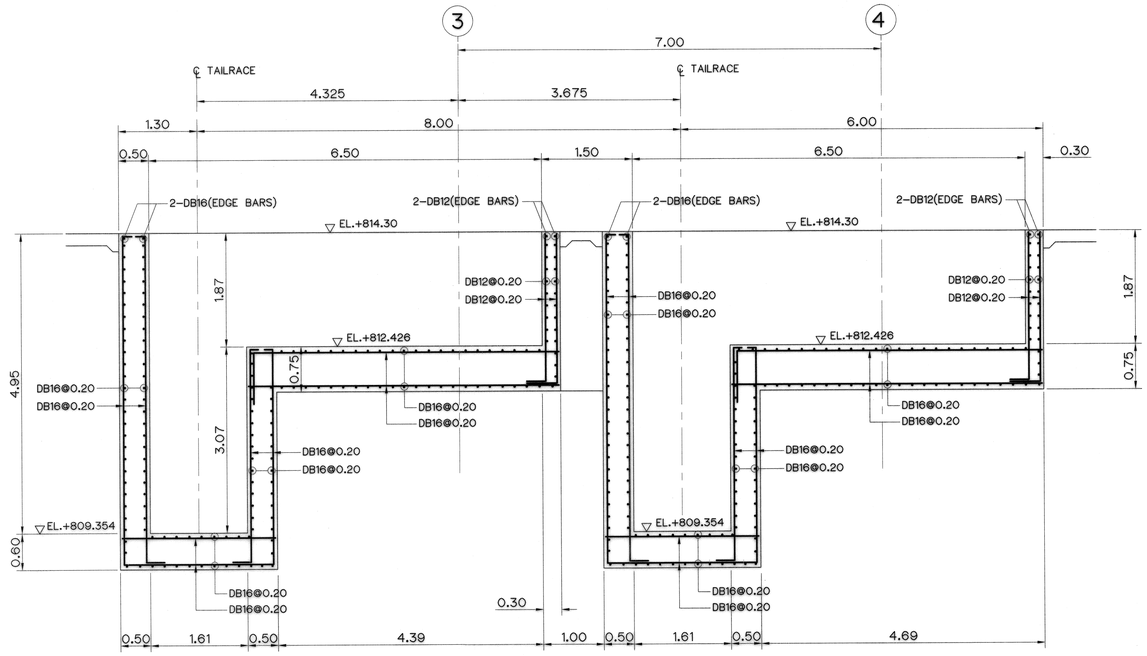
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SUBMITTED
RECOMMENDED
APPROVED P.Hanwit

DRAWING NO. MH–TR–02
SHEET NO. 110 OF 130



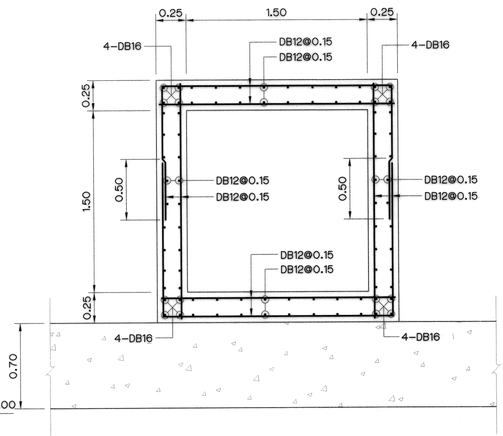
PLAN

SCALE 1:100



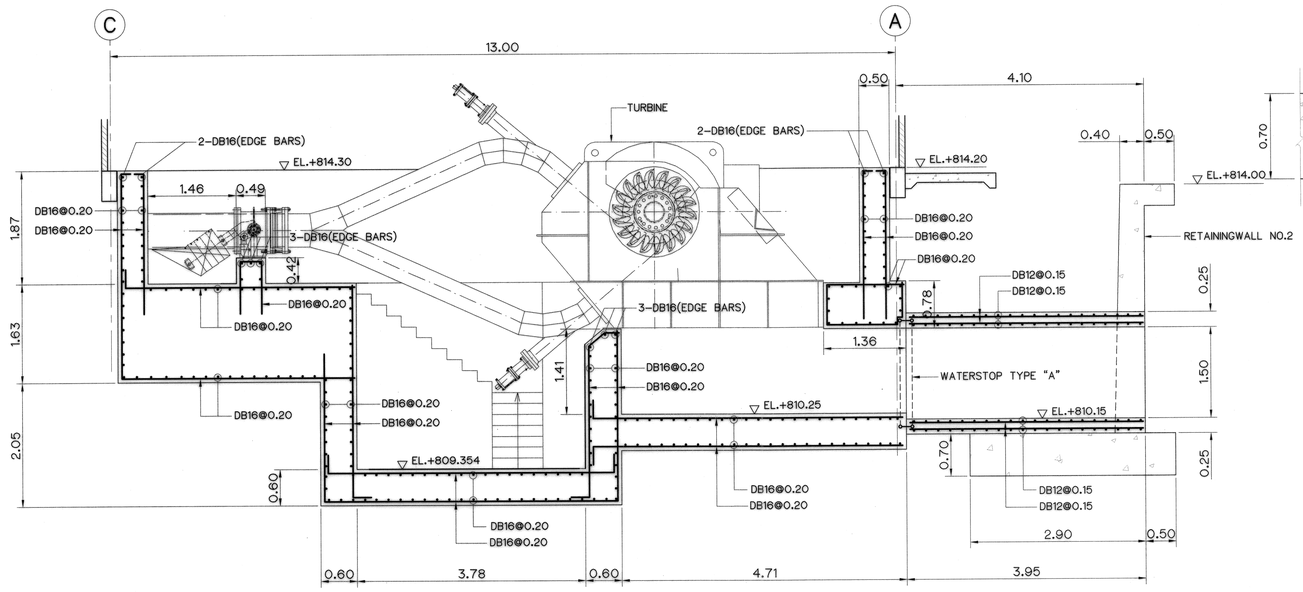
SECTION B–B

SCALE 1:50



SECTION C–C

SCALE 1:25



SECTION A–A

SCALE 1:50

RETAININGWALL NO.2

0 0.5 1 1.5 2

SCALE 1:25 METERS

0 0.5 1 2 3 4

SCALE 1:50 METERS

0 1 2 4 6 8

SCALE 1:100 METERS

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. TAILRACE PLAN — MH-TR-01

NO.	DATE	REVISIONS	CHECKED	APPROVED
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MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
TAILRACE
REINFORCEMENT DETAILS

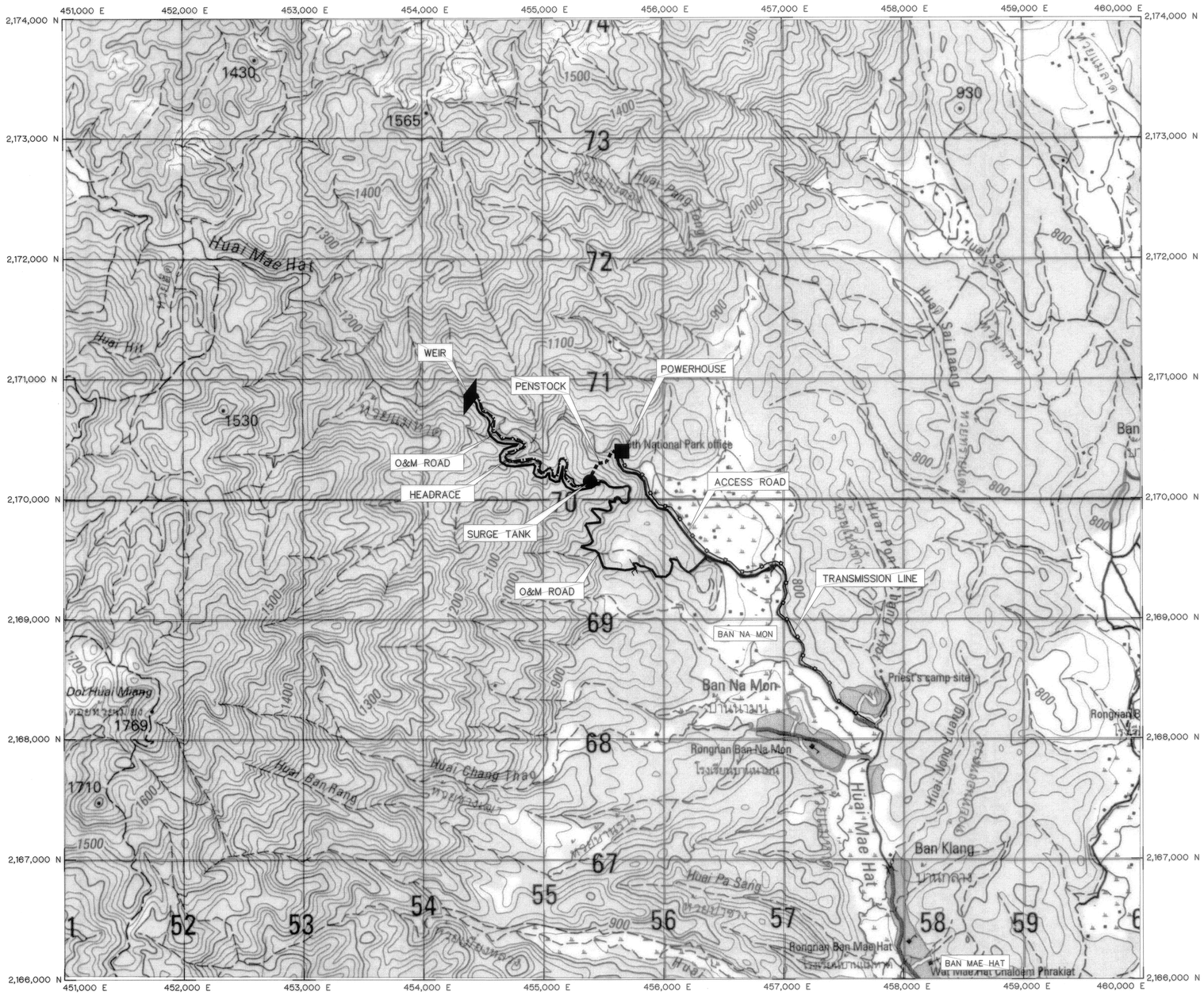
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED	วิฑูรย์	วิฑูรย์	REVIEWED
DRAWN			SUBMITTED
CHECKED	วิฑูรย์	วิฑูรย์	RECOMMENDED
PROJECT MANAGER			APPROVED
	DATE		

DRAWING NO. MH-TR-03

SHEET NO. 111 OF 130



PROJECT AREA MAP

SCALE 1:20,000

0 500 1,000 1,500

SCALE 1:20,000 METERS

N

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NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. THE POLE OF TRANSMISSION LINE IS PRESTRESSED CONCRETE WITH 12.00 METERS HIGH

LEGENDS :

- STREAM
- WEIR
- HEADRACE
- SURGE TANK
- PENSTOCK
- POWERHOUSE
- ACCESS ROAD
- TRANSMISSION LINE

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
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	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

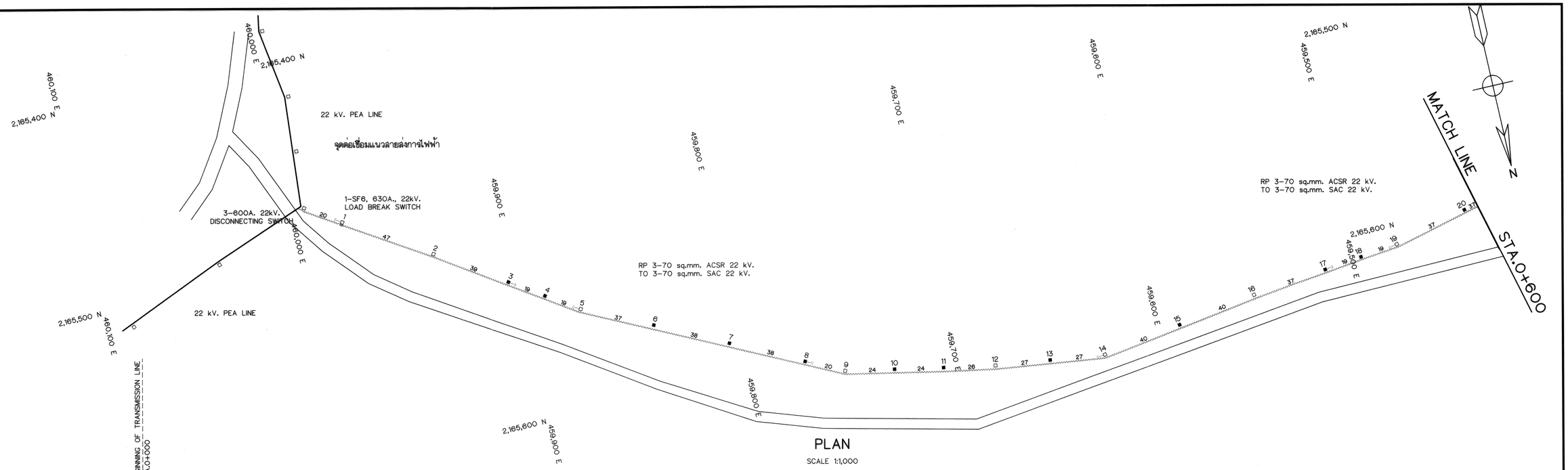
CIVIL WORKS AND TRANSMISSION LINE
TRANSMISSION LINE
GENERAL PLAN

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DRAWN
CHECKED ส.ค.6226
PROJECT MANAGER 01/03/2565 DATE

