



โครงการก่อสร้างถนนแอสฟัลต์ติกคอนกรีต สายเทพประสิทธิ์ ตอนที่ 2 หมู่ที่ 5 บ้านทุ่งมะพร้าว

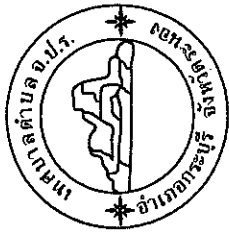
ตำบล จ.ป.ร. อำเภอกระบุรี จังหวัดกระบี่

ปริมาณงาน: กว้าง 6.00 เมตร ยาว 1,540 เมตร หนา 0.05 เมตร หรือพื้นที่แอสฟัลต์ติกคอนกรีต
ไม่น้อยกว่า 9,240 ตารางเมตร และงานกำแพงป้องกันกัดเซาะ ยาว 40 เมตร สูง 3.00 เมตร

สถานที่ก่อสร้าง

สายเทพประสิทธิ์ ตอนที่ 2 หมู่ที่ 5 บ้านทุ่งมะพร้าว

ตำบล จ.ป.ร. อำเภอกระบุรี จังหวัดกระบี่



เทศบาลตำบล จ.ป.ร.

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โครงการที่ออกจากรายงานของมูลนิธิคิดชุมชนวิ
สามทศวรรษที่คิดนั้น ๕ หมู่ ๖ บ้านทุ่งมะพร้าว
ตำบล จ.ป.ว. อำเภอประจักษ์ศิลปาคม จังหวัดบึง

คำถามที่
หมายเหตุประสิทธิ์ ตอนที่ 2 หน้า 3 บ้านทุ่งมะพร้าว
ตำบล อ.ป.ร. อำเภอกาบพระ จังหวัดสุราษฎร์ธานี

ชื่อ	นาย ประดิษฐ์
นามสกุล	ประเสริฐ

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1980-1981

ผู้ควบคุม	นายสมชาย ใจดี
ผู้ควบคุม	นายสมชาย ใจดี

๑. ผู้จัดทำ	นายทวี ทองแก้ว คำสอน มหาวิทยาลัยสุโขทัยธรรมาธิราช
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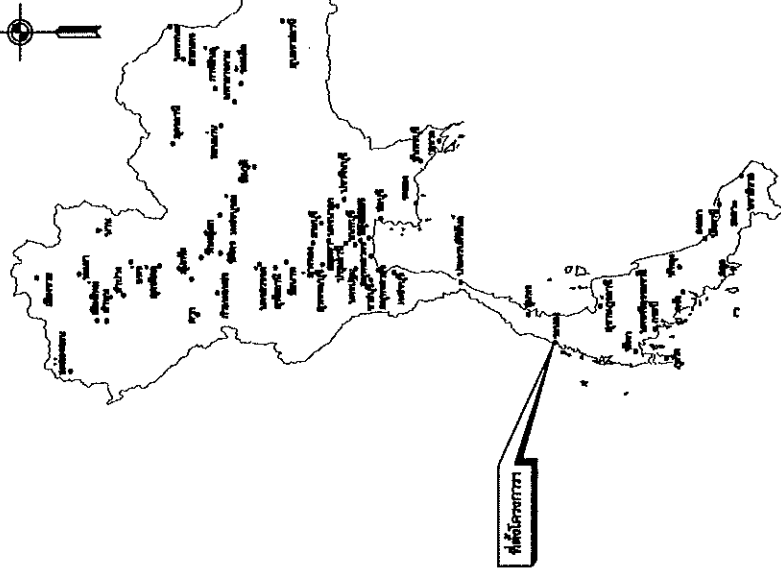
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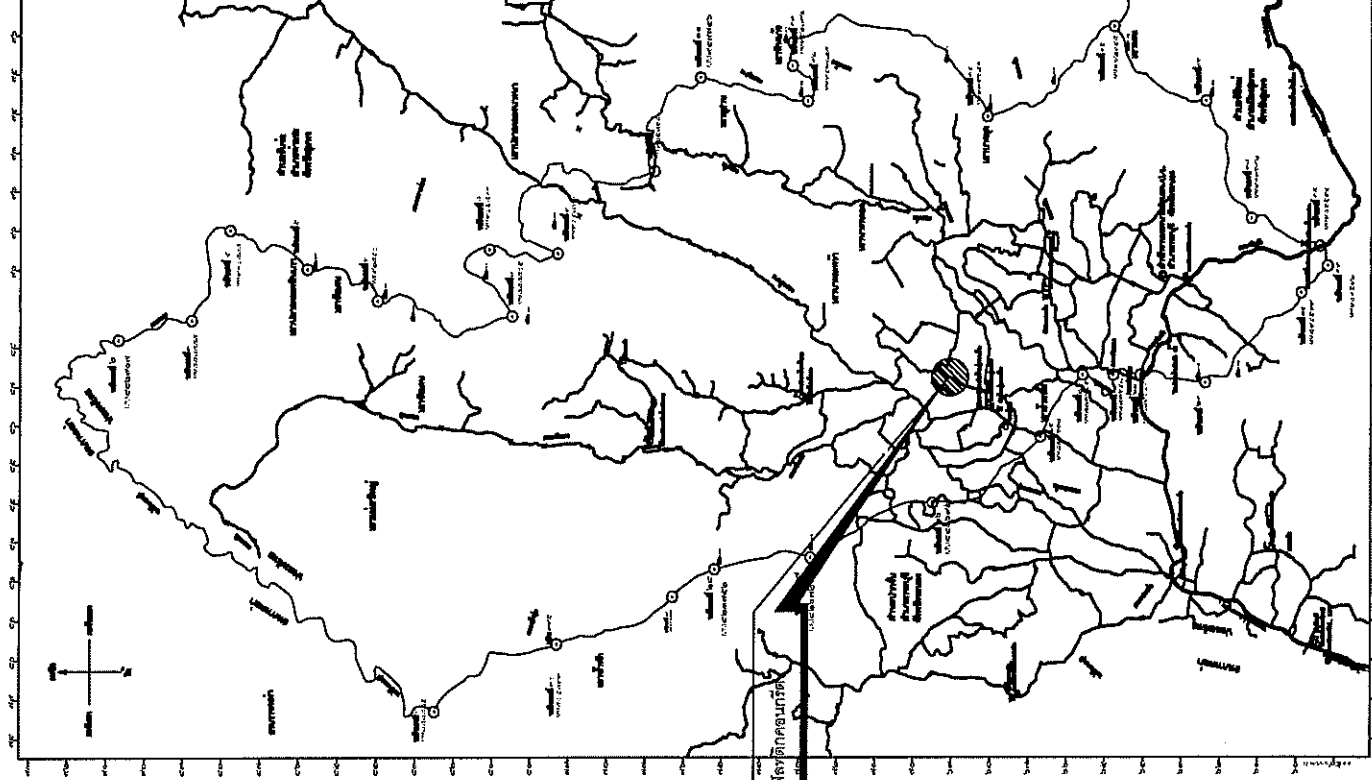
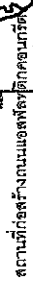
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โครงการก่อสร้างถนนแอสฟัลต์ติกคอนกรีต สายเทพประสิทธิ์ ตอนที่ 2
หมู่ที่ 5 บ้านทุ่งมะพร้าว ตำบล จ.ป.ร. อำเภอกระบุรี จังหวัดระนอง



