



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE II
DALAN NA PAVVURULUN, RGC, CARIG SUR, TUGUEGARAO CITY, CAGAYAN

C.Y. 2025 PROJECT
DETAILED ENGINEERING DESIGN PLAN FOR
ORGANIZATIONAL OUTCOME 1 :
ENSURE SAFE AND RELIABLE NATIONAL ROAD SYSTEM
NETWORK DEVELOPMENT PROGRAM
CONSTRUCTION OF BY-PASS AND DIVERSION ROADS
TUGUEGARAO-ENRILE DIVERSION RD
(INCLUDING TUGUEGARAO-ENRILE BRIDGE AND APPROACHES, PACKAGE 2,
CAGAYAN

BRIDGE: STA.0+172.60 TO STA.2+000.50; L=1827.90m

SUBMITTED:

CECIL M. SANTOS
CHIEF, PLANNING AND DESIGN DIVISION

DATE :

RECOMMENDED:

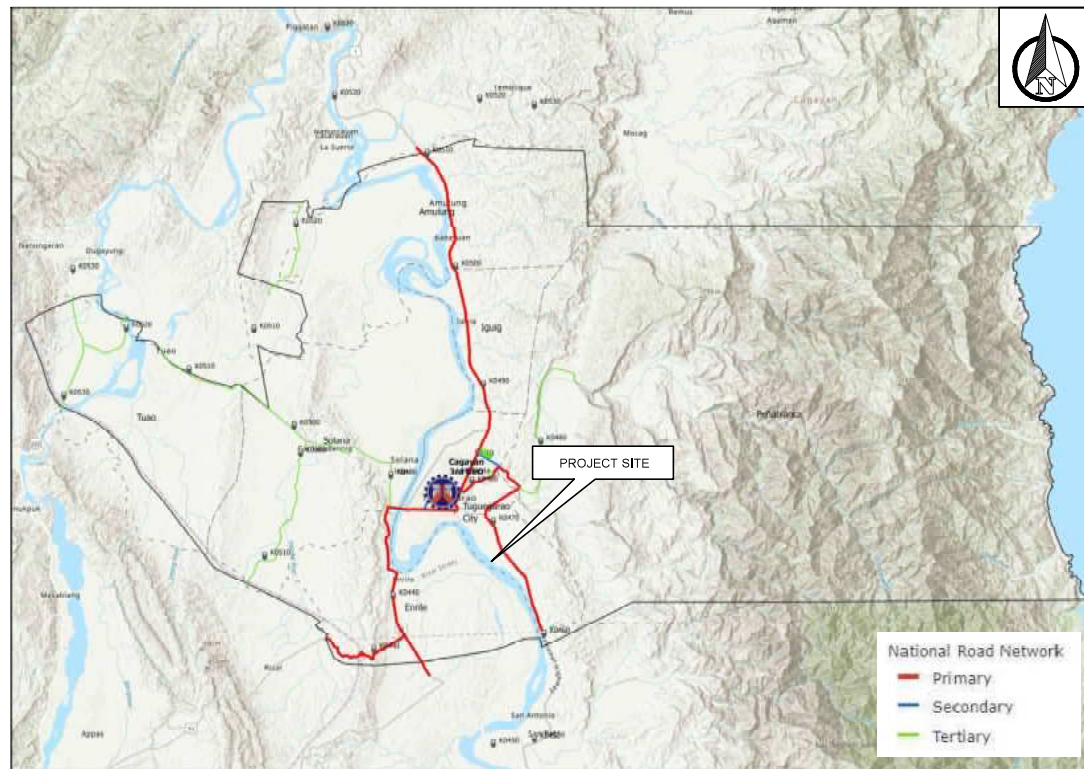
EDITHA R. BABARAN, CSEE
ASSISTANT REGIONAL DIRECTOR

DATE :

APPROVED:

MATHIAS L. MALENAB
REGIONAL DIRECTOR

DATE :