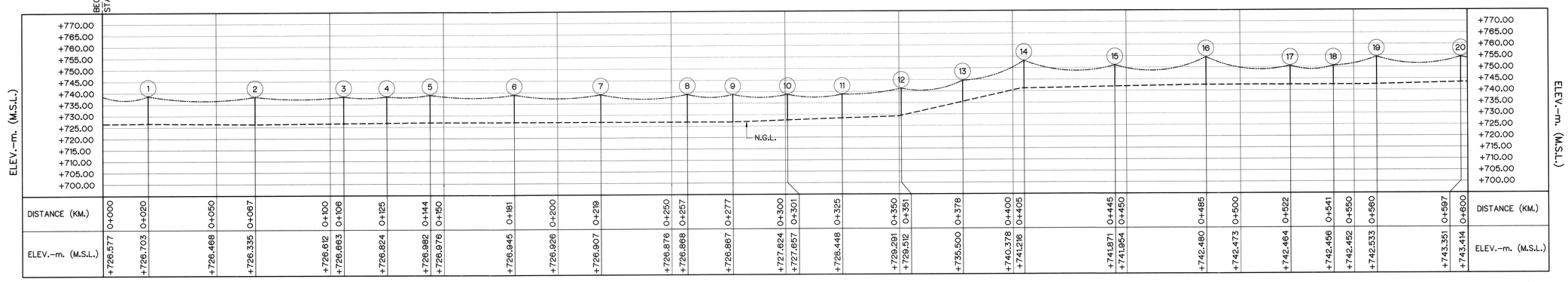
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY
REVIEWED
SUBMITTED
RECOMMENDED
APPROVED

DRAWING NO. MH-TS-01
SHEET NO. 112 OF 130



PLAN

SCALE 1:1,000



TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
EXISTING POLE	0	0				1							
1	20	20					1				1		
2	47	67	1										
3	39	106			1						1		
4	19	125		1				1					
5	19	144			1						1		
6	37	181	1										
7	38	219	1										
8	38	257			1						1		
9	20	277		1									
10	24	301		1									
11	24	325		1									
12	26	351		1									
13	27	378		1									
14	27	405			1						1		
15	40	445	1										
16	40	485	1										
17	37	522			1						1		
18	19	541		1									
19	19	560			1						1		
20	37	597	1										

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 0+600 TO STA. 1+200	MH-TS-03
2. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
3. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
4. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
5. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M — REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
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	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
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MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

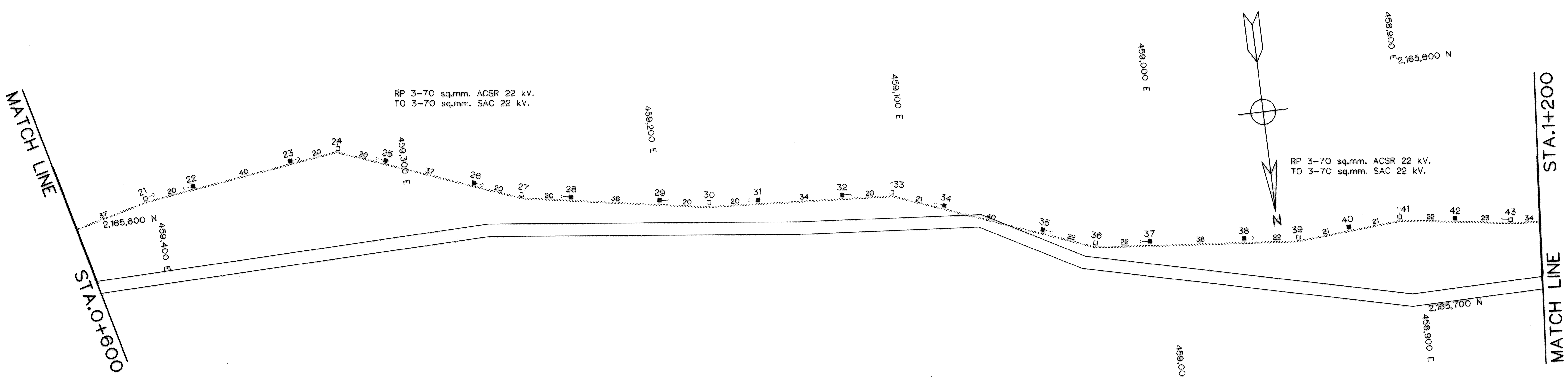
PLAN AND PROFILE, STA. 0+000 TO 0+600

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MINISTRY OF ENERGY

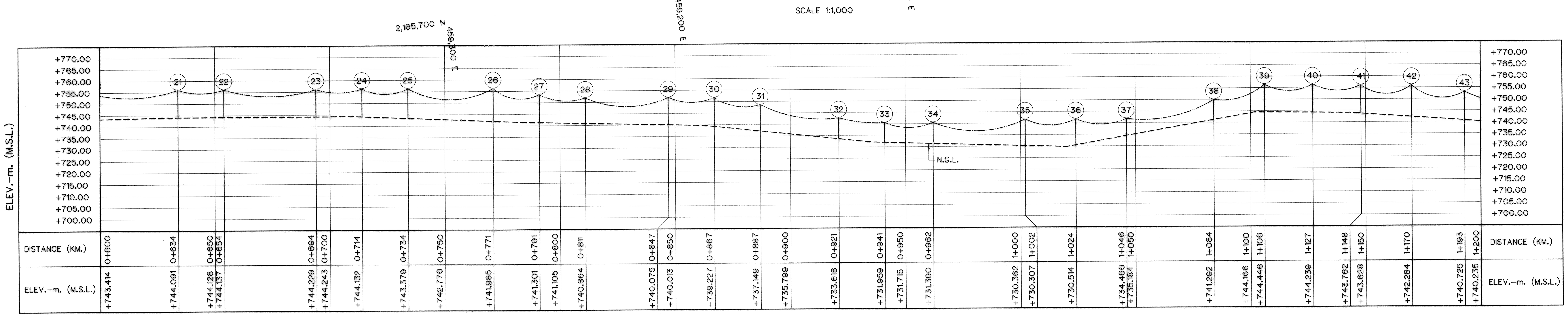
DESIGNED	วิชิต.64624	วิชิต.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED	วิชิต.6226		RECOMMENDED
PROJECT MANAGER		08/05/2564 DATE	APPROVED

DRAWING NO. MH-TS-02
SHEET NO. 113 OF 130



PLAN

SCALE 1:1,000



PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
20	37	597	1										
21	37	634			1						1		
22	20	654			1						1		
23	40	694			1						1		
24	20	714		1				1					
25	20	734			1						1		
26	37	771			1						1		
27	20	791		1									
28	20	811			1						1		
29	36	847			1						1		
30	20	867		1									
31	20	887			1						1		
32	34	921			1						1		
33	20	941		1				1					
34	21	962			1						1		
35	40	1,002			1						1		
36	22	1,024		1									
37	22	1,046			1						1		
38	38	1,084			1						1		
39	22	1,106		1									
40	21	1,127		1									
41	21	1,148		1				1					
42	22	1,170		1									
43	23	1,193			1						1		

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 0+000 TO STA. 0+600	MH-TS-02
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 1+200 TO STA. 1+366	MH-TS-04
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

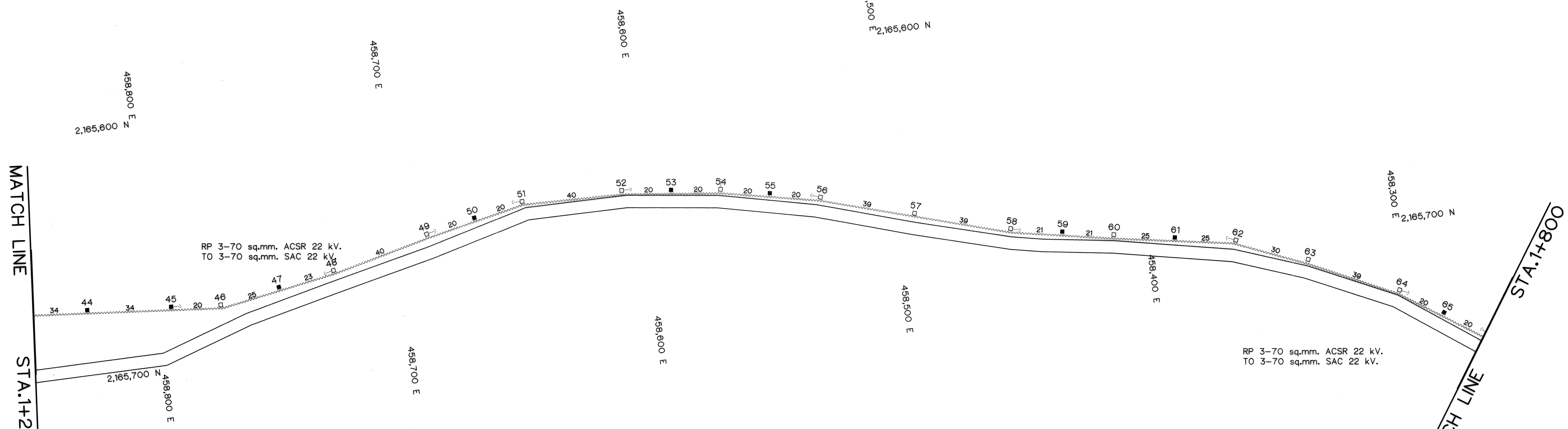
NO.	DATE	REVISIONS	CHECKED	APPROVED
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	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

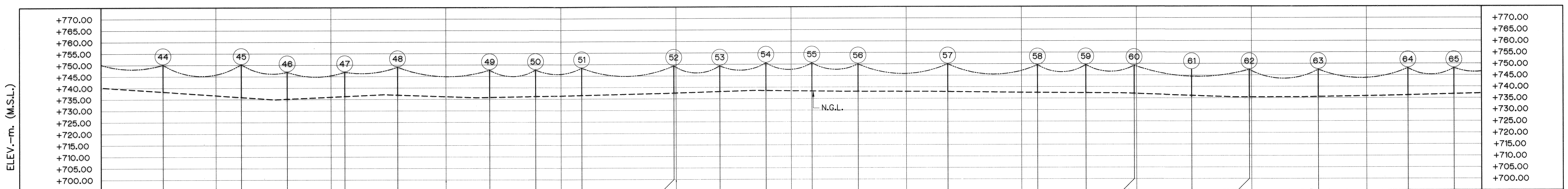
CIVIL WORKS AND TRANSMISSION LINE
TRANSMISSION LINE
PLAN AND PROFILE, STA. 0+600 TO 1+200

P&C MANAGEMENT CO.,LTD.	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
	REVIEWED
DESIGNED ภย.64624 สย.6226	SUBMITTED
DRAWN	RECOMMENDED
CHECKED สย.6226	APPROVED P. Housell
PROJECT MANAGER — DATE 08103125S9	DRAWING NO. MH-TS-03 — SHEET NO. 114 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	ELEV.-m. (M.S.L.)
1+200	+740.235
1+227	+738.343
1+250	+736.731
1+261	+735.960
1+281	+735.175
1+300	+736.034
1+306	+736.305
1+329	+736.878
1+350	+736.167
1+369	+735.821
1+389	+736.184
1+400	+736.383
1+409	+736.571
1+449	+737.524
1+450	+737.555
1+469	+738.144
1+489	+738.545
1+500	+738.414
1+509	+738.306
1+529	+738.111
1+550	+738.056
1+568	+737.958
1+600	+737.573
1+607	+737.513
1+628	+737.357
1+649	+737.033
1+650	+736.996
1+674	+736.107
1+699	+735.430
1+700	+735.431
1+729	+735.566
1+750	+735.902
1+768	+736.248
1+788	+736.745
1+800	+737.039

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
43	23	1,193			1						1		
44	34	1,227	1										
45	34	1,261			1						1		
46	20	1,281		1									
47	25	1,306		1									
48	23	1,329			1						1		
49	40	1,369			1						1		
50	20	1,389		1									
51	20	1,409			1						1		
52	40	1,449			1						1		
53	20	1,469		1									
54	20	1,489		1				1					
55	20	1,509		1									
56	20	1,529			1						1		
57	39	1,568	1										
58	39	1,607			1						1		
59	21	1,628		1									
60	21	1,649		1									
61	25	1,674		1									
62	25	1,699			1						1		
63	30	1,729	1										
64	39	1,768			1						1		
65	20	1,788		1									

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 0+600 TO STA. 1+200 — MH-TS-03
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 1+800 TO STA. 2+400 — MH-TS-06
3. TRANSMISSION LINE, POLE TYPE "A" AND "B" — MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D" — MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E" — MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY — MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
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	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
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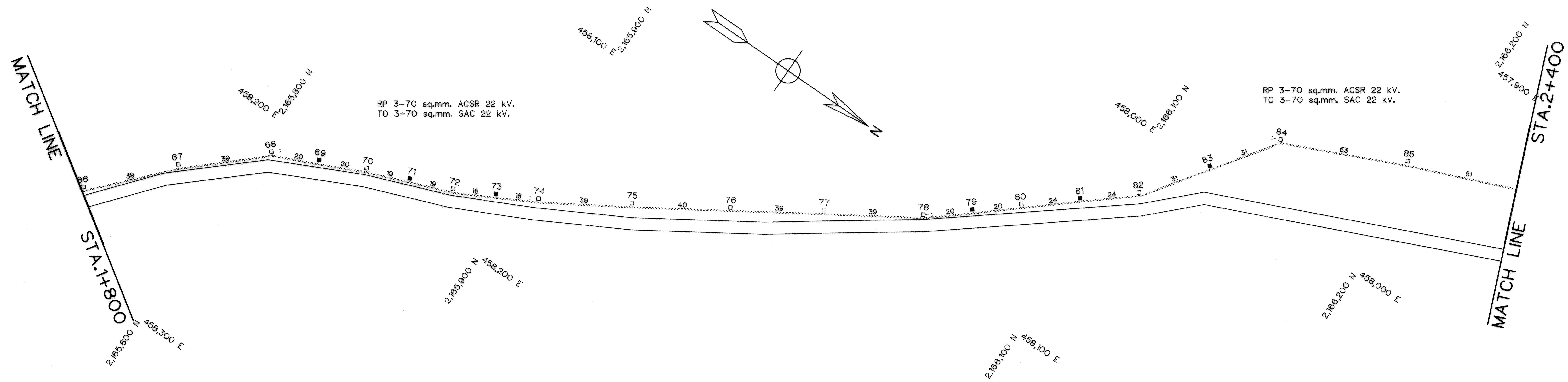
MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
TRANSMISSION LINE
PLAN AND PROFILE, STA. 1+200 TO 1+800