แผนปฏิบัติการประเทศไทย



โครงการอนุรักษ์วัฒนธรรมและศิลปกรรม
 สาขาศิลปะการแสดงที่ ๒ หมู่ ๖ บ้านทุ่งมะพร้าว
 ตำบล อ.ร. อำเภอกะปง จ.ยะลา

คํานบ จ.ป.ร. อำเภอกะบุรี จังหวัดระนอง

คำขวัญ นายภทท กงน้อย

ស៊ីម៉ង់ត៍បំបែក ស៊ីម៉ង់ត៍កញ្ចប់សេរីអេស

การดำเนินงานโครงการ
ตามแผนงาน

การดำเนินงานตามแผนปฏิบัติการประจำปี ๒๕๖๒
ของกรมส่งเสริมการค้าระหว่างประเทศ

ตัวแบบ: นายสมชาย ภูมิปัญญา

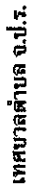
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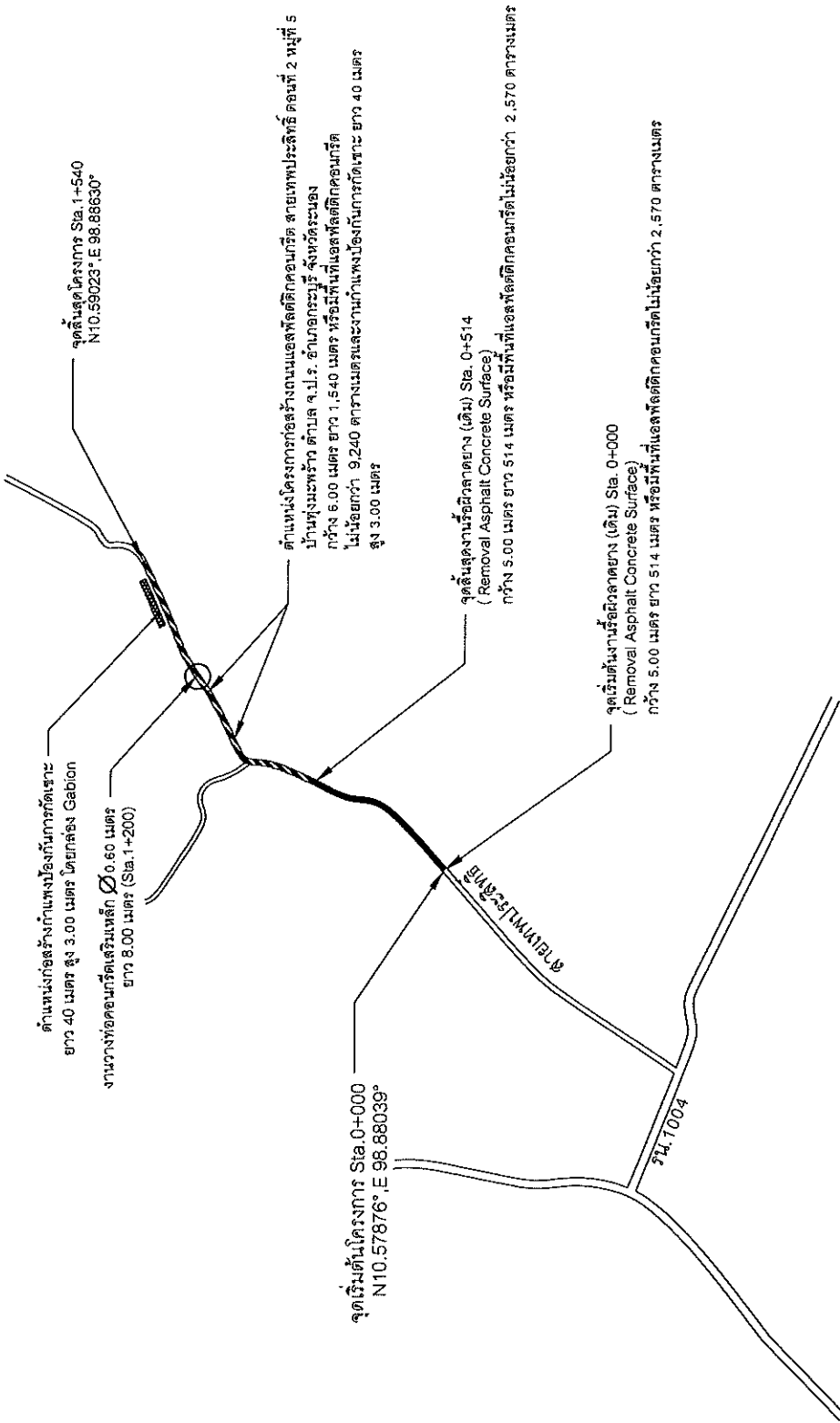