LOCATION MAP
SCALE AS SHOWN



B VICINITY MAP
2 SCALE AS SHOWN

LOCATION		DISTANCE	TERRAIN CONDITION	ROAD SURFACE CONDITION
FROM	TO			
PROJ.SITE	CAG. 3RD DEO	4KM	FLAT	PAVED
PROJ.SITE	DISPOSAL SITE (NAMARAI AN,NORF)	±5KM		

DRAWING INDEX (BRIDGE PROPER)		
SET NO.	SHEET NO.	DESCRIPTION
	1	COVER SHEET
G-01	2	LOCATION / VICINITY MAP, DRAWING INDEX
G-02	3	SUMMARY OF QUANTITIES
G-03	4	STRAIGHT-LINE DIAGRAM (SLD) SHEET 1 OF 2
G-04	5	STRAIGHT-LINE DIAGRAM (SLD) SHEET 2 OF 2
G-05	6	CRANEWAY (SLD)

SUMMARY OF QUANTITIES (BRIDGE PROPER)										
ITEM NO.	DESCRIPTION	UNIT	MASTER PLAN QUANTITIES	CY 2023 200M	CY 2023 REVISED QTY	CY 2024 280M	CY 2024 REVISED QTY	CY 2025 300M	REMARKS	
PART A - FACILITIES FOR THE ENGINEER										
A.1.1 (6)	PROVISION OF COMBINED FIELD OFFICE, LABORATORY AND LIVING QUARTERS BUILDING FOR THE ENGINEER (RENTAL BASIS)	MONTH						16.930		
A.1.1 (11)	PROVISION OF FURNITURES/FIXTURES, EQUIPMENT & APPLIANCES FOR THE FIELD OFFICE FOR THE ENGINEER	LUMP SUM						1.000		
A.1.1 (15)	OPERATION & MAINTENANCE OF TEMPORARY FIELD OFFICE, LABORATORY AND LIVING QUARTERS BUILDING FOR THE ENGINEER	MONTH						16.930		
A.1.2 (4)	PROVISION OF 4X2 PICKUP TYPE SERVICE VEHICLE FOR THE ENGINEER ON BARE RENTAL BASIS	VEHICLE-MONTH						16.930		
A.1.2 (5)	OPERATION AND MAINTENANCE OF 4X2 PICKUP TYPE SERVICE VEHICLE FOR THE ENGINEER	VEHICLE-MONTH						16.930		
PART B - OTHER GENERAL REQUIREMENTS										
B.5	PROJECT BILLBOARD / SIGNBOARD	EACH						6.000		
B.7 (2)	OCCUPATIONAL SAFETY AND HEALTH PROGRAM	LUMP SUM						1.000		
B.8 (1)	TRAFFIC MANAGEMENT	MONTH						1.000		
B.9	MOBILIZATION / DEMOBILIZATION	LUMP SUM						1.000		
B.13	ADDITIONAL GEOTECHNICAL INVESTIGATION	LUMP SUM	1.000	1.000	1.000					
B.14	ENVIRONMENTAL MANAGEMENT AND MONITORING	MONTH						16.930		
PART C - EARTHWORK										
101 (7) a	REMOVAL OF STRUCTURES AND OBSTRUCTION - STEEL	KILOGRAM	1,297,172.200							
101 (7) b	REMOVAL OF STRUCTURES AND OBSTRUCTION - STEEL H-PILES	KILOGRAM	600,660.000							
102 (2)	SURPLUS COMMON EXCAVATION	CUBIC METER	546.000	546.000	546.000		735.000			
103 (1) a	STRUCTURE EXCAVATION - COMMON SOIL	CUBIC METER	839.420	684.530						
103 (1) a	STRUCTURE EXCAVATION - COMMON SOIL (SLOPE PROTECTION STRUCTURES)	CUBIC METER	138.450							
103 (3)	FOUNDATION FILL	CUBIC METER	224.370	68.550	15.000	35.700	35.700	142.800		
103 (6) a	PIPE CULVERTS AND DRAIN EXCAVATION - COMMON SOIL	CUBIC METER	12.000	12.000	12.000					
104 (2) d	EMBANKMENT FROM BORROW - GRANULAR COARSE MATERIAL	CUBIC METER	3,754.000	3,754.000	3,754.000		563.000			
104 (5)	BOULDER FILL	CUBIC METER	711.000							
PART D - SUBBASE AND BASE COURSE										
200 (1)	AGGREGATE SUBBASE COURSE	CUBIC METER	2,404.000	2,404.000	2,404.000		2,265.000			
PART E - SURFACE COURSES										
300 (1)	GRAVEL SURFACE COURSE	CUBIC METER	336.000							
PART F - BRIDGE CONSTRUCTION										