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PROJECT MANAGER — DATE 08/03/2559

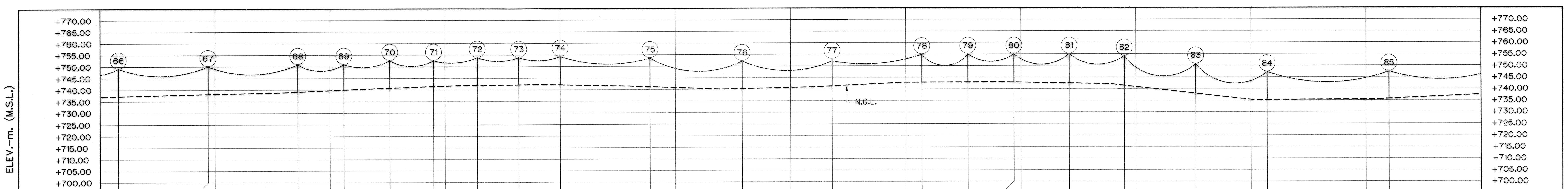
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
REVIEWED
SUBMITTED Chanit
RECOMMENDED
APPROVED P. Hansell

DRAWING NO. MH-TS-04
SHEET NO. 115 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	ELEV.-m. (M.S.L.)
1+800	+737.039
1+808	+737.230
1+847	+738.145
1+850	+738.209
1+886	+739.110
1+900	+739.707
1+906	+739.962
1+926	+740.772
1+945	+741.452
1+950	+741.631
1+964	+741.938
1+982	+742.138
2+000	+742.077
2+039	+741.180
2+050	+740.801
2+079	+740.285
2+100	+740.731
2+118	+741.358
2+150	+742.871
2+157	+742.894
2+177	+742.957
2+197	+742.874
2+200	+742.820
2+221	+742.442
2+245	+741.422
2+250	+740.865
2+276	+737.968
2+300	+735.295
2+307	+735.225
2+350	+735.375
2+360	+735.673
2+400	+737.529

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
65	20	1,788		1									
66	20	1,808			1						1		
67	39	1,847	1										
68	39	1,886			1						1		
69	20	1,906		1									
70	20	1,926		1									
71	19	1,945		1									
72	19	1,964		1									
73	18	1,982		1									
74	18	2,000			1						1		
75	39	2,039	1										
76	40	2,079	1										
77	39	2,118	1										
78	39	2,157			1						1		
79	20	2,177		1									
80	20	2,197		1									
81	24	2,221		1									
82	24	2,245		1									
83	31	2,276		1									
84	31	2,307			1						1		
85	53	2,360	1										

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. ■ NEW 12M. CONCRETE POLE
4. □ EXISTING 12M. CONCRETE POLE
5. RM 12M □ REMOVE 12M. CONCRETE POLE
6. 3 – 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

REFERENCE DRAWINGS :–

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 1+200 TO STA. 1+800 MH–TS–04
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 2+400 TO STA. 3+000 MH–TS–06
3. TRANSMISSION LINE, POLE TYPE "A" AND "B" MH–TS–16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D" MH–TS–17
5. TRANSMISSION LINE, POLE TYPE "E" MH–TS–18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY MH–TS–19

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE
TRANSMISSION LINE
PLAN AND PROFILE, STA. 1+800 TO 2+400

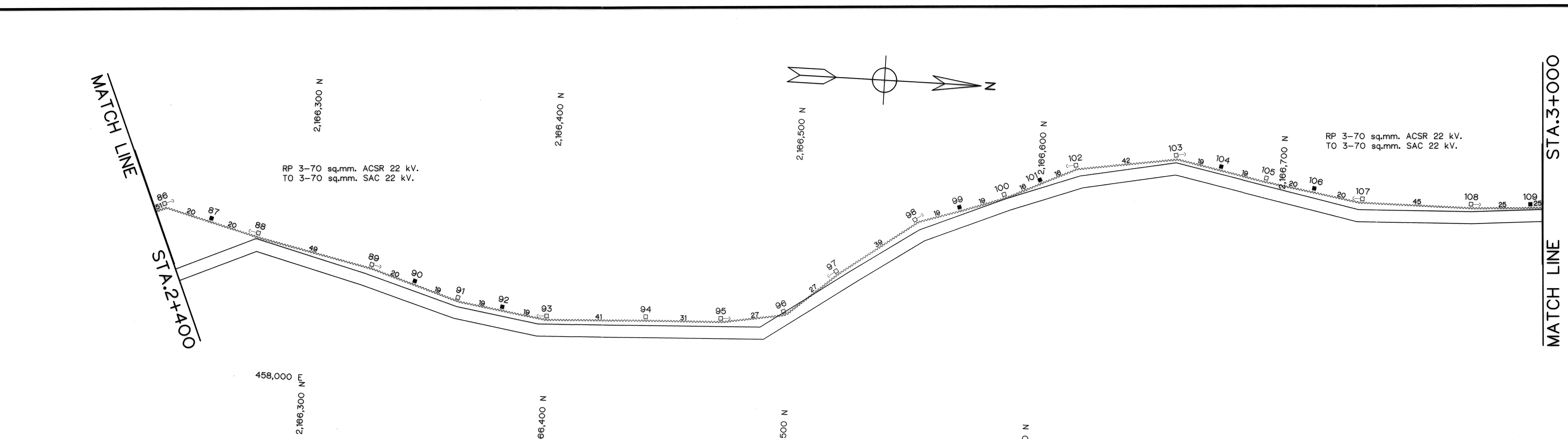
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PROJECT MANAGER
DATE 08/03/2559

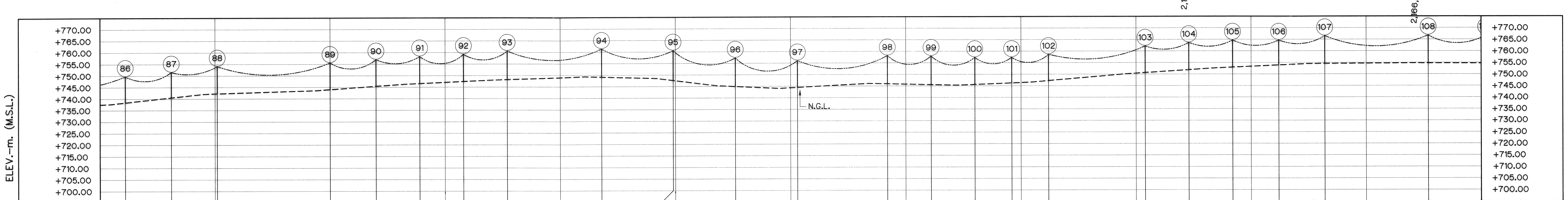
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SUBMITTED
RECOMMENDED
APPROVED

DRAWING NO. MH-TS-05
SHEET NO. 116 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	ELEV.-m. (M.S.L.)
2+400	+737.529
2+411	+738.425
2+431	+740.572
2+450	+742.252
2+451	+742.282
2+500	+744.006
2+520	+745.435
2+539	+746.617
2+550	+747.119
2+558	+747.483
2+577	+748.255
2+600	+749.006
2+618	+749.169
2+649	+747.663
2+650	+747.539
2+676	+744.961
2+700	+744.350
2+703	+744.509
2+742	+745.989
2+750	+745.820
2+761	+745.588
2+780	+745.653
2+796	+746.290
2+800	+746.449
2+812	+747.274
2+850	+750.446
2+854	+750.704
2+873	+751.930
2+892	+753.017
2+900	+753.383
2+912	+753.931
2+932	+754.572
2+950	+754.669
2+977	+754.756
3+000	+754.682

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY: POLE TYPE A	B	C	D	E	GUY TYPE G1	G2	G3	G4	G5	G6
85	53	2,360	1										
86	51	2,411			1						1		
87	20	2,431		1									
88	20	2,451			1						1		
89	49	2,500		1									
90	20	2,520		1									
91	19	2,539		1									
92	19	2,558		1									
93	19	2,577			1						1		
94	41	2,618	1										
95	31	2,649			1						1		
96	27	2,676		1									
97	27	2,703			1						1		
98	39	2,742			1						1		
99	19	2,761		1									
100	19	2,780		1									
101	16	2,796											
102	16	2,812			1						1		
103	42	2,854			1						1		
104	19	2,873		1									
105	19	2,892		1									
106	20	2,912		1									
107	20	2,932			1						1		
108	45	2,977			1						1		

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 1+800 TO STA. 2+400 MH-TS-05
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 3+000 TO STA. 3+600 MH-TS-07
3. TRANSMISSION LINE, POLE TYPE "A" AND "B" MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D" MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E" MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

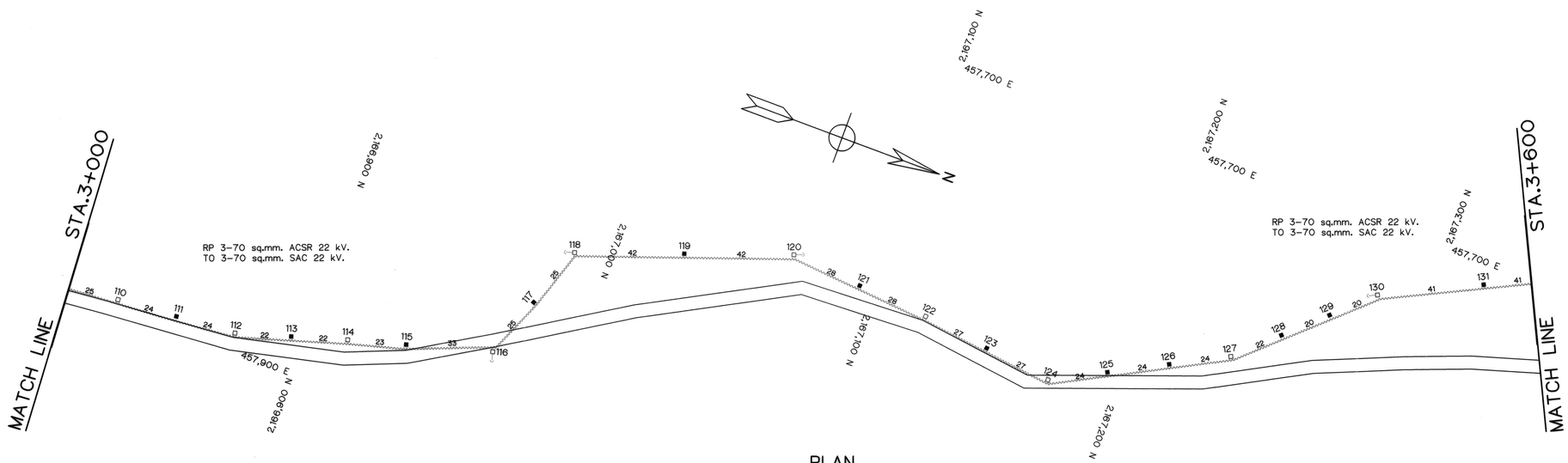
TRANSMISSION LINE

PLAN AND PROFILE, STA. 2+400 TO 3+000

P&C MANAGEMENT CO.,LTD.

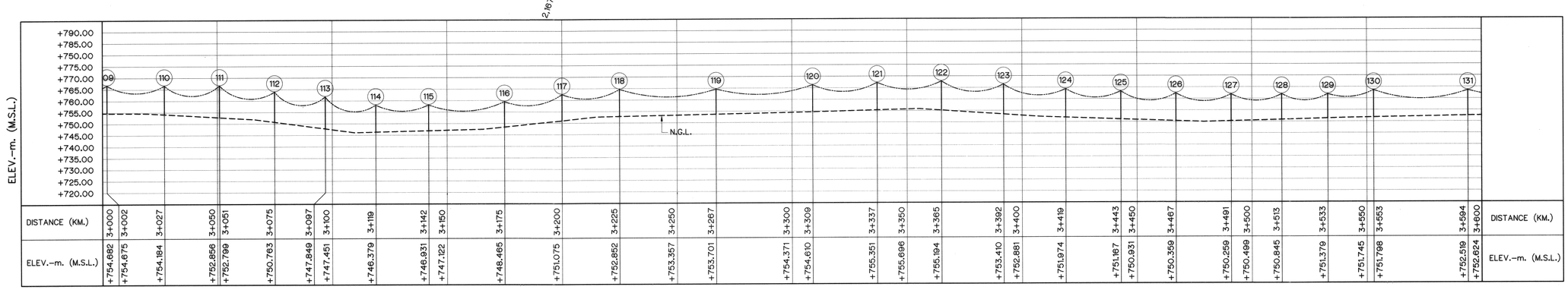
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED ภย.64624 สย.6226	REVIEWED
DRAWN	SUBMITTED
CHECKED สย.6226	RECOMMENDED
	APPROVED P. Hansell
PROJECT MANAGER — DATE 08/03/2559	DRAWING NO. MH-TS-06 — SHEET NO. 117 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	3+000	3+002	3+027	3+050	3+051	3+075	3+097	3+100	3+119	3+142	3+150	3+175	3+200	3+225	3+250	3+267	3+300	3+309	3+337	3+350	3+365	3+392	3+400	3+419	3+443	3+450	3+467	3+491	3+500	3+513	3+533	3+550	3+563	3+594	3+600	DISTANCE (KM.)
ELEV.-m. (M.S.L.)	+754.682	+754.875	+754.184	+752.856	+752.799	+750.763	+747.849	+747.451	+746.379	+746.931	+747.122	+748.465	+751.075	+752.852	+753.357	+753.701	+754.371	+754.610	+755.351	+755.696	+755.194	+753.410	+752.881	+751.974	+751.167	+750.931	+750.359	+750.259	+750.499	+750.845	+751.379	+751.745	+751.798	+752.519	+752.624	ELEV.-m. (M.S.L.)