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ผังบริเวณโครงการก่อสร้างถนนคอนกรีตเสริมเหล็ก 0+000 ถึง 1+540

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67.

MATERIAL SPECIFICATIONS OF GABION

- GENERAL NOTES
 - GABIONS SHALL BE MESH TYPE "B" WORK HEAVILY ZINC OR GALFAN COATED (WITH OR WITHOUT PVC) WIRE MESH BOXES OF DIMENSIONS IN ACCORDANCE WITH ASTM A975.
 - ALL MATERIAL SUPPLIED MUST BE MANUFACTURED TO THE FACTORY FOR QUALITY CONTROL AND QUALITY MANAGEMENT PURPOSES. THE MATERIAL SHALL BE SOURCED FROM AN ISO 9001 CERTIFIED FACTORY.
 - ALL MATERIAL SHALL BE SOURCED FROM A MANUFACTURER WHO HAS AN INTERNATIONALLY ACCEPTED PRODUCT / SYSTEM CERTIFICATION, WHICH ANALYZES ALL ASPECTS OF THE PRODUCT / SYSTEM INCLUDING:
 - DESIGN
 - INSTALLATION
 - MAINTENANCE AND REPAIR, AND
 - LIABILITY
- BOX SIZES
 - GABIONS SHALL BE MECHANICALLY PRE-FABRICATED IN SUCH A MANNER THAT THE BOXES, ENDS, LOS AND DIAPHRAGMS CAN BE ASSEMBLED AT THE CONSTRUCTION SITE INTO RECTANGULAR LAYOUTS OF THE STANDARD SIZES AS SPECIFIED IN TABLE 3 OR AS SPECIFIED IN THE CONTRACT DRAWINGS.

TABLE 3. TYPICAL STANDARD SIZE OF GABION

MESH TYPE	"B"
LENGTH, L (m)	1.00, 1.50, 2.00 and 3.00
WIDTH, W (m)	1.00
DEPTH, D (m)	0.50 and 1.00
DIAPHRAGM SPACING (m)	EVERT 1.00

ALL GABION DIMENSIONS FOR THE ABOVE STANDARD SIZES SHALL BE WITHIN A TOLERANCE UNIT OF $\pm$ 5% OF THE REQUIRED NOMINAL SIZE.
THE ENDS SHALL BE BUILT BY DIAPHRAGMS INTO CELLS OF ONE METER LENGTH, EXCEPT FOR THE 1.5M LENGTH BOX SIZE WHICH MAY HAVE NO DIAPHRAGM ATTACHED.

- WIRE DIAMETER AND STRENGTH
 - ALL STEEL WIRE USED IN THE FABRICATION OF THE GABIONS AND IN THE WIRING OPERATIONS DURING CONSTRUCTION SHALL BE ACCORDING TO EN10223 - 3 AND HAVING THE CHARACTERISTICS AS SPECIFIED IN TABLE 4. NOMINAL SIZE AND YIELD TENSILE STRENGTH OF WIRE

TYPE OF WIRE	WIRE DIAMETER (mm)	TOLERANCE (mm)	YIELD TENSILE STRENGTH (N/50MM)
LACING	2.20	$\pm$ 0.06	2.35
BODY	2.70	$\pm$ 0.08	2.35
SELVAGE	3.40	$\pm$ 0.10	2.35

ALL WIRE USED IN THE FABRICATION OF THE GABIONS AND IN THE WIRING OPERATIONS DURING CONSTRUCTION SHALL BE HEAVILY GALVANIZED WITH ZINC OR GALFAN (5% AL - ZINC). IN ADDITIONAL, THE PVC CAN BE USED WHEN SPECIFIED TO BE ADDITIONAL COATING TO THE ZINC OR GALFAN WIRE. THE COATING TYPE SHALL BE AS SPECIFIED IN THE CONTRACT DRAWINGS. IF NO COATING TYPE SPECIFIED, THEN THE NORMAL ZINC COATING WILL BE USED.
FOR ZINC COATING, THE COATING SHALL MEET OR EXCEED EN 10244 - 2 CLASS A WITH THE MINIMUM MASS OF THE ZINC AS SPECIFIED IN TABLE 5