400 (3) b	STEEL H-PILES, FURNISHED - 305 MM X 305 MM - 94 KG/M	METER	6,390.000	1,500.000		1,560.000				
400 (6)	STRUCTURAL STEEL SHEET PILES, FURNISHED (SLOPE PROTECTION STRUCTURES)	METER	1,107.000							
400 (10)	STEEL H-PILES, DRIVEN	METER	6,390.000	1,500.000		1,560.000				
400 (11)	STEEL PILES PILES (FURNISHED AND DRIVEN), 0.8MØ, 10MM THK	METER			1,524.000		1,244.000	1,276.000	WEIGHT=	248,501 kgs
400 (12)	STRUCTURAL STEEL SHEET PILES, DRIVEN (SLOPE PROTECTION STRUCTURES)	METER	1,107.000							
400 (17) a	CONCRETE PILES CAST IN DRILLED HOLES 0.80 M DIA.	METER	114.000							
400 (17) e	CONCRETE PILES CAST IN DRILLED HOLES 1.20 M DIA.	METER	1,568.000							
400 (17) i	CONCRETE PILES CAST IN DRILLED HOLES 1.60 M DIA.	METER	929.600	398.400	398.400	265.600	265.600	265.600	CONCRETE 28MPa = 534.08 cu.m	REINF GR.60 = 138.848 kgs
400 (17) k	CONCRETE PILES CAST IN DRILLED HOLES 1.80 M DIA.	METER	531.200					398.400	CONCRETE 28MPa = 1,013.88 cu.m	REINF GR.60 = 261.264 kgs
400 (17) q	CONCRETE PILES CAST IN DRILLED HOLES 2.40 M DIA.	METER	1,824.000	76.000	228.000	304.000	380.000	228.000	CONCRETE 28MPa = 1,031.46 cu.m	REINF GR.60 = 254.844 kgs
400 (23) a1	PERMANENT CASING 0.90 M DIA. 10 MM THICK	METER	49.000							
400 (23) e1	PERMANENT CASING 1.20 M DIA. 10 MM THICK	METER	432.000							
400 (23) i1	PERMANENT CASING 1.60 M DIA. 12 MM THICK	METER	336.000	144.000	144.000	96.000	96.000	96.000		
400 (23) k1	PERMANENT CASING 1.80 M DIA. 12 MM THICK	METER	256.000					192.000		
400 (23) q1	PERMANENT CASING 2.40 M DIA. 12 MM THICK	METER	432.000	18.000	64.000	72.000	60.000	64.000		
400 (26) a	PILE INTEGRITY TESTING CROSSHOLE-SONIC	EACH	24.000	1.000	3.000	4.000	5.000	3.000		
400 (26) b	PILE INTEGRITY TESTING LOW STRAIN	EACH	44.000	6.000	6.000	4.000	4.000	10.000		
400 (27)	HIGH STRAIN DYNAMIC TESTING (P.D.A)	EACH	22.000	2.000	2.000	3.000	4.000	4.000		
401 (2) a	CONCRETE RAILING STANDARD	METER	3,654.000							
403 (1) a1	STRUCTURAL STEEL, FURNISHED GRADE 36	KILOGRAM	1,201,412.200	340,202.000	356,197.400	344,876.200	292,095.000	490,106.600		
403 (3) a1	STRUCTURAL STEEL, ERECTED GRADE 36	KILOGRAM	1,201,412.200	340,202.000	356,197.400	344,876.200	292,095.000	490,106.600		
403 (3) a2	STRUCTURAL STEEL, ERECTED GRADE 50	KILOGRAM	4,347,896.000							
403 (4) a2	STRUCTURAL STEEL, FURNISHED AND FABRICATED GRADE 50	KILOGRAM	4,347,896.000							
403 (6)	STRUCTURAL STEEL, PAINTING WORKS	SQUARE METER	116,445.000							
403 (7)	BOLTS WITH NUTS AND WASHERS	LUMP SUM	1.000							
404 (1) a	REINFORCING STEEL GRADE 40	KILOGRAM	102,326.290	348.600		1,329.500	1,155.200	2,048.000		
404 (1) a	REINFORCING STEEL GRADE 40 (SLOPE PROTECTION STRUCTURES)	KILOGRAM	3,021.000							
404 (1) b	REINFORCING STEEL GRADE 60	KILOGRAM	3,402,358.810	236,072.700		345,394.800	330,236.700	814,570.400		
404 (1) b	REINFORCING STEEL GRADE 60 (SLOPE PROTECTION STRUCTURES)	KILOGRAM	195,565.000							