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY											
			POLE TYPE					GUY TYPE						
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
108	45	2,977			1						1		
109	25	3,002		1									
110	25	3,027		1									
111	24	3,051		1									
112	24	3,075		1									
113	22	3,097		1									
114	22	3,119		1									
115	23	3,142		1									
116	33	3,175				1		1					
117	25	3,200		1									
118	25	3,225				1		1					
119	42	3,267	1										
120	42	3,309			1						1		
121	28	3,337		1									
122	28	3,365		1									
123	27	3,392		1									
124	27	3,419		1									
125	24	3,443		1									
126	24	3,467		1									
127	24	3,491		1									
128	22	3,513		1									
129	20	3,533		1									
130	20	3,553			1						1		
131	41	3,594	1										

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 2+400 TO STA. 3+000	MH-TS-06
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 3+600 TO STA. 4+200	MH-TS-08
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

PLAN AND PROFILE, STA. 3+000 TO 3+600

P&C MANAGEMENT CO.,LTD.

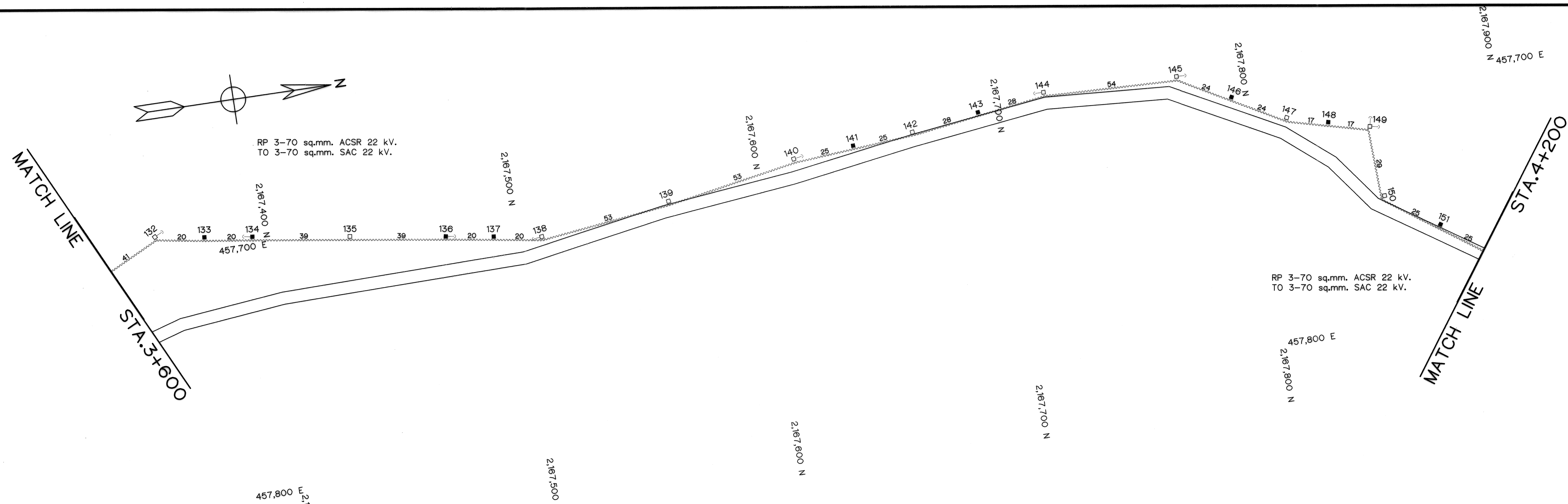
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED	วิศ.64624	วิศ.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED	วิศ.6226		RECOMMENDED
PROJECT MANAGER		08/03/2564 DATE	APPROVED

P. Hanpa M.

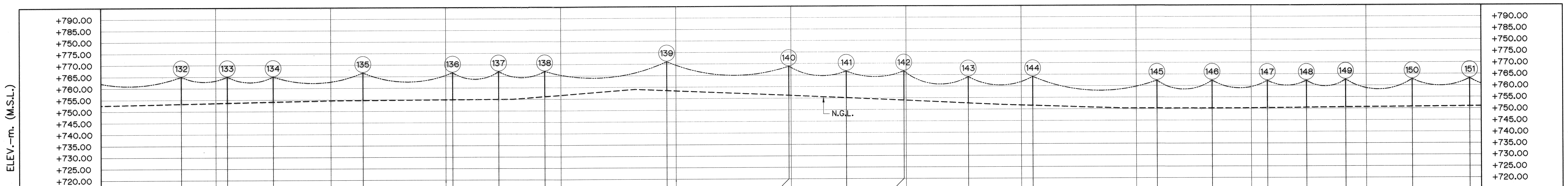
DRAWING NO. MH-TS-07

SHEET NO. 118 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	ELEV.-m. (M.S.L.)
3+600	+752.624
3+635	+753.279
3+650	+753.590
3+655	+753.694
3+675	+754.109
3+700	+754.627
3+714	+754.728
3+750	+754.926
3+753	+754.943
3+773	+755.053
3+793	+756.132
3+800	+756.658
3+846	+758.512
3+850	+758.345
3+899	+756.267
3+900	+756.223
3+924	+755.160
3+949	+754.015
3+950	+753.968
3+977	+752.702
4+000	+751.765
4+005	+751.603
4+050	+750.309
4+059	+750.285
4+083	+750.218
4+100	+750.270
4+107	+750.335
4+124	+750.493
4+141	+750.645
4+150	+750.693
4+170	+750.804
4+195	+750.989
4+200	+751.026

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY – POLE TYPE A	B	C	D	E	GUY TYPE G1	G2	G3	G4	G5	G6
131	41	3,594	1										
132	41	3,635			1						1		
133	20	3,655		1									
134	20	3,675			1						1		
135	39	3,714	1										
136	39	3,753			1						1		
137	20	3,773		1									
138	20	3,793			1						1		
139	53	3,846	1										
140	53	3,899			1						1		
141	25	3,924		1									
142	25	3,949		1									
143	28	3,977		1									
144	28	4,005			1						1		
145	54	4,059			1						1		
146	24	4,083		1									
147	24	4,107		1									
148	17	4,124		1									
149	17	4,141				1						1	
150	29	4,170				1							
151	25	4,195		1									

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 3+000 TO STA. 3+600 — MH-TS-07
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 4+200 TO STA. 4+800 — MH-TS-09
3. TRANSMISSION LINE, POLE TYPE "A" AND "B" — MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D" — MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E" — MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY — MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M REMOVE 12M. CONCRETE POLE
6. 3 – 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

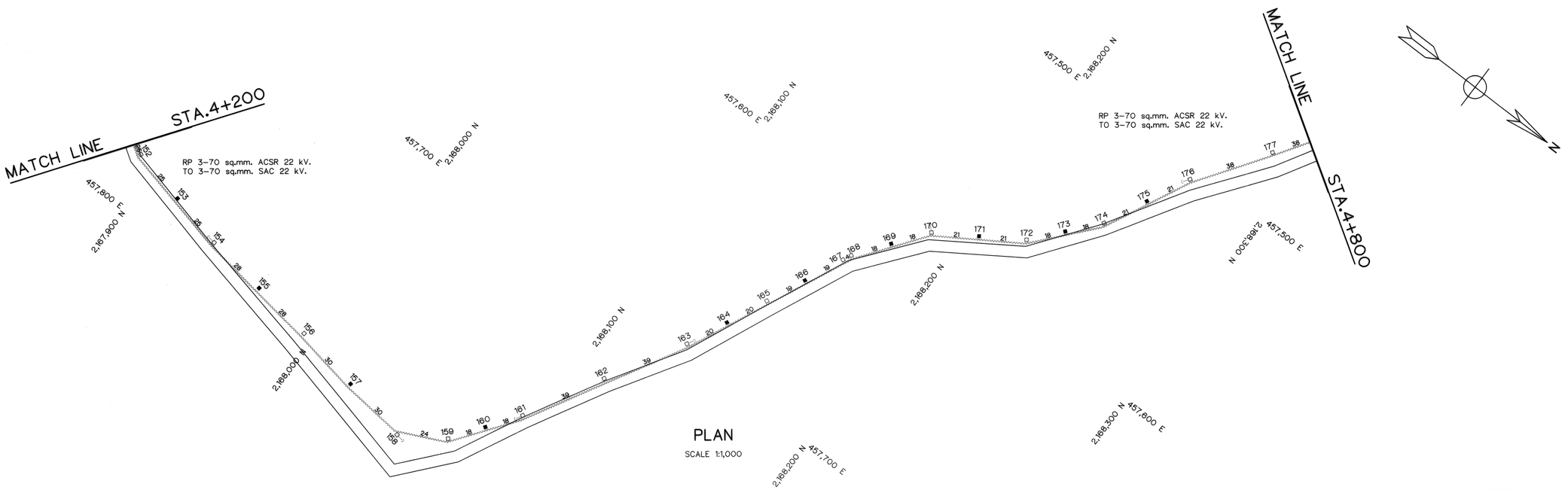
CIVIL WORKS AND TRANSMISSION LINE
TRANSMISSION LINE
PLAN AND PROFILE, STA. 3+600 TO 4+200

P&C MANAGEMENT CO.,LTD.
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED ภย.64624 สย.6226 — REVIEWED
DRAWN — SUBMITTED
CHECKED สย.6226 — RECOMMENDED
APPROVED P. Hans.

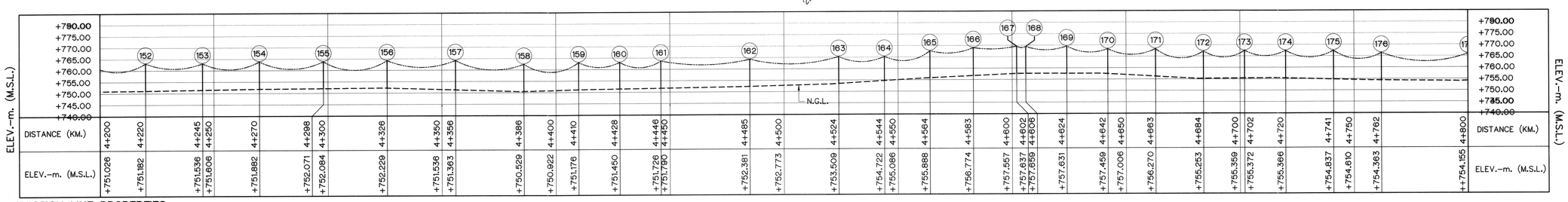
PROJECT MANAGER — DATE 08/03/2559

DRAWING NO. MH-TS-08
SHEET NO. 119 OF 130



PLAN

SCALE 1:1,000



TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
151	25	4,195		1									
152	25	4,220		1									
153	25	4,245		1									
154	25	4,270				1					1		
155	28	4,298	1										
156	28	4,326	1										
157	30	4,356	1										
158	30	4,386			1						1		
159	24	4,410		1									
160	18	4,428		1									
161	18	4,446			1						1		
162	39	4,485	1										
163	39	4,524			1						1		
164	20	4,544		1									
165	20	4,564		1									
166	19	4,583		1									
167	19	4,602		1									
168	4	4,606		1									
169	18	4,624		1									
170	18	4,642		1				1					
171	21	4,663		1									
172	21	4,684		1									
173	18	4,702		1									
174	18	4,720		1									
175	21	4,741		1									
176	21	4,762						1					
177	38	4,800	1										

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

REFERENCE DRAWINGS :-

1.	TRANSMISSION LINE, PLAN AND PROFILE, STA. 3+600 TO STA. 4+200	MH-TS-08
2.	TRANSMISSION LINE, PLAN AND PROFILE, STA. 4+800 TO STA. 5+400	MH-TS-10
3.	TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4.	TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5.	TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6.	TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M — REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