TABLE 5. MINIMUM WEIGHT OF ZINC COATING

DIAMETER OF WIRE (mm)	WEIGHT OF ZINC COATING (G/50MM)
2.20	230
2.70	245
3.40	265

FOR GALFAN (5% AL - ZINC) COATING, THE COATING SHALL MEET OR EXCEED ASTM A 856A - 80 CLASS 100 WITH THE MINIMUM MASS OF COATING NOT LESS THAN 305 G/50MM. THE CHEMICAL COMPOSITE OF THE GALFAN COATING SHALL BE CONSISTED OF 5% ALUMINUM AND 95% ZINC APPROXIMATELY BY WEIGHT. THE ACCEPTED LEVEL OF ALUMINUM IN THE COATING SHALL BE BETWEEN 4.5% TO 9% THE ADHESION OF THE ZINC OR GALFAN COATING TO THE WIRE SHALL BE SUCH THAT WHEN THE WIRE IS WRAPPED SIX TIMES AROUND A FOUR WIRE DIAMETER SIZE MANIPUL, IT SHALL NOT FLAKE OR CRACK TO SUCH AN EXTENT THAT ANY COATING CAN BE REMOVED.

FOR PVC ADDITIONAL COATING, THE POLYVINYL CHLORIDE (PVC) SHALL HAVE EXTRUDED ONTO THE WIRE AFTER COATING IT WITH ZINC OR GALFAN. THE PVC COATING SHALL BE IN GREY COLOUR AND HAVING NOMINALLY 0.50 MM AVERAGE THICKNESS WITH A TOLERANCE OF $\pm$ 0.05MM, AND NOWHERE SHALL BE LESS THAN 0.40 MM THICKNESS.

- WIRE MESH
 - WIRE MESH SHALL BE MECHANICALLY PRE-FABRICATED TO BECOME A UNIFORM HEXAGONAL MESH WHEN THE JOINTS ARE FORMED BY TWISTING EACH PAIR OF WIRES THROUGH THREE HALF-TURNS (COMMONLY KNOWN AS DOUBLE TWIST). IN SUCH A MANNER THAT UNRAVELLING IS PREVENTED. DOUBLE-TWIST MESH IS DEMONSTRATED IN FIGURE 2. THE WIRE MESH DIMENSIONAL LAYOUT CAN BE SPECIFIED IN TABLE 6.

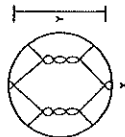


FIGURE 2. WIRE MESH DIMENSIONAL LAYOUT

TABLE 6. NOMINAL SIZE OF MESH TYPE "B"

NOMINAL MESH TYPE	X (mm)	Y (mm)	TOLERANCE (%)
"B"	80	120	$\pm$ 10

- STRETCHING
 - END PANELS AND DIAPHRAGMS, EXCEPT THE BOTTOM EDGES OF END PANELS AND DIAPHRAGMS, SHALL BE FORMED MECHANICALLY WITH A SELVAGE WIRE WHICH IS A LARGER DIAMETER THAN THE BODY WIRE.
 - UNBUILT EDGES OF EACH GABION BOX SHALL BE ADDITIONAL COATED WITH PVC AND UNBUILT EDGES WITH MANUFACTURER NAME APPROXIMATELY EVERY 500 MM.

- END PANELS AND DIAPHRAGMS
 - END PANELS AND DIAPHRAGMS SHALL BE MECHANICALLY DELIVERED ON THE TOP AND VERTICAL EDGES. THE BOTTOM OF THE PANEL TO THE SELVAGE WIRE ON THE BASE OF THE GABION.
 - THE END PANELS SHALL BE ATTACHED BY MECHANICALLY TIGHTENING THE MESH WIRES AT THE BOTTOM OF THE PANEL TO THE SELVAGE WIRE ON THE BASE BY A SPIRAL WIRE PASSING IN TURN THROUGH MESH OPENINGS OF THE BASE AND EACH MESH OF THE DIAPHRAGM PANEL. THE WIRE FOR THE SPIRAL SHALL BE OF THE SAME TYPE OF THE MESH WIRE, BUT THE DIAMETER SHALL BE 2.20 MM IN DIAMETER.
 - LACING AND BRACING WIRE SHALL BE 2.20 MM. THE LACING WIRE SHALL BE SUPPLIED IN THE QUANTITY OF 5% OF THE TOTAL GABION WEIGHT TO ENABLE THE LACING AND BRACING TO BE UNDERTAKEN.

- ROCK FILL
 - THE MATERIAL USED FOR GABION FILL SHALL BE CLEAN, HARD, DENSE AND DURABLE STONE, ROUNDED OR ANGULAR SHAPE.
 - NO ROCK SHALL EXCEED 250MM AND AT LEAST 85% BY WEIGHT OF THE STONES SHALL HAVE A SIZE EQUAL TO OR LARGER THAN 100 MM. NO ROCK SHALL PASS THROUGH THE MESH.

- ASSEMBLY
 - PRIOR TO ASSEMBLY, THE GABION MATERIAL SHALL BE OPENED OUT FLAT ON THE GROUND AND STRETCHED TO REMOVE ALL KINKS AND BENDS (FIGURE 3 (A)).