405 (1) a3	STRUCTURAL CONCRETE 20.68 MPA CLASS A 28 DAYS (SLOPE PROTECTION STRUCTURES)	CUBIC METER	63.000							
405 (1) b3	STRUCTURAL CONCRETE 27.58 MPA CLASS A 28 DAYS	CUBIC METER	9,090.890	1,097.420		1,316.060	1,253.900	3,467.410		
405 (1) b3	STRUCTURAL CONCRETE 27.58 MPA CLASS A 28 DAYS (SLOPE PROTECTION STRUCTURES)	CUBIC METER	128.000							
405 (1) d3	STRUCTURAL CONCRETE 36.00 MPA CLASS A 28 DAYS	CUBIC METER	5,204.600							
405 (6)	STRUCTURAL CONCRETE, PAINTING WORKS	SQUARE METER	11,175.000							
407 (6)	LEAN CONCRETE, CLASS B, 16.5 MPA (REFER TO ITEM 901)	CUBIC METER	104.690	26.770		17.840	17.840	71.360		
407 (6)	LEAN CONCRETE, CLASS B, 16.5 MPA (REFER TO ITEM 901) (SLOPE PROTECTION STRUCTURES)	CUBIC METER	9.000							
412 (1) c	ELASTOMERIC BEARING PADS OTHERS	EACH	228.000						DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023). BALANCE QTY TRANSFERRED TO ITEM 417(2)	
413 (3) a	PREMOLDED EXPANSION JOINT FILLER WITH SEALANT 12 MM	CUBIC METER	4.000							
413 (3) b	PREMOLDED EXPANSION JOINT FILLER WITH SEALANT 50 MM	CUBIC METER	9.300							
413 (4) a	EXPANSION JOINT	LINEAR METER	62.520							
413 (7) a1	EXPANSION DAM FOR BRIDGES - STEEL TRANSVERSE	SETS	10.000							
417 (1) a	BEARING DEVICES - STEEL BEARING	EACH	176.000	8.000		44.000	40.000		DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023)	
417 (1) b	BEARING DEVICES - RUBBER BEARING	EACH	156.000						DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023). BALANCE QTY TRANSFERRED TO ITEM 417(2)	
417 (2)	ELASTOMERIC BRIDGE BEARINGS (MOV)	EACH						16.000	600mm x 600mm x 100mm DURO 60 = 16 PCS; STRUCTURAL STEEL (ACCESSORIES)	
417 (2)	ELASTOMERIC BRIDGE BEARINGS (FIX)	EACH						40.000	600mm x 600mm x 100mm DURO 60 = 40 PCS; STRUCTURAL STEEL (ACCESSORIES)	
PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES										
500 (1) a3	PIPE CULVERTS 910 MM DIA. CLASS II RCPC	LINEAR METER	82.000	82.000	82.000					
505 (2) a	GROUTED RIPRAP A	CUBIC METER	523.950	468.950	468.950					
509 (1) b2	SHEET PILES STEEL COFFERDAMMING	LINEAR METER	1,995.000	1,995.000						
511 (1) a1	GABIONS 0.5M X 1M X 3M METALLIC COATED	CUBIC METER	291.400							
511 (3)	FILTER CLOTH	SQUARE METER	548.930							
517 (3) a	DECK DRAIN TYPE-1 CAST IRON	EACH	896.000							
PART H - MISCELLANEOUS STRUCTURES										
605 (2) a12	REGULATORY SIGNS 600 MM R6-11B MISCELLANEOUS SIGNS WHEEL CHAIR CROSSINGSIGNS	EACH	2.000							
624 (11)	ROADWAY LIGHTING	LUMP SUM	1.000							
1021 (2)	STAMPED CONCRETE	SQUARE METER	3,639.200							
1047 (4) b	METAL STRUCTURE ACCESSORIES TURNBUCKLE	EACH	20.000							
1111 (1)	REINFORCED CONCRETE PEDESTAL / POLE	LUMP SUM	1.000							
1407 (3)	HEXAPOD	PIECE	1,156.000							
NOTE: QUANTITIES OF VARIOUS ITEMS ARE SUBJECT TO DECREASE OR INCREASE AS PER ACTUAL FIELD CONDITION.				Σ = 1,803,190.820						