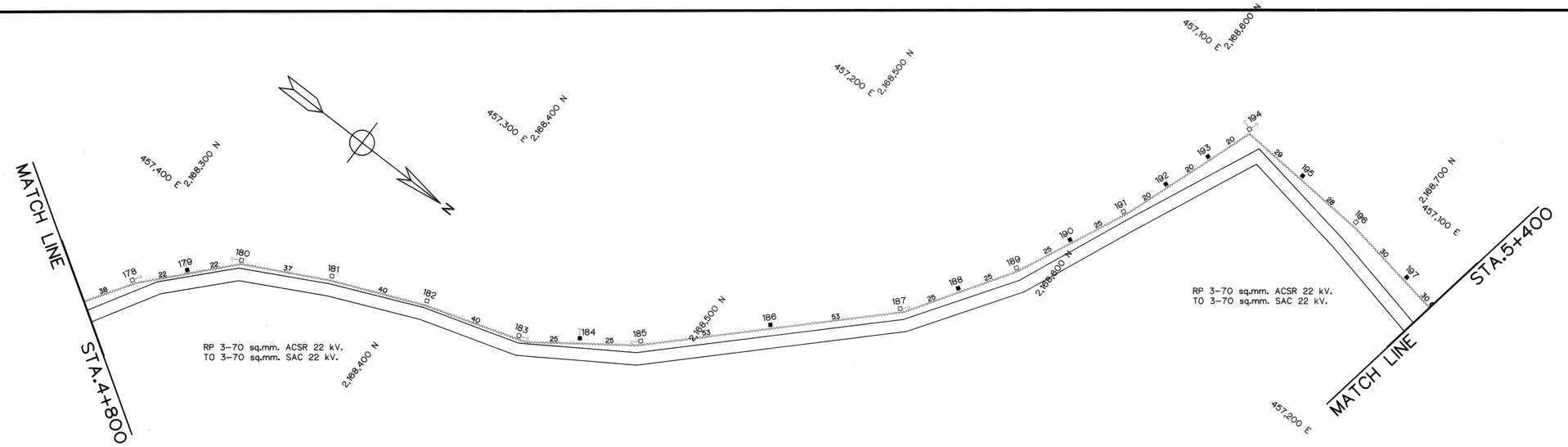
PLAN AND PROFILE, STA. 4+200 TO 4+800

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

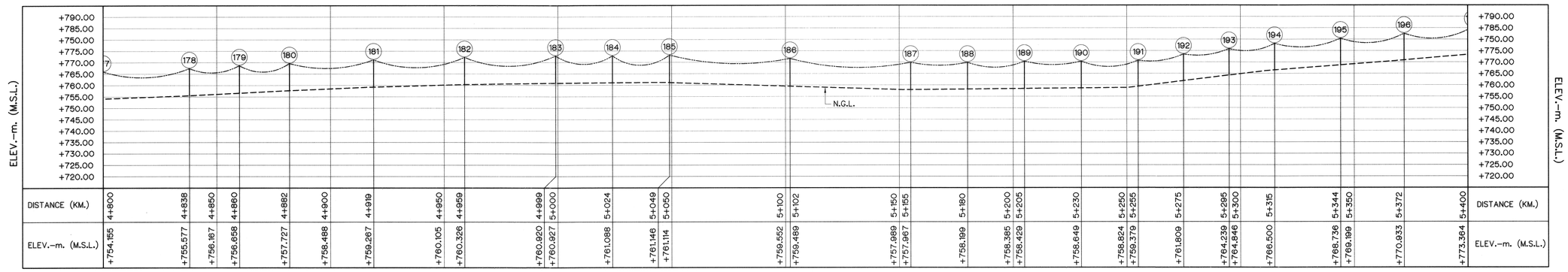
DESIGNED	วิศ.64624	วิศ.6226	REVIEWED
DRAWN			SUBMITTED
CHECKED	วิศ.6226		RECOMMENDED
PROJECT MANAGER		DATE 08/03/2564	APPROVED

DRAWING NO. MH-TS-09
SHEET NO. 120 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	4+800	4+838	4+850	4+880	4+882	4+900	4+919	4+950	4+959	4+999	5+000	5+024	5+049	5+050	5+100	5+102	5+150	5+155	5+180	5+200	5+205	5+230	5+250	5+255	5+275	5+295	5+300	5+315	5+344	5+350	5+372	5+400	DISTANCE (KM.)
ELEV.-m. (M.S.L.)	+754.155	+755.577	+756.167	+756.658	+757.727	+758.488	+759.267	+760.105	+760.326	+760.920	+760.927	+761.088	+761.146	+761.114	+759.552	+759.489	+757.989	+757.967	+758.199	+758.385	+758.429	+758.649	+758.824	+759.379	+761.809	+764.239	+764.846	+766.500	+768.736	+769.199	+770.933	+773.364	ELEV.-m. (M.S.L.)

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY											
			POLE TYPE					GUY TYPE						
			A	B	C	D	E	G1	G2	G3	G4	G5	G6	
177	38	4,800	1											
178	38	4,838			1						1			
179	22	4,860		1				1						
180	22	4,882			1						1			
181	37	4,919	1											
182	40	4,959		1										
183	40	4,999			1						1			
184	25	5,024		1				1						
185	25	5,049			1						1			
186	53	5,102	1											
187	53	5,155			1						1			
188	25	5,180		1										
189	25	5,205		1										
190	25	5,230		1										
191	25	5,255		1										
192	20	5,275		1										
193	20	5,295		1										
194	20	5,315				1						1		
195	29	5,344		1										
196	28	5,372		1				1						
197	30	5,402		1										

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 4+200 TO STA. 4+800	MH-TS-09
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 5+400 TO STA. 6+000	MH-TS-11
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M — REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

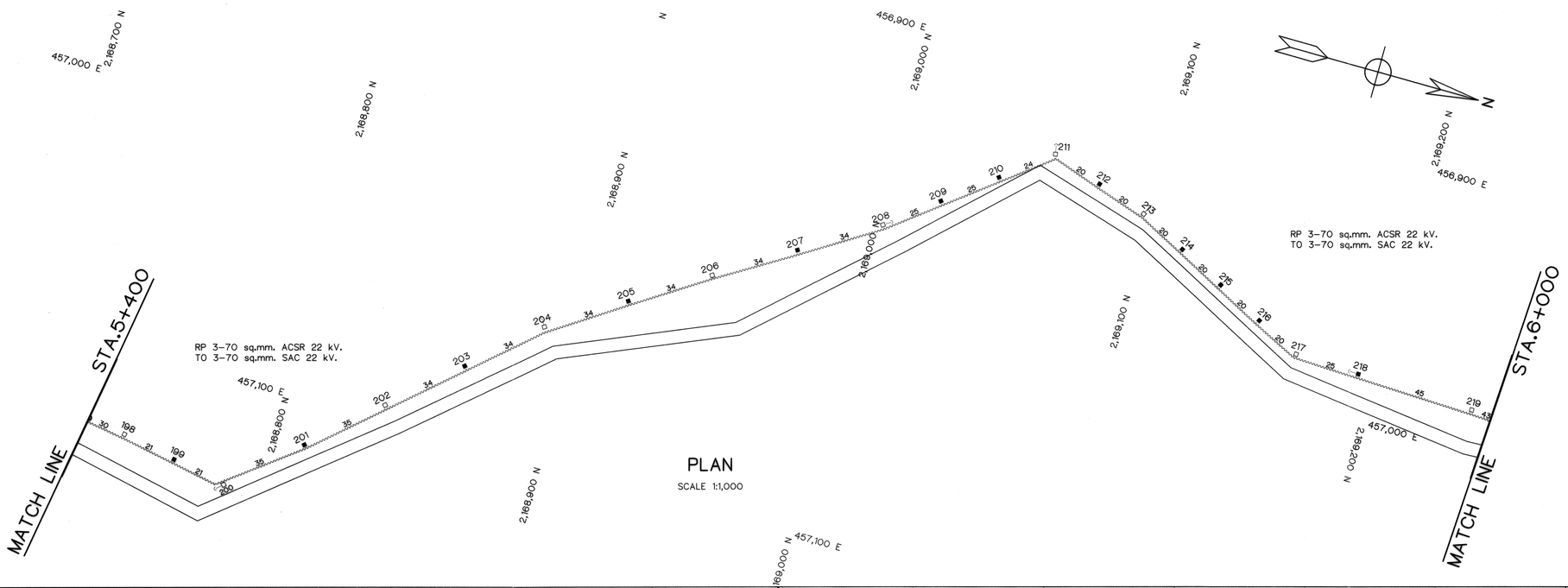
PLAN AND PROFILE, STA. 4+800 TO 5+400

P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

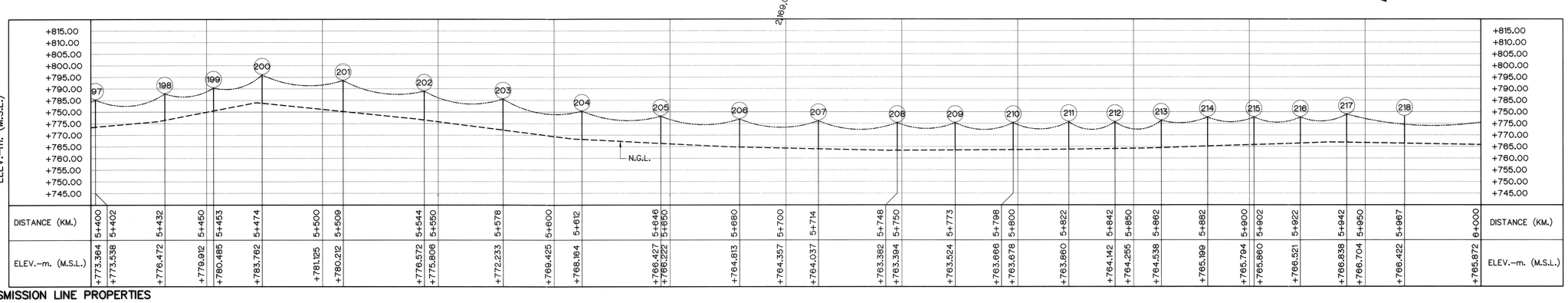
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DRAWN	[illegible]		SUBMITTED
CHECKED	[illegible]	[illegible]	RECOMMENDED
PROJECT MANAGER		DATE	APPROVED

DRAWING NO. MH-TS-10
SHEET NO. 121 OF 130



PLAN

SCALE 1:1,000



TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY											
			POLE TYPE					GUY TYPE						
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
197	30	5,402		1									
198	30	5,432		1									
199	21	5,453		1									
200	21	5,474				1		1					
201	35	5,509	1										
202	35	5,544	1										
203	34	5,578	1										
204	34	5,612		1				1					
205	34	5,646	1										
206	34	5,680	1										
207	34	5,714	1										
208	34	5,748			1						1		
209	25	5,773		1									
210	25	5,798		1									
211	24	5,822				1						1	
212	20	5,842		1									
213	20	5,862		1				1					
214	20	5,882		1									
215	20	5,902		1				1					
216	20	5,922		1									
217	20	5,942		1									
218	25	5,967			1						1		

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 4+800 TO STA. 5+400	MH-TS-10
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 6+000 TO STA. 6+600	MH-TS-12
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