THE GABION BOXES SHALL BE ASSEMBLED INDIVIDUALLY, BY RAISING THE SIDES, ENDS AND DIAPHRAGMS, ENSURING THAT ALL CREASES ARE IN THE CORRECT POSITION AND THAT THE TOPS OF ALL FOUR SIDES AND THE DIAPHRAGMS ARE EVEN.
THE FOUR CORNER EDGES OF THE GABION BOXES SHALL BE LACED FIRST, FOLLOWED BY THE EDGES OF INTERNAL DIAPHRAGMS TO THE SIDES (FIGURE 3 (B)).
IN ALL CASES, LACING SHALL COMMENCE BY TWISTING THE END OF THE LACING WIRE TIGHTLY AROUND THE SELVAGE. IT SHALL THEN PASS ROUND THE TWO EDGES BEING JOINED USING ALTERNATE SINGLE AND DOUBLE LOOPS AT 100MM INTERVALS AND BE SECURELY TIED OFF AT THE BOTTOM. THE ENDS OF ALL LACING WIRES SHALL BE TURNED TO THE INSIDE OF THE BOX ON COMPLETION OF EACH LACING OPERATION (FIGURE 3 (C) AND 3 (D)). EACH LOOP SHALL BE PULLED TIGHT TO PREVENT THE JOINT OPENING DURING FILLING. THICKNESS OF THE LACING IS ESSENTIAL.

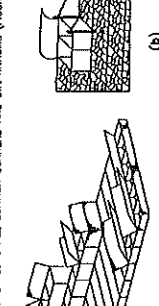
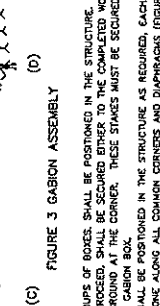
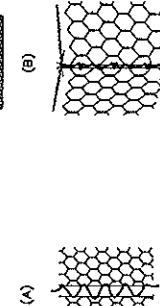


FIGURE 3. GABION ASSEMBLY

- ERECTION
 - ASSEMBLED BOXES OR GROUPS OF BOXES, SHALL BE POSITIONED IN THE STRUCTURE. THE SIDE OR END FROM WHICH WORK IS TO PROCEED, SHALL BE SECURED EITHER TO THE COMPLETED WORK, OR BY ROSS OR STAKES DRIVEN INTO THE GROUND AT THE CORNER. THESE STAKES MUST BE SECURED AND REACH AT LEAST TO THE TOP OF THE GABION BOX.
 - FURTHER GABION BOXES SHALL BE POSITIONED IN THE STRUCTURE AS REQUIRED, EACH BEING SECURELY LACED TO THE PRECEDING ONE ALONG ALL COMMON CORNERS AND DIAPHRAGMS (FIGURE 4).

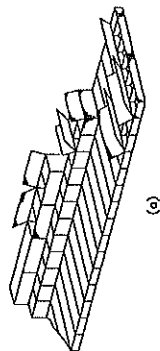


FIGURE 4. GABION ERECTION

- STRETCHING
 - FINAL STRETCHING OF THE GABION BOXES SHALL BE CARRIED OUT USING A PULL-UP OF AT LEAST ONE TON CAPACITY, FINALLY SECURED TO THE FREE END OF THE ASSEMBLED GABION BOXES (FIGURE 4 (B)).
 - DESIGN, THE GABION BOXES SHALL BE SECURELY LACED ALONG ALL EDGES (TOP, BOTTOM AND SIDES) AND AT DIAPHRAGM POINTS, TO ALL ADJACENT BOXES.

- FILLING
 - FILLING SHALL BE CARRIED OUT WHILE GABION BOXES ARE UNDER TENSION.
 - THE FRONT FACE AND ALL OTHER FACES WHICH WILL BE EXPOSED IN THE COMPLETED STRUCTURE SHALL BE "HAND PACKED" WITH THE STONES PLACED SO AS TO PRODUCE A NEAT FACE FREE FROM EXCESSIVE BULGES, DEPRESSIONS AND VOIDS.
 - INTERNAL BRACING WIRES SHALL BE PROVIDED ON THE EXPOSED FACES AT THE RATE OF 4 NOS/50MM AT 0.33 M VERTICAL CENTERS IN 1 M HEIGHT GABION BOX TO PREVENT DISTORTION OF THE GABION UNITS DURING FILLING AND IN THE COMPLETED STRUCTURE (FIGURE 5 (A)). THESE BRACING WIRES SHALL BE WRAPPED AROUND TWO OF THE MESH WIRES (FIGURE 5 (B)) AND EXTEND FROM THE TOP TO THE BOTTOM OF THE GABION BOX.
 - ENDS AT A RATE OF 4 NOS/50MM OF FACE.

- BOXES SHALL BE FILLED UP IN STAGES AND HORIZONTAL BRACING WIRE INSERTED AS FILLS ARE BROUGHT UP.
- MECHANICAL FILLING EQUIPMENT MAY BE USED WITH THE APPROVAL OF THE ENGINEER AND PROVIDING ADEQUATE PRECAUTIONS ARE TAKEN TO PROTECT THE PVC COATING FROM ABRASION DURING FILLING OPERATIONS.
- THE GABION BOXES SHALL BE RELEASED ONLY WHEN FULLY LACED AND SUFFICIENTLY TENSIONED ON THE CARBON BOXES.
- ALL CARBON SHALL BE FILLED BY ZONE USING FLAT STONE TO ALLOW FOR MINOR SETTLEMENT AND TO PROVIDE A LEVEL SURFACE FOR SUBSEQUENT LAYERS.