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE II
DALAN NA PAVVURULUN, RGC, CARIG SUR, TUGUEGARAO CITY, CAGAYAN

PROJECT AND LOCATION:
C.Y. 2025 PROJECT
DETAILED ENGINEERING DESIGN FOR
ORGANIZATIONAL OUTCOME 1: ENSURE SAFE AND RELIABLE
NATIONAL ROAD SYSTEM: NETWORK DEVELOPMENT PROGRAM:
CONSTRUCTION OF BY-PASS AND DIVERSION ROADS:
TUGUEGARAO-ENRILE DIVERSION RD
(INCL. TUGUEGARAO-ENRILE BRIDGE AND APPROACHES),
PACKAGE 2, CAGAYAN

SUMMARY OF QUANTITIES

PREPARED:
RACHEL R. CAPA
ENGINEER II
DATE:

REVIEWED:
RHETT WILLEM P. VARILLA
SECTION CHIEF, BRIDGE AND OTHER
PUBLIC WORKS DESIGN SECTION
DATE:

SUBMITTED:
CECIL M. SANTOS
CHIEF, PLANNING AND DESIGN DIVISION
DATE:

RECOMMENDED:
EDITHA R. BABARAN, CSEE
ASSISTANT REGIONAL DIRECTOR
DATE:

APPROVED:
MATHIAS L. MALENAB
REGIONAL DIRECTOR
DATE:

SET NO.
G
02 05

SHEET NO.
3a
6

SUMMARY OF QUANTITIES (BRIDGE PROPER)																			
ITEM NO.	DESCRIPTION	UNIT	SUBSTRUCTURE															CY 2025 300M	REMARKS
			(P34)	(P35)	(P36)	(P37)	(P38)	(P39)	(P46)	PIER		(P47)	(P60)	(P61)	(P62)	(P63)	(P64)		
PART A - FACILITIES FOR THE ENGINEER																			
A.1.1 (6)	PROVISION OF COMBINED FIELD OFFICE, LABORATORY AND LIVING QUARTERS BUILDING FOR THE ENGINEER (RENTAL BASIS)	MONTH																	16.930
A.1.1 (11)	PROVISION OF FURNITURES/FIXTURES, EQUIPMENT & APPLIANCES FOR THE FIELD OFFICE FOR THE ENGINEER	LUMP SUM																	1.000
A.1.1 (15)	OPERATION & MAINTENANCE OF TEMPORARY FIELD OFFICE, LABORATORY AND LIVING QUARTERS BUILDING FOR THE ENGINEER	MONTH																	16.930
A.1.2 (4)	PROVISION OF 4X2 PICKUP TYPE SERVICE VEHICLE FOR THE ENGINEER ON BARE RENTAL BASIS	VEHICLE-MONTH																	16.930
A.1.2 (6)	OPERATION AND MAINTENANCE OF 4X2 PICKUP TYPE SERVICE VEHICLE FOR THE ENGINEER	VEHICLE-MONTH																	16.930
PART B - OTHER GENERAL REQUIREMENTS																			
B.5	PROJECT BILLBOARD / SIGNBOARD	EACH																	6.000
B.7 (2)	OCCUPATIONAL SAFETY AND HEALTH PROGRAM	LUMP SUM																	1.000
B.8 (1)	TRAFFIC MANAGEMENT	MONTH																	1.000
B.9	MOBILIZATION / DEMOBILIZATION	LUMP SUM																	1.000
B.13	ADDITIONAL GEOTECHNICAL INVESTIGATION	LUMP SUM																	
B.14	ENVIRONMENTAL MANAGEMENT AND MONITORING	MONTH																	16.930
PART C - EARTHWORK																			
101 (7) a	REMOVAL OF STRUCTURES AND OBSTRUCTION - STEEL	KILOGRAM																	
101 (7) b	REMOVAL OF STRUCTURES AND OBSTRUCTION - STEEL H-PILES	KILOGRAM																	
102 (2)	SURPLUS COMMON EXCAVATION	CUBIC METER																	
103 (1) a	STRUCTURE EXCAVATION - COMMON SOIL	CUBIC METER																-	
103 (1) a	STRUCTURE EXCAVATION - COMMON SOIL (SLOPE PROTECTION STRUCTURES)	CUBIC METER																	
103 (3)	FOUNDATION FILL	CUBIC METER							17.850	17.850	17.850	17.850	17.850	17.850	17.850	17.850	-	-	142.800
103 (6) a	PIPE CULVERTS AND DRAIN EXCAVATION - COMMON SOIL	CUBIC METER																	
104 (2) d	EMBANKMENT FROM BORROW - GRANULAR COARSE MATERIAL	CUBIC METER																	
104 (5)	BOULDER FILL	CUBIC METER																	
PART D - SUBBASE AND BASE COURSE																			
200 (1)	AGGREGATE SUBBASE COURSE	CUBIC METER																	
PART E - SURFACE COURSES																			
300 (1)	GRAVEL SURFACE COURSE	CUBIC METER																	
PART F - BRIDGE CONSTRUCTION																			
400 (3) b	STEEL H-PILES, FURNISHED - 305 MM X 305 MM - 94 KG/M	METER																	
400 (6)	STRUCTURAL STEEL SHEET PILES, FURNISHED (SLOPE PROTECTION STRUCTURES)	METER																	
400 (10)	STEEL H-PILES, DRIVEN	METER																	
400 (11)	STEEL PILES PILES (FURNISHED AND DRIVEN), 0.8MØ, 10MM THK	METER																	1,276.000
400 (12)	STRUCTURAL STEEL SHEET PILES, DRIVEN (SLOPE PROTECTION STRUCTURES)	METER																	WEIGHT= 248,501 kgs
400 (17) a	CONCRETE PILES CAST IN DRILLED HOLES 0.80 M DIA.	METER																	
400 (17) e	CONCRETE PILES CAST IN DRILLED HOLES 1.20 M DIA.	METER																-	
400 (17) i	CONCRETE PILES CAST IN DRILLED HOLES 1.60 M DIA.	METER										132.800	132.800						265.600
400 (17) k	CONCRETE PILES CAST IN DRILLED HOLES 1.80 M DIA.	METER												132.800	132.800	132.800	-		398.400
400 (17) q	CONCRETE PILES CAST IN DRILLED HOLES 2.40 M DIA.	METER	76.000	76.000	76.000														228.000