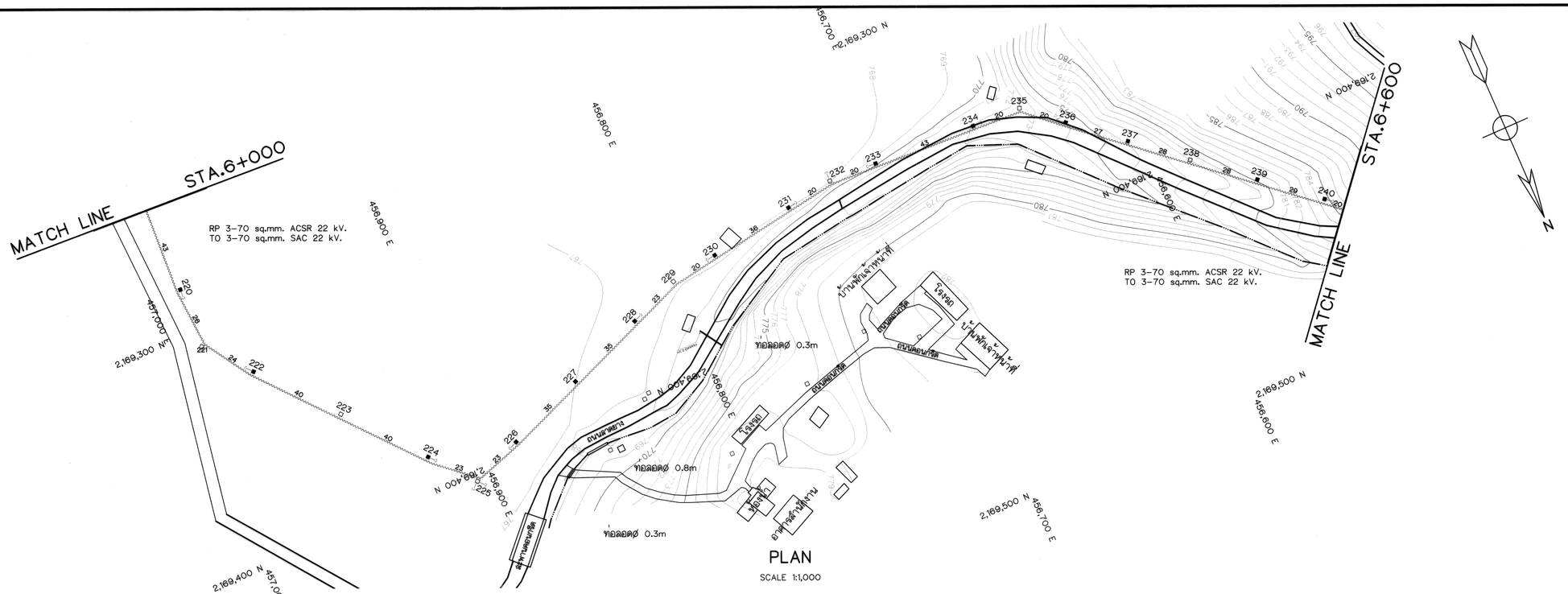
TRANSMISSION LINE

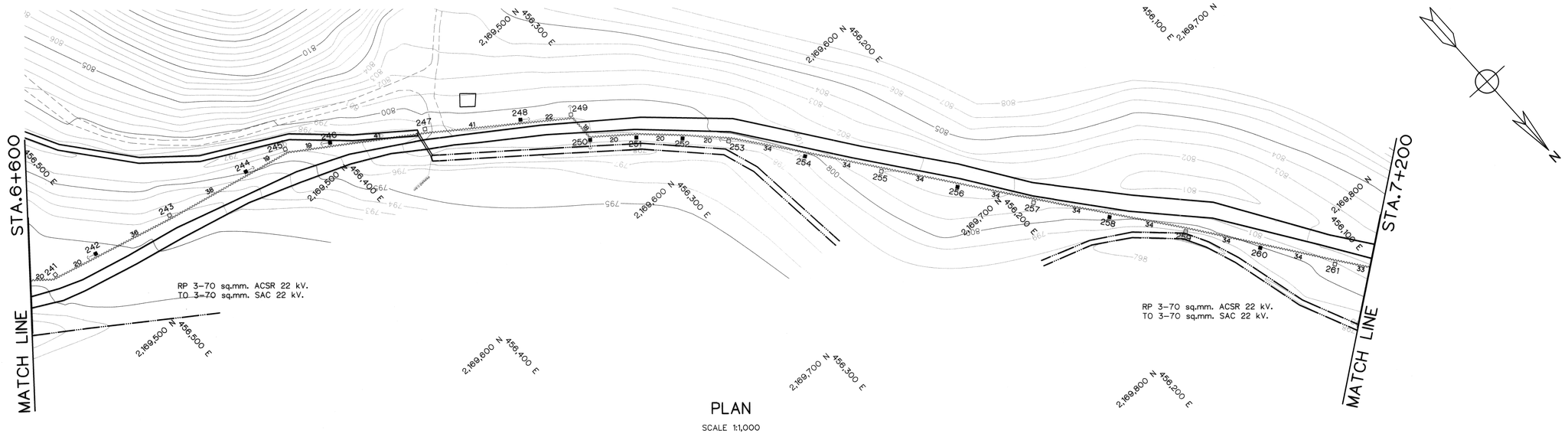
PLAN AND PROFILE, STA. 5+400 TO 6+000

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Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

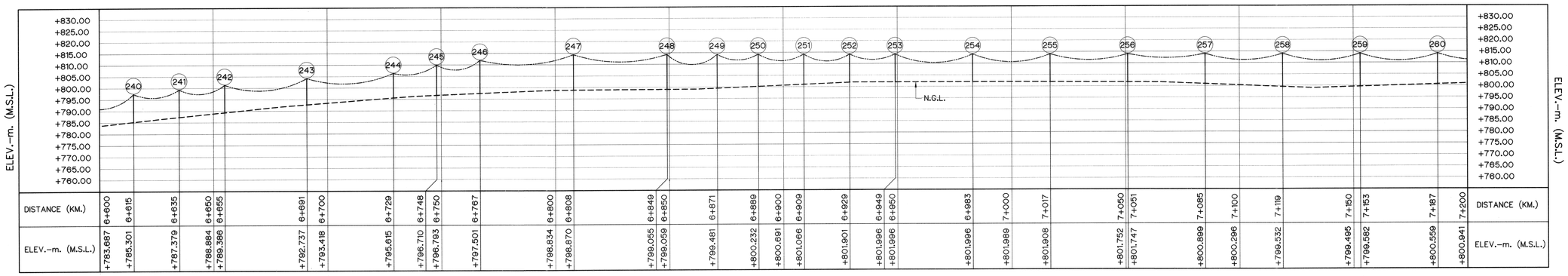
DESIGNED	ส.ต.ท.64624	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	ส.ต.ท.6226	RECOMMENDED	
PROJECT MANAGER		APPROVED	
	DATE	DRAWING NO.	MH-TS-11
		SHEET NO.	122 OF 130


MATCH LINE
STA.6+000
RP 3-70 sq.mm. ACSR 22 kV.
TO 3-70 sq.mm. SAC 22 kV.
456,900 E
457,000 E
2,169,300 N
2,169,400 N
456,700 E
456,800 E
2,169,500 N
456,600 E
STA.6+600
MATCH LINE
RP 3-70 sq.mm. ACSR 22 kV.
TO 3-70 sq.mm. SAC 22 kV.
N
ท่อระบายน้ำ Ø 0.3m
ท่อระบายน้ำ Ø 0.8m
ท่อระบายน้ำ Ø 0.3m
ถนนลาดยาง
ถนนลาดยาง
ถนนลาดยาง
ถนนลาดยาง
ร้านค้า
ร้านค้า
ร้านค้า



PLAN

SCALE 1:1,000



PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
239	28	6,586	1										
240	29	6,615			1						1		
241	20	6,635		1									
242	20	6,655			1						1		
243	36	6,691	1										
244	38	6,729			1						1		
245	19	6,748		1				1					
246	19	6,767			1						1		
247	41	6,808	1										
248	41	6,849			1						1		
249	22	6,871				1		1					
250	18	6,889				1		1					
251	20	6,909		1									
252	20	6,929		1									
253	20	6,949			1						1		
254	34	6,983	1										
255	34	7,017	1										
256	34	7,051	1										
257	34	7,085	1										
258	34	7,119	1										
259	34	7,153	1										
260	34	7,187	1										

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 6+000 TO STA. 6+600	MH-TS-12
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 7+200 TO STA. 7+800	MH-TS-14
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. RM 12M — REMOVE 12M. CONCRETE POLE
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				

CONSULTANTS | DEDE

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

PLAN AND PROFILE, STA. 6+600 TO 7+200

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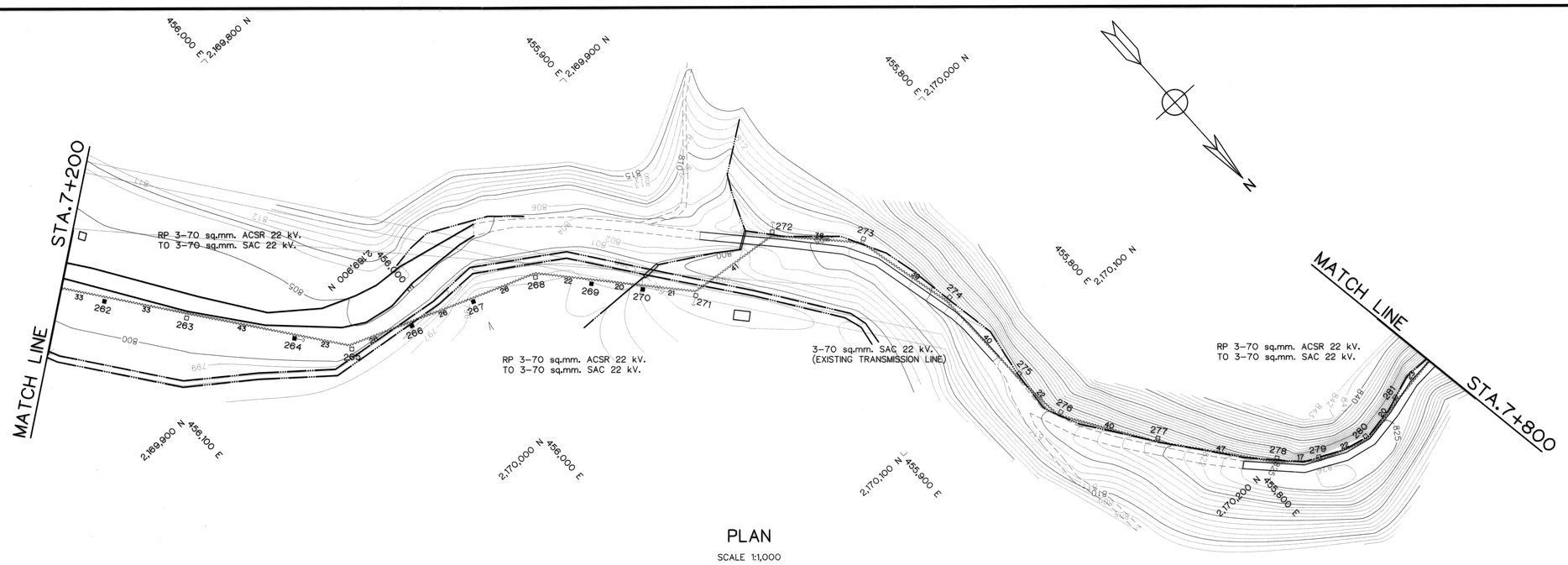
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

DESIGNED	วิฑ.64624	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วิฑ.6226	RECOMMENDED	
		APPROVED	

PROJECT MANAGER | 08/08/2559 DATE

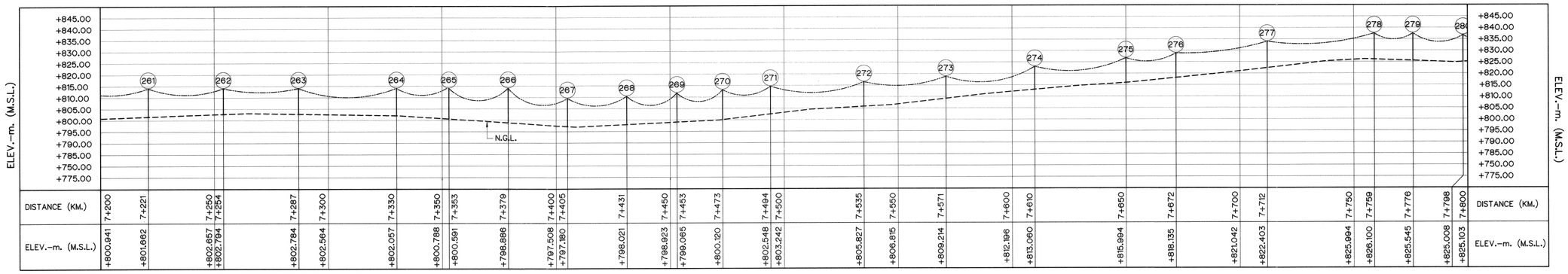
DRAWING NO. MH-TS-13

SHEET NO. 124 OF 130



PLAN

SCALE 1:1,000



TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
260	34	7,187	1										
261	34	7,221	1										
262	33	7,254	1										
263	33	7,287	1										
264	43	7,330			1						1		
265	23	7,353		1									
266	26	7,379		1									
267	26	7,405		1									
268	26	7,431		1									
269	22	7,453		1									
270	20	7,473		1									
271	21	7,494	3 - 70 sq.mm. SAC 22KV. EXISTING TRANSMISSION LINE										
272	41	7,535											
273	36	7,571											
274	39	7,610											
275	40	7,650											
276	22	7,672											
277	40	7,712											
278	47	7,759											
279	17	7,776											
280	22	7,798											

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. REMOVE 12M. CONCRETE POLE (RM 12M)
6. 3 - 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 6+600 TO STA. 7+200	MH-TS-13
2. TRANSMISSION LINE, PLAN AND PROFILE, STA. 7+800 TO STA. 8+086	MH-TS-15
3. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
4. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
5. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
6. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
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KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

PLAN AND PROFILE, STA. 7+200 TO 7+800

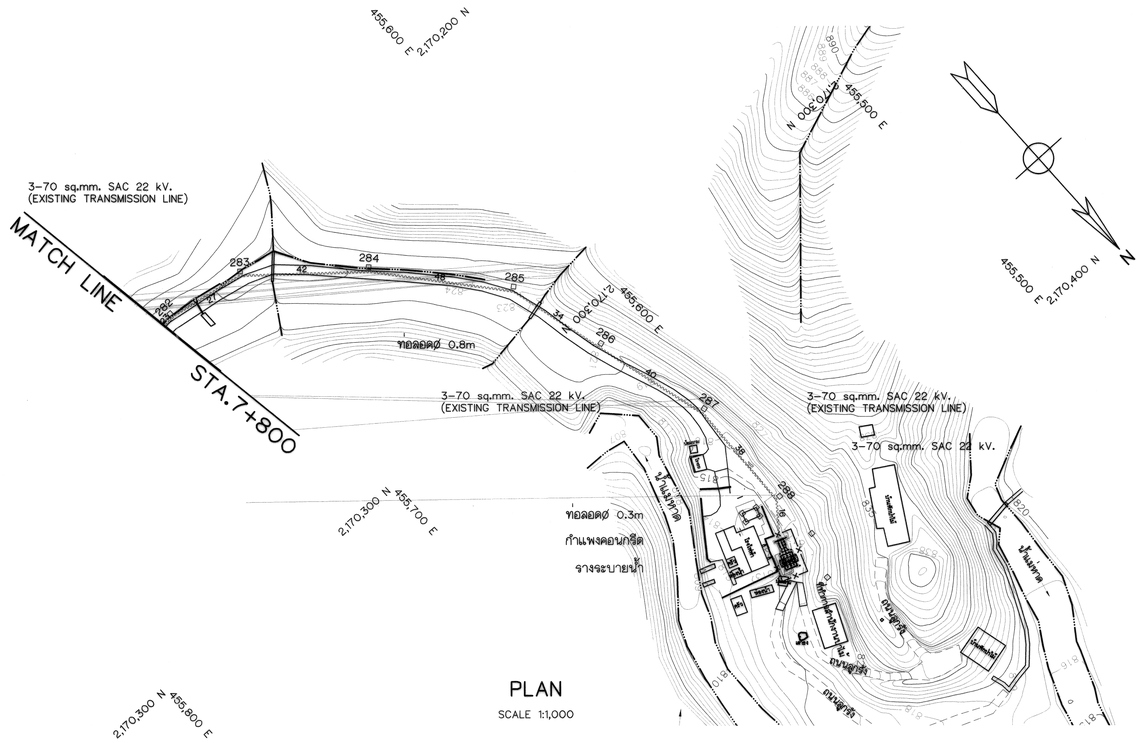
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Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED สมิต,64624 สมิต,6226
DRAWN
CHECKED สมิต,6226
PROJECT MANAGER 08/08/2559 DATE