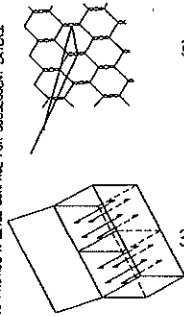


FIGURE 5. FILLING TECHNIQUE

- FINAL LACING
 - CLOSING AND LACING DOWN OF LOS SHALL PROCEED AS SOON AS PRACTICABLE AFTER FILLING OPERATIONS ESPECIALLY IF EXPOSED TO THE LIKELIHOOD OF STORM OR FLOOD RISING CONSTRUCTION. LOS SHALL BE STRETCHED TIGHT OVER THE FILLING WITH SUITABLY DESIGNED CLOSING TOOLS AND LACED DOWN SECURELY THROUGH EACH MESH ALONG ALL EDGES, ENDS AND DIAPHRAGMS USING THE LACING METHOD DESCRIBED ABOVE BEFORE COMMENCING WORK ON THE NEXT LAYER OF CARBON. THE ENDS OF ALL TONG AND BRACING WIRES SHALL BE TURNED INTO THE CARBON BOX ON COMPLETION OF EACH LACING OPERATION.

- DOCUMENTS FOR PRODUCT APPROVAL
 - THE FACTOR WILL SUBMIT THE DOCUMENTS REGARDING FOR THE MATERIAL (CARBON) THAT WILL BE USED IN THE CONSTRUCTION OF THE GABION. THE OWNER'S REPRESENTATIVE FOR APPROVAL THESE DOCUMENTS SHALL BE SUBMITTED AT LEAST 30 DAYS BEFORE STARTING THE WORK. THE DETAIL OF DOCUMENTS FOR PRODUCT APPROVAL ARE AS BELOW:

- 15.1 COPY OF MANUFACTURER'S ISO 9001 CERTIFICATION
- 15.2 TECHNICAL DATA OF THE PRODUCT WHICH HAS MANUFACTURER'S NAME AND ADDRESS
- 15.3 PRODUCT SAMPLE (1 PIECE)
- 15.4 TEST REPORT OF THE PRODUCT MATERIAL. THE TEST SHALL BE CONDUCTED BY DOH OR RELIABLE INSTITUTE'S LABORATORY. THE DETAIL OF THE TEST FOR CARBON SHALL BE AS BELOW:
 - 15.4.1 WIRE DIAMETER (INCLUDE MESH WIRE, SELVAGE WIRE AND LACING WIRE)
 - 15.4.2 COATING QUANTITY (ASTM A975 A-85)
 - 15.4.3 TENSILE STRENGTH OF THE WIRE (ASTM E-8)
 - 15.4.4 CHEMICAL COMPOSITE OF COATING MATERIAL (ASTM E 1277, FOR GALFAN COATING ONLY)

MATERIAL SPECIFICATION OF GEOTEXTILE

1. GEOTEXTILE USED FOR GABION WALL
 - THIS GEOTEXTILE WILL BE USED FOR FILTRATION AND SEPARATION BETWEEN GABIONS AND BACKFILL/FOUNDATION SOIL.
 - POLYPROPYLENE USING NEEDLE PUNCHED PROCESS.

TABLE 7. PHYSICAL AND ENGINEERING PROPERTIES OF GEOTEXTILE

TYPE OF WIRE	STANDARD	UNIT	VALUE
POLYESTER OR POLYPROPYLENE NEEDLE PUNCHED NONWOVEN GEOTEXTILE			
NOMINAL MASS	ISO 9864, ASTM D 5261	g/sqm	$\geq$ 200
FLOW RATE (100 MM HEAD)	ISO 11058, BS 6906-3	litre/sqm/sec	$\geq$ 100
APPROXIMATE OPENING SIZE, NOS (95%)	ASTM D 4753	mm	$\leq$ 0.25
CUR PUNCTURE	ISO 12238	N	$\geq$ 2000

- 1.3 THE GEOTEXTILE SHALL HAVE ISO 9001 CERTIFICATION OF THE MANUFACTURING OF TESTING SHALL BE SUBMITTED WITH THE MANUFACTURER OFFICIAL TECHNICAL DATA SHEET.
- 1.4 THE GEOTEXTILE WILL BE PLACED ACCORDING TO THE CONSTRUCTION DRAWING. THE CONNECTION BETWEEN ROLLS OF GEOTEXTILE IS DONE BY THE MEAN OF SEAMING OR OVERLAPPING. THE LENGTH OF OVERLAPPING SHALL BE AT LEAST 300 MM FOR NORMAL CONDITION, 0.50 M FOR SOFT SOIL AND AT LEAST 1000 MM FOR UNDER WATER. FOR 1.6 DOCUMENTS FOR PRODUCT APPROVAL

THE CONTRACTOR SHALL SUBMIT THE DOCUMENTS REGARDING FOR THE MATERIAL (GEOTEXTILE) THAT WILL BE USED IN THE PROJECT TO THE DESIGNER OR THE OWNER'S REPRESENTATIVE FOR APPROVAL. THESE DOCUMENTS SHALL BE SUBMITTED AT LEAST 30 DAYS BEFORE STARTING THE WORK. THE DETAIL OF DOCUMENTS FOR PRODUCT APPROVAL ARE AS BELOW:

- 1.6.1 COPY OF MANUFACTURER'S ISO 9001 CERTIFICATION
- 1.6.2 TECHNICAL DATA OF THE PRODUCT WHICH HAS MANUFACTURER'S NAME AND ADDRESS
- 1.6.3 PRODUCT SAMPLE (1 PIECE)
- 1.6.4 TEST REPORT OF THE PRODUCT MATERIAL. THE TEST SHALL BE CONDUCTED BY DOH OR RELIABLE INSTITUTE'S LABORATORY. THE DETAIL OF THE TEST SHALL BE ACCORDING TO THE TABLE ABOVE

KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS			
STANDARD DRAWING			
CABION			
MATERIAL SPECIFICATIONS			
DESIGNED: EAK, A. COMBUTS	DRAWN: N. N. N. N. N.	CHECKED: N. N. N. N. N.	DATE: OCT 2015
SUBMITTED: N. N. N. N. N.	APPROVED: N. N. N. N. N.		SCALE: AS SHOWN
PROJECT NO. SP-402			SHEET NO. 147

TABLE 1 GENERAL ARRANGEMENT OF GABION BASKET IN EACH LAYER

HEIGHT (M)	WIDTH OF EACH LAYER (B) FROM UPPERMOST TO THE BASE (METER)											QUANTITY OF GABION USED, BASKETS				ALLOWABLE BEARING CAPACITY (T/M ²)
	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	1.50 × 1.00 × 0.50 (m)	2.00 × 1.00 × 0.50 (m)	2.00 × 1.00 × 1.00 (m)		
2.00	1.00	1.50	2.00									—	1.00	—	70	
3.00	1.00	1.50	2.00	3.00								—	1.00	1.00	90	
4.00	1.00	1.50	2.00	2.50	3.00							—	—	2.00	105	
5.00	1.00	1.50	2.00	2.50	3.00	3.50						—	—	3.00	125	
6.00	1.00	1.50	2.00	2.50	3.00	3.50	3.50					—	—	3.00	145	
7.00	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50				—	—	4.00	160	
8.00	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00			—	—	4.00	180	
9.00	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50		3.00	2.00	9.00	200	
10.00	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	5.00	2.00	3.00	9.00	215	

LEGENDS:

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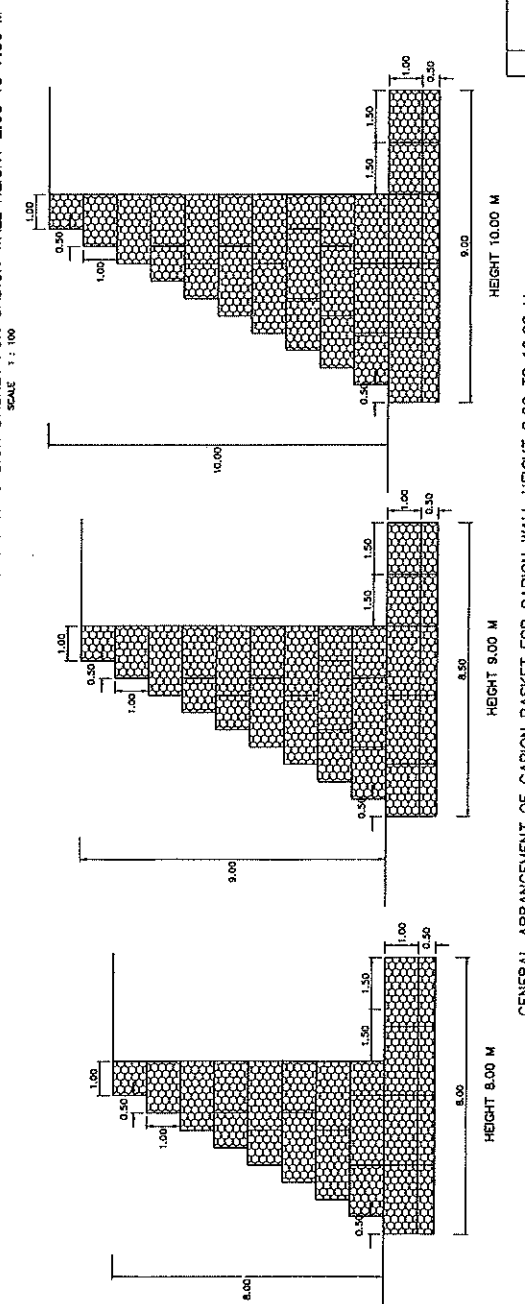
EXISTING GROUND

EXISTING GROUND

EXISTING GROUND

TYPICAL CROSS SECTION OF GABION WALL LOCATED AT SIDE SLOPE ADJACENT TO WATERFRONT
(ANGLE OF BATTER 0 DEGREE)
SCALE 1 : 50

GENERAL ARRANGEMENT OF GABION BASKET FOR GABION WALL HEIGHT 2.00 TO 7.00 M
SCALE 1 : 100



NOTES :

1. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE INDICATED.
2. THE SHAPE AND NUMBER OF GABION BASKET AS SHOWN IN THE TABLE 1 ARE ONLY RECOMMENDATION. THE CONTRACTOR SHALL SUBMIT COMPLETE DESIGN COMPUTATION.
3. IN CASE OF SEVERE EROSION, ROCK-AND-WIRE MATTRESS OR OTHER PROTECTION METHOD AT THE SLOPE SHALL BE PROVIDED AT THE SLOPE.
4. CONTRACTOR SHALL SUBMIT COMPLETE DESIGN COMPUTATIONS, SOIL INVESTIGATION REPORT AND SHOP DRAWING TO ENGINEER FOR APPROVAL BEFORE BEGINNING OF THE CONSTRUCTION.
5. SOIL BORING INVESTIGATION SHALL BE CONDUCTED APPROXIMATELY AT 200 M INTERVAL IN CASE OF COMPLEX GEOLOGICAL CONDITION. ADDITIONAL BOREHOLE SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER.
6. PLATE LOAD TEST (ASTM 1194-94) SHALL BE CARRIED OUT TO CONFIRM BEARING CAPACITY OF FOUNDATION SOIL. FACTOR OF SAFETY OF AT LEAST 3.0 SHALL BE USED.
7. SELECTED BACKFILL SHALL CONFORM TO STANDARD NO. GH-S 105/2550.
8. NORMALLY, THE GABION WALL SHALL BE CONSTRUCTED DURING THE DRY SEASON WHERE THE WATER IN THE CANAL OR RIVER DOES NOT EXIST. HOWEVER, IN CASE OF PERSECUTION OF WATER DURING THE DRY SEASON, ROCK RIPRAP, GRAVEL, SAND OR GABION SHALL BE REQUIRED TO FILL UP THE BASE OF GABION ABOVE THE WATER LEVEL PRIOR TO THE CONSTRUCTION OF GABION WALL.