400 (23) a1	PERMANENT CASING 0.80 M DIA. 10 MM THICK	METER																	
400 (23) e1	PERMANENT CASING 1.20 M DIA. 10 MM THICK	METER																-	
400 (23) i1	PERMANENT CASING 1.60 M DIA. 12 MM THICK	METER										48.000	48.000						96.000
400 (23) k1	PERMANENT CASING 1.80 M DIA. 12 MM THICK	METER												64.000	64.000	64.000	-		192.000
400 (23) q1	PERMANENT CASING 2.40 M DIA. 12 MM THICK	METER	18.000	18.000	18.000														54.000
400 (26) a	PILE INTEGRITY TESTING CROSSHOLE-SONIC	EACH	1.000	1.000	1.000														3.000
400 (26) b	PILE INTEGRITY TESTING LOW STRAIN	EACH										2.000	2.000	2.000	2.000	2.000	-	-	10.000
400 (27)	HIGH STRAIN DYNAMIC TESTING (P.D.A)	EACH	1.000									1.000		1.000		1.000	-	-	4.000
401 (2) a	CONCRETE RAILING STANDARD	METER																	
403 (1) a1	STRUCTURAL STEEL, FURNISHED GRADE 36	KILOGRAM																	490,106.600
403 (3) a1	STRUCTURAL STEEL, ERECTED GRADE 36	KILOGRAM																	490,106.600
403 (3) a2	STRUCTURAL STEEL, ERECTED GRADE 50	KILOGRAM																	
403 (4) a2	STRUCTURAL STEEL, FURNISHED AND FABRICATED GRADE 50	KILOGRAM																	
403 (6)	STRUCTURAL STEEL, PAINTING WORKS	SQUARE METER																	
403 (7)	BOLTS WITH NUTS AND WASHERS	LUMP SUM																	
404 (1) a	REINFORCING STEEL GRADE 40	KILOGRAM	-	-	153.000	174.000	174.000	174.000	174.300	174.300	174.300	174.300	174.300	152.900	174.300	174.300	-	-	2.048.000
404 (1) a	REINFORCING STEEL GRADE 40 (SLOPE PROTECTION STRUCTURES)	KILOGRAM																	
404 (1) b	REINFORCING STEEL GRADE 60	KILOGRAM	-	16,416.900	30,555.000	32,549.900	32,549.900	32,549.900	83,743.600	83,743.600	83,743.600	83,743.600	83,743.600	83,743.600	83,743.600	83,743.600	-	-	814,570.400
404 (1) b	REINFORCING STEEL GRADE 60 (SLOPE PROTECTION STRUCTURES)	KILOGRAM																	
405 (1) a3	STRUCTURAL CONCRETE 20.68 MPA CLASS A 28 DAYS (SLOPE PROTECTION STRUCTURES)	CUBIC METER																	
405 (1) b3	STRUCTURAL CONCRETE 27.58 MPA CLASS A 28 DAYS	CUBIC METER	-	-	87.960	94.790	97.790	97.790	386.530	386.300	386.300	386.530	386.530	383.830	386.530	386.530	-	-	3,467.410
405 (1) b3	STRUCTURAL CONCRETE 27.58 MPA CLASS A 28 DAYS (SLOPE PROTECTION STRUCTURES)	CUBIC METER																	
405 (1) c3	STRUCTURAL CONCRETE 36.00 MPA CLASS A 28 DAYS	CUBIC METER																	
405 (6)	STRUCTURAL CONCRETE, PAINTING WORKS	SQUARE METER																	
407 (6)	LEAN CONCRETE, CLASS B, 16.5 MPA (REFER TO ITEM 901)	CUBIC METER							8.920	8.920	8.920	8.920	8.920	8.920	8.920	8.920	-	-	71.360
407 (8)	LEAN CONCRETE, CLASS B, 16.5 MPA (REFER TO ITEM 901) (SLOPE PROTECTION STRUCTURES)	CUBIC METER																	
412 (1) c	ELASTOMERIC BEARING PADS OTHERS	EACH																	DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023), BALANCE QTY TRANSFERRED TO ITEM 417(2)
413 (3) a	PREMOLDED EXPANSION JOINT FILLER WITH SEALANT 12 MM	CUBIC METER																	
413 (3) b	PREMOLDED EXPANSION JOINT FILLER WITH SEALANT 50 MM	CUBIC METER																	
413 (4) a	EXPANSION JOINT	LINEAR METER																	
413 (7) a1	EXPANSION DAM FOR BRIDGES - STEEL TRANSVERSE	SETS																	DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023)
417 (1) a	BEARING DEVICES - STEEL BEARING	EACH																	DELETED ITEM FOR CY2025 DUE TO ISSUANCE OF UPDATED STANDARD PAY ITEM (D.O. 60 S2023), BALANCE QTY TRANSFERRED TO ITEM 417(2)
417 (1) b	BEARING DEVICES - RUBBER BEARING	EACH																	



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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE II
DALAN NA PAVVURULUN, RGC, CARIG SUR, TUGUEGARAO CITY, CAGAYAN

PROJECT AND LOCATION:
C.Y. 2025 PROJECT
DETAILED ENGINEERING DESIGN FOR
ORGANIZATIONAL OUTCOME 1: ENSURE SAFE AND RELIABLE
NATIONAL ROAD SYSTEM: NETWORK DEVELOPMENT PROGRAM:
CONSTRUCTION OF BY-PASS AND DIVERSION ROADS:
TUGUEGARAO-ENRILE DIVERSION RD
(INCL. TUGUEGARAO-ENRILE BRIDGE AND APPROACHES),
PACKAGE 2, CAGAYAN

SUMMARY OF QUANTITIES

PREPARED:
RACHEL R. CAPA
ENGINEER II
DATE:

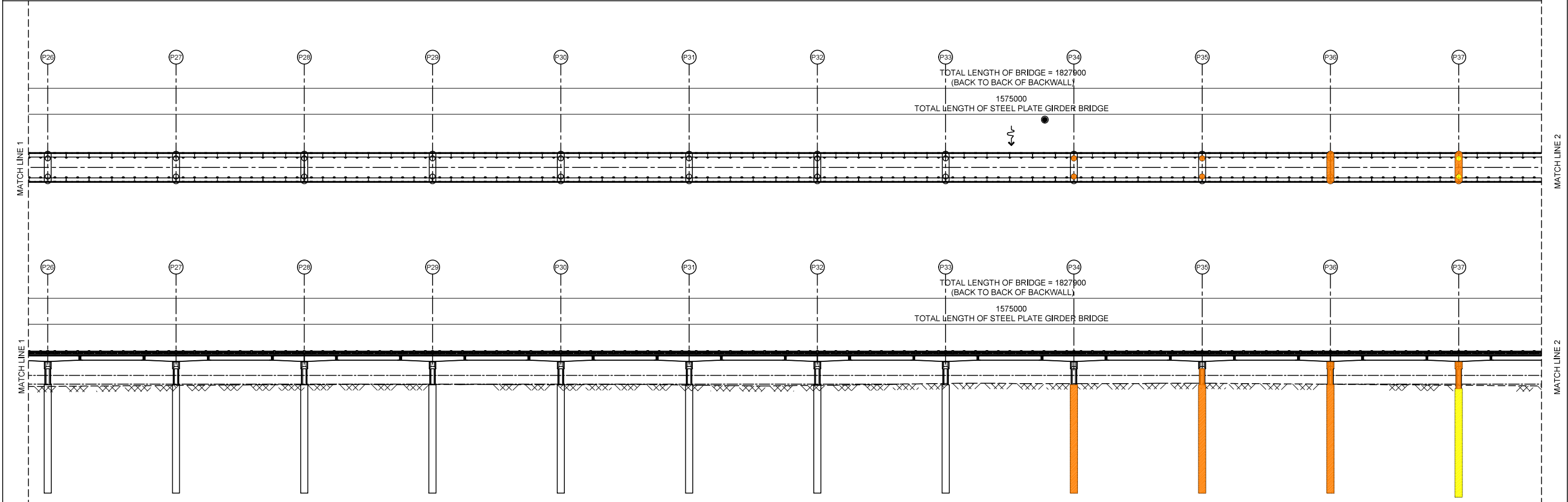