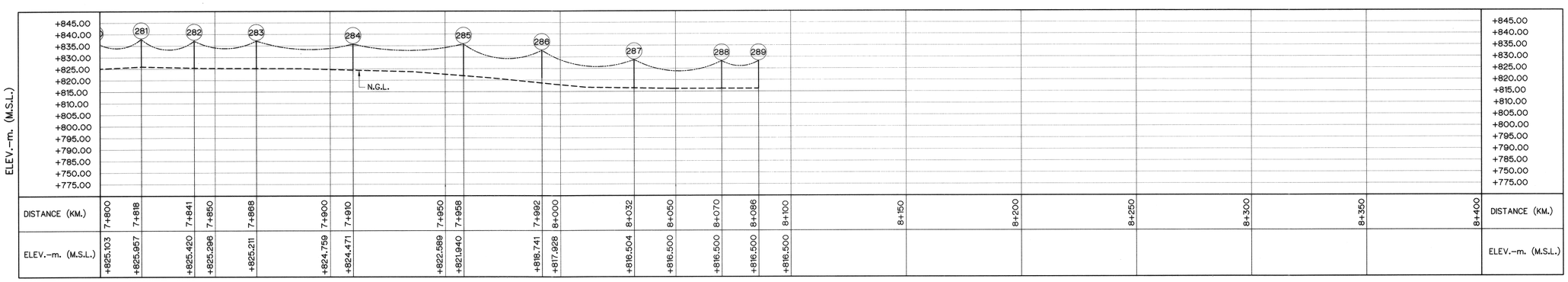
REVIEWED
SUBMITTED
RECOMMENDED
APPROVED P. Hannah

DRAWING NO. MH-TS-14
SHEET NO. 125 OF 130



PLAN

SCALE 1:1,000



DISTANCE (KM.)	7+800	7+818	7+841	7+850	7+868	7+900	7+910	7+950	7+958	7+992	8+000	8+032	8+050	8+070	8+086	8+100	8+150	8+200	8+250	8+300	8+350	8+400	DISTANCE (KM.)
ELEV.-m. (M.S.L.)	+825.103	+825.957	+825.420	+825.296	+825.211	+824.759	+824.471	+822.589	+821.940	+818.741	+817.928	+816.504	+816.500	+816.500	+816.500	+816.500							ELEV.-m. (M.S.L.)

PROFILE

HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:1,000

TRANSMISSION LINE PROPERTIES

POLE NO.	DISTANCE (M.)	ACCUMULATIVE DISTANCE (M.)	QUANTITY										
			POLE TYPE					GUY TYPE					
			A	B	C	D	E	G1	G2	G3	G4	G5	G6
280	22	7,798	3 – 70 sq.mm. SAC 22KV. EXISTING TRANSMISSION LINE										
281	20	7,818											
282	23	7,841											
283	27	7,868											
284	42	7,910											
285	48	7,958											
286	34	7,992											
287	40	8,032											
288	38	8,070											
TEAK OFF STRUCTURE	16	8,086											
TOTAL		8,086	0	6	1	0	0	0	0	0	1	0	0
GRAND TOTAL CABLE REPLACE		7,489	35	82	40	0	0	17	0	0	41	4	0

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

LEGENDS :

1. 22 kV. SPACE AERIAL CABLE
2. EXISTING 22 kV. PEA. OVERHEAD TRANSMISSION LINE
3. NEW 12M. CONCRETE POLE
4. EXISTING 12M. CONCRETE POLE
5. REMOVE 12M. CONCRETE POLE
6. 3 – 100A. FUSE CUTOUT 33 kV.
7. GUY
8. LOAD BREAK SWITCH, SF6, 630A, 33KV. WITH AUTOMATIC REMOTE CONTORLLED
9. DISCONNECTING SWITCH 600A, 33KV.

REFERENCE DRAWINGS :-

1. TRANSMISSION LINE, PLAN AND PROFILE, STA. 7+200 TO STA. 7+800	MH-TS-14
2. TRANSMISSION LINE, POLE TYPE "A" AND "B"	MH-TS-16
3. TRANSMISSION LINE, POLE TYPE "C" AND "D"	MH-TS-17
4. TRANSMISSION LINE, POLE TYPE "E"	MH-TS-18
5. TRANSMISSION LINE, TYPE OF ANCHOR GUY	MH-TS-19

0 5 10 15 20 25 50 100
SCALE 1:1,000 METERS

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

PLAN AND PROFILE, STA. 7+800 TO 8+086

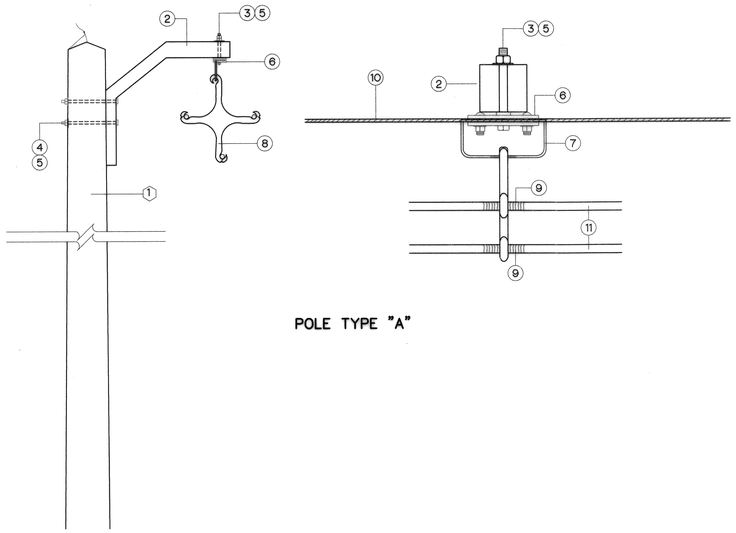
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MINISTRY OF ENERGY

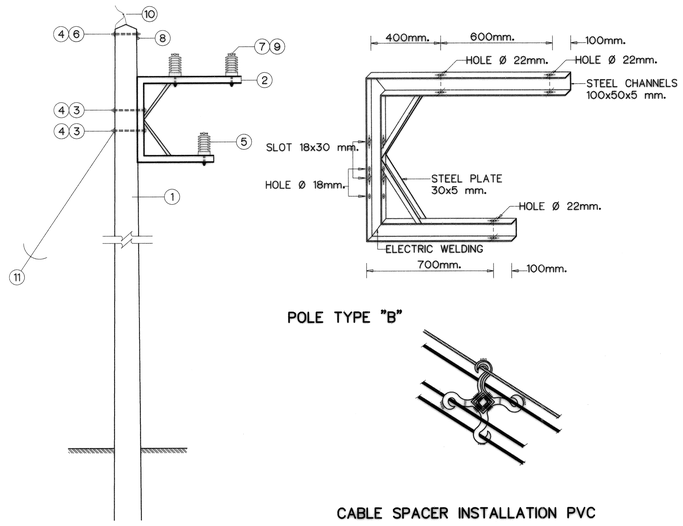
DESIGNED	วิศ.64624	วิศ.6226	SUBMITTED
DRAWN			RECOMMENDED
CHECKED	วิศ.6226		APPROVED
PROJECT MANAGER		09/01/2569 DATE	DRAWING NO. MH-TS-15

REVIEWED

SHEET NO. 126 OF 130



POLE TYPE "A"



POLE TYPE "B"

CABLE SPACER INSTALLATION PVC

BILL OF MATERIAL POLE TYPE "A"	
ITEM	DESCRIPTION
1	POLE CONCRETE 12 M. LONG
2	BRACKET AERIAL CABLE FOR STRAIGHT TYPE
3	BOLT MACHINE M16x170 mm.
4	BOLT MACHINE M16x250 mm.
5	WASHER SQUARE FLAT 52x52x4.5 mm. HOLE Dia.18 mm. TIS 258
6	CLAMP GUY TRIPLE BOLT
7	LINK CABLE SPACER (MADE OF GALV. STEEL Dia. 9 mm.)
8	CABLE SPEACER 22 KV.
9	TIE WIRE 4.0 sq.mm.
10	WIRE STEEL STRANDED 50/7 DIN 48201
11	AERIAL CABLE 70 sq.mm. 25 KV.

BILL OF MATERIAL POLE TYPE "B"	
ITEM	DESCRIPTION
1	POLE CONCRETE 12 M. LONG
2	BRACKET AERIAL CABLE FOR CORNER TYPE
3	BOLT MACHINE M16x350 mm.
4	WASHER SQUARE FLAT 52x52x4.5 mm. HOLE Dia. 18 mm. TIS 258
5	INSULATOR LINE POST TYPE ANSI C 29.7 CLASS 57-2L
6	GROUND WIRE SUPPORT AND CLAMP FOR CONCRETE POLE
7	AERIAL CABLE 70 sq.mm. 25 kV.
8	GROUND WIRE SUPPORT AND STEEL STRANDED 50/7 DIN 48201
9	TIE WIRE 4.0 sq.mm.
10	CLAMP SINGLE U-BOLT M8
11	GUY (STEEL STARNDARD WIRE 95 Sq.mm.)

NOTES :

1. THIS DRAWING IS DESIGNED FOR GUIDE LINE ONLY, THE CONSTRUCTION DRAWING SHALL CONFORM TO PEA'S STANDARD AND REGULATIONS.

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

POLE TYPE "A" AND "B"

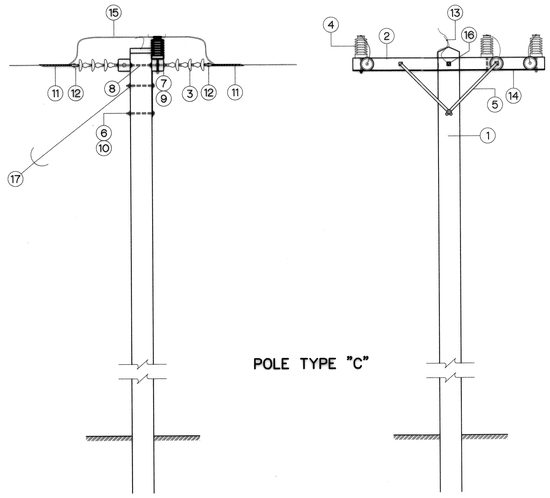
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MINISTRY OF ENERGY

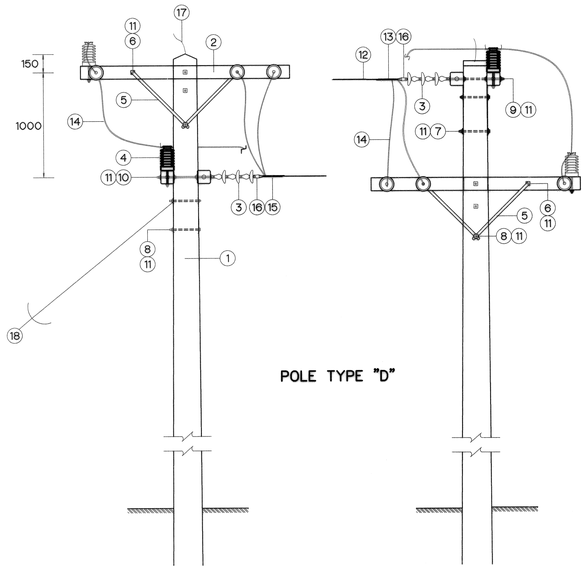
DESIGNED	วิฑูรย์	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วิฑูรย์	RECOMMENDED	
PROJECT MANAGER	08/08/2559 DATE	APPROVED	

DRAWING NO. MH-TS-16

SHEET NO. 127 OF 130



POLE TYPE "C"



POLE TYPE "D"

BILL OF MATERIAL POLE TYPE "C"	
ITEM	DESCRIPTION
1	POLE CONCRETE 12.0 M. LONG
2	CROSSARM,SPUN PRESTERSSED CONCRETE,120X120X2,000mm.
3	INSULATOR,SUSPENSION TYPE,TIS 354, TYPE A (CLASS 52-1)
4	INSULATOR,LINE POST TYPE,ANSI C 29.7 CLASS 57-2L
5	BRACE,FLAT,FOR CROSSARM,30X6X760mm.
6	BOLT,MACHINE, M16X170mm.
7	BOLT,MACHINE, M16X200mm.
8	BOLT,DOUBLE ARMING,ROUND EYE, M16X450mm.
9	NUT, EYE, M16, DIN 582
10	WASHER,SQUARE,FLAT,52X52X4.5mm.HOLE Dia.18mm.TIS 258
11	PREFORMED DEAD-END FOR AERIAL CABLE 70sq.mm.
12	CLEVIS,THIMBLE,FOR PREFORM DEAD-END
13	CLAMP,SINGLE U-BOLT,M8
14	WIRE STEEL SOLID Dia.4mm.
15	AERIAL CABLE 70sq.mm. 25kV.
16	WIRE STEEL STRANDED 50/7 DIN 48201
17	GUY (STEEL STARNDARD WIRE 95 Sq.mm.)