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT
DEPARTMENT OF HIGHWAYS
STANDARD DRAWING

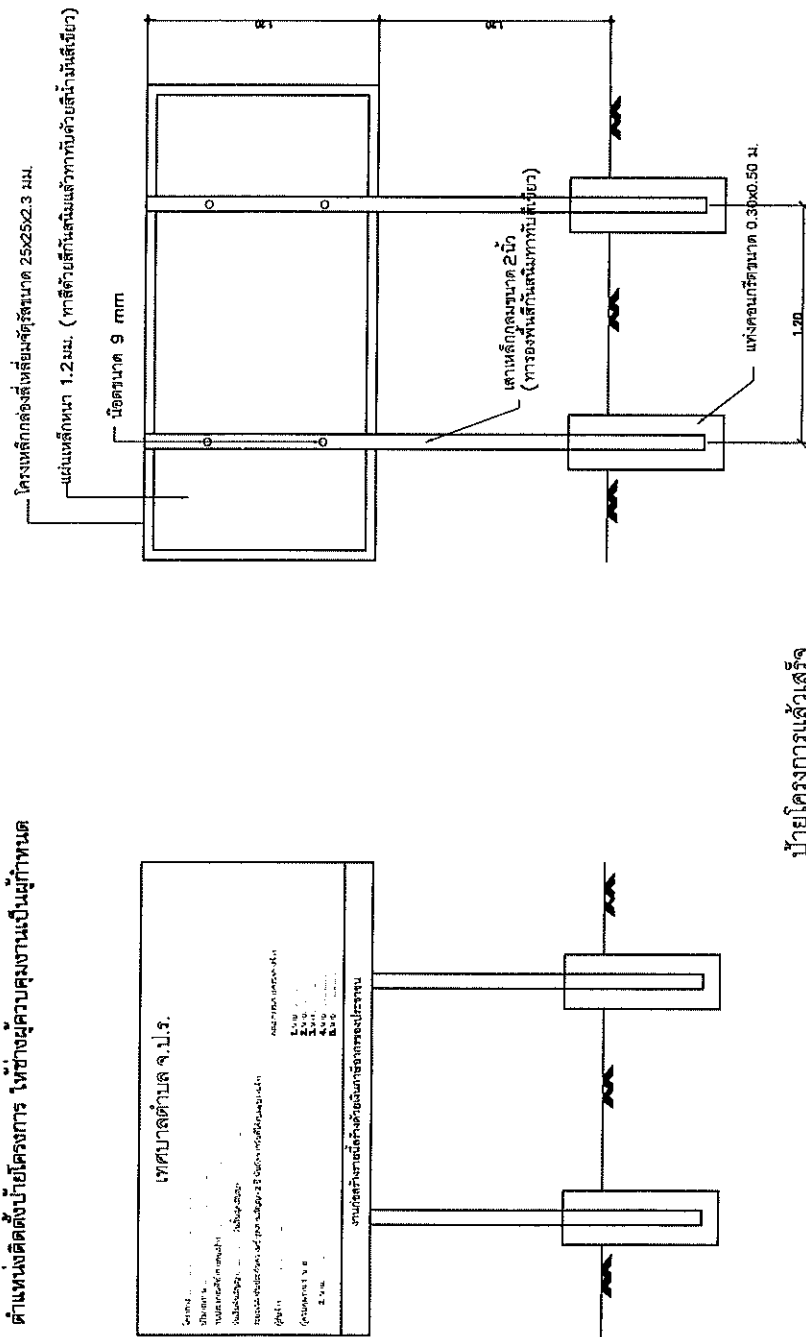
TYPICAL CROSS SECTION OF GABION WALL ADJACENT TO WATERFRONT
(ANGLE OF BATTER 0 DEGREE)

DESIGNED BY: S.M. K. CHANWAT (ENGINEER) DRAWN BY: S.M. K. CHANWAT (ENGINEER)
CHECKED BY: S.M. K. CHANWAT (ENGINEER) APPROVED BY: S.M. K. CHANWAT (ENGINEER)

DATE: OCT. 2015
SCALE: AS SHOWN
DWG. NO. SP-605
SHEET NO. 1/30

1. เส่า . พันแผนป้าย โห้ทาดวยสีน้ำมัน สีเขียว พง 2 ดาน

1. เส้า : พื้นแนวนอนให้ทาสีด้วยสีน้ำมัน สีเขียว ทั้ง 2 ด้าน
2. ตัวอักษรให้เขียนข้อความให้ยาวออก มองเห็นชัดเจน มีเนื้อหาสาระตามรายละเอียดของงานจ้าง
3. ตำแหน่งติดตั้งป้ายโครงการ ให้ช่างผู้ควบคุมงานเป็นผู้กำหนด



ป้ายโครงการแล้วเสร็จ

[illegible]