BILL OF MATERIAL POLE TYPE "D"	
ITEM	DESCRIPTION
1	POLE CONCRETE 12 M. LONG
2	CROSSARM SPUN PRESTERSSED CONCRETE 120x120x2,000 mm.
3	INSULATOR SUSPENSION TYPE TIS 354 TYPE A (CLASS 52-1)
4	INSULATOR LINE POST TYPE ANSI C 29.7 CLASS 57-2L
5	BRACE FLAT FOR CROSSARM 30x6x760 mm.
6	BOLT MACHINE M16x170 mm.
7	BOLT MACHINE M16x200 mm.
8	BOLT MACHINE M16x250 mm.
9	BOLT DOUBLE ARMING ROUND EYE M16x450 mm.
10	BOLT DOUBLE ARMING ROUND EYE M16x500 mm.
11	WASHER SQUARE FLAT 52x52x4.5 mm. HOLE Dia.18 mm. TIS 258
12	AERIAL CABLE 70 sq.mm. 25 kV.
13	PERFOR DEAD-END FOR AERIAL CABLE 70 sq.mm.
14	AERIAL CABLE 70 sq.mm. 25 kV.
15	PERFOR DEAD-END FOR AERIAL CABLE 70 sq.mm.
16	CLEVIS THIMBLE FOR PERFORMED DEAD-END
17	CLAMP SINGLE U-BOLT M 8
18	GUY (STEEL STARNDARD WIRE 95 Sq.mm.)

NOTES :

1. THIS DRAWING IS DESIGNED FOR GUIDE LINE ONLY, THE CONSTRUCTION DRAWING SHALL CONFORM TO PEA'S STANDARD AND REGULATIONS.

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

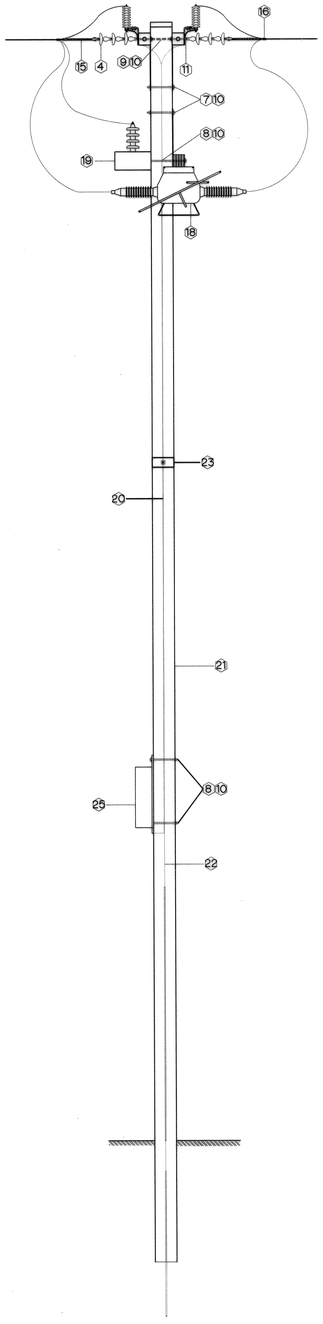
TRANSMISSION LINE

POLE TYPE "C" AND "D"

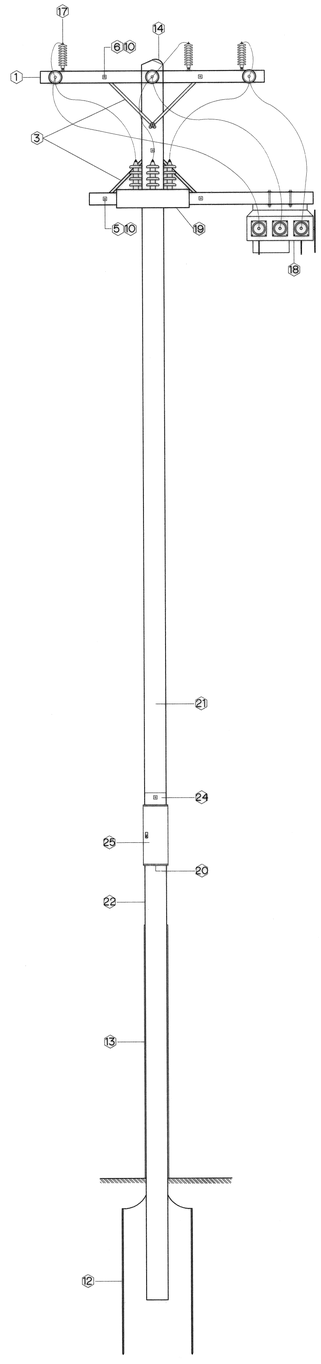
P&C MANAGEMENT CO.,LTD.

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED	วพ.604
DRAWN	
CHECKED	วพ.604
PROJECT MANAGER	05/05/2559 (DATE)
REVIEWED	
SUBMITTED	
RECOMMENDED	
APPROVED	
DRAWING NO.	MH-TS-17
SHEET NO.	128 OF 130

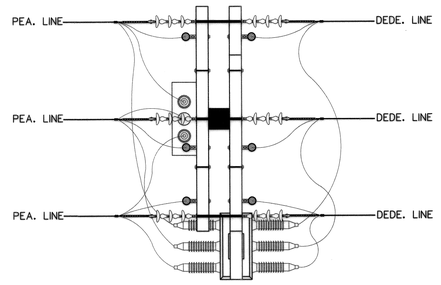


SIDE VIEW



FRONT VIEW

POLE TYPE "E"



TOP VIEW

BILL OF MATERIAL POLE TYPE "E"

ITEM	DESCRIPTION
1	CROSS ARM, SPUN, PRESTRESSED CONCRETE 120X120x2,000mm.
2	STEEL, SQUARE, 100 x 3.2 mm., 2,000mm. LONG
3	BRACE,FLAT FOR CROSS ARM 30X6X760mm.
4	INSULATOR,SUSPENSION (TYPE D TIS.354) TYPE (CLASS 52-1)
5	BOLT,MACHINE M.16X130mm. COMPLETE WITH SQUARE NUT
6	BOLT,MACHINE M.16X170mm. COMPLETE WITH SQUARE NUT
7	BOLT,MACHINE M.16X250mm. COMPLETE WITH SQUARE NUT
8	BOLT,MACHINE M.16X300mm. COMPLETE WITH SQUARE NUT
9	BOLT,DOUBLE ARMING,ROUND EYE M.16X450mm. COMPLETE WITH SQUARE NUT
10	WASHER,SQUARE,FLAT 50X50X5mm.HOLE Dia.18mm.
11	NUT,EYE M.16 DIN 582
12	ROD,GROUND, 60X60X5mm. LONG
13	CONDUIT,PVC,RIGID,DIA 20X2,500mm. TIS.216
14	CLAMP,SINGLE U-BOLT,M.8 (WIRE ROPE CLIP)
15	PREFORMED DEAD-END, FOR AERIAL CABLE 25 KV. 70 sq.mm.
16	CONNECTOR,PARALLEL GROOVE,TRIPLE BOLT,AL, 70-185 sq.mm.
17	LIGHTING ARRESTER 21 KV. 10 KA.
18	LOAD BREAK SWITCH, SF6, 630A, 24KV.
19	TRANSFORMER,VOLTAGE 3PHASE, OUTDOOR,RATIO 22,000/100 V., 10 VA.
20	CONTROL CABLE
21	POLE, CONCRETE, 12 m. LONG
22	WIRE, STEEL STRANDED 50/7 sq.mm. TIS.404
23	PLATE,WOOD, SIZE 2X20X30 cm.
24	PLATE,WOOD, SIZE 2X20X60 cm.
25	CONTROL UNIT, AUTOMATIC REMOTE CONTORLLED, FOR SF6

NOTES :

1. THIS DRAWING IS DESIGNED FOR GUIDE LINE ONLY, THE CONSTRUCTION DRAWING SHALL CONFORM TO PEA'S STANDARD AND REGULATIONS.

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				
	CONSULTANTS		DEDE	

KINGDOM OF THAILAND
Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

MAE HAT HYDROPOWER PROJECT

CIVIL WORKS AND TRANSMISSION LINE

TRANSMISSION LINE

POLE TYPE "E"

P&C MANAGEMENT CO.,LTD.

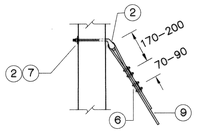
Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED	วพก.604	REVIEWED	
DRAWN		SUBMITTED	
CHECKED	วพก.604	RECOMMENDED	
PROJECT MANAGER	DATE	APPROVED	

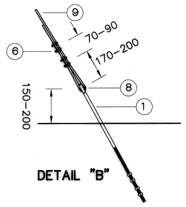
DRAWING NO. MH-TS-18

SHEET NO. 129 OF 130

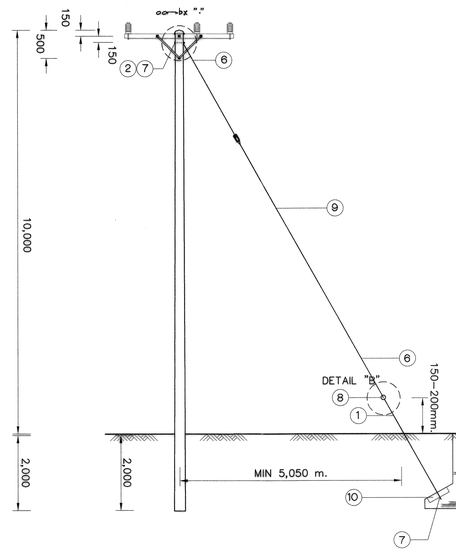
METHOD OF SINGLE ANCHOR GUY



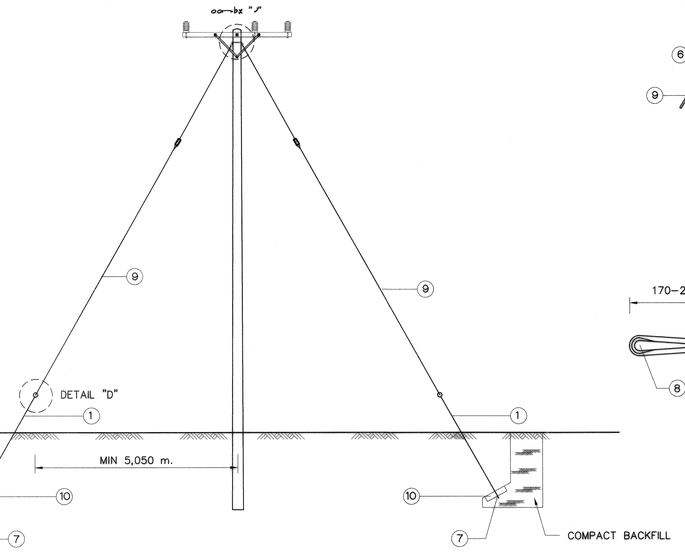
DETAIL "A"

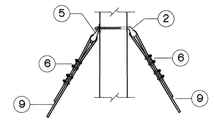


DETAIL "B"

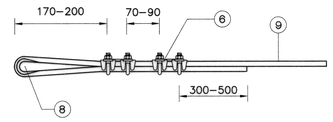


METHOD OF DOUBLE ANCHOR GUY

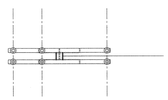




DETAIL "C"



DETAIL "D"



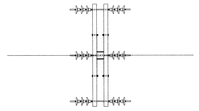
G1

SIDE GUY 5°– 30°



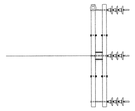
G2

SIDE GUY 30°– 60°



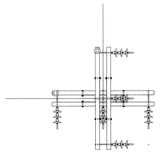
G3

LINE GUY



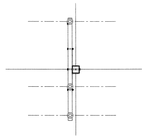
G4

DEAD END GUY



G5

BUCK ARM, 60°– 90°
DEAD END GUY



G6

FIXED OR STORM GUY

BILL OF MATERIAL FOR ANCHOR GUY

ITEM	DESCRIPTION	REQ'D					
		G1	G2	G3	G4	G5	G6
1	ANCHOR ROD, M. 16 x 2,000 mm. COMPLETE WITH SQUARE NUT	1	1	2	1	2	4
2	BOLT, SINGLE STRANDED EYE 45° M. 16 x 250 mm. COMPLETE WITH SQUARE NUT	1	1	1	1	2	2
3	BOLT, SINGLE STRANDED EYE 30° M. 16 x 250 mm. COMPLETE WITH SQUARE NUT	–	1	–	1	2	–
4	BOLT, DOUBLE ARMING, ROUND EYE, M. 16 x 200 mm. COMPLETE WITH SQUARE NUT	–	–	–	–	–	–
5	STRAND EYE SINGLE ANGLE 45°	–	–	1	–	–	2
6	CLAMP, DOUBLE U–BOLT, M. 16 mm.	4	8	8	8	16	16
7	WASHER, SQUARE FLAT 50 x 50 x 5 mm. HOLE Ø18 mm.	2	2	2	4	6	4
8	GUY, THIMBLE, FOR STEEL STRANDED WIRE 50 Sq.mm.	1	2	2	2	4	4
9	STEEL STRANDED WIRE 50 Sq.mm.	15 m.	35 m.	30 m.	35 m.	70 m.	60 m.
10	CONCRETE ANCHOR 550 x 550 x 180 mm.	1	1	2	2	2	4
11	STRAIN INSULATOR CLASS 54–4	1	1	2	2	2	4

NOTES :

1. THIS DRAWING IS DESIGNED FOR GUIDE LINE ONLY, THE CONSTRUCTION DRAWING SHALL CONFORM TO PEA'S STANDARD AND REGULATIONS.

NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				

CONSULTANTS | DEDE

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TYPE OF ANCHOR GUY

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Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

DESIGNED ชวน.604 | REVIEWED

DRAWN | SUBMITTED

CHECKED ชวน.604 | RECOMMENDED

APPROVED P. Hanwong

PROJECT MANAGER 08/03/2559 DATE

DRAWING NO. MH–TS–19

SHEET NO. 130 OF 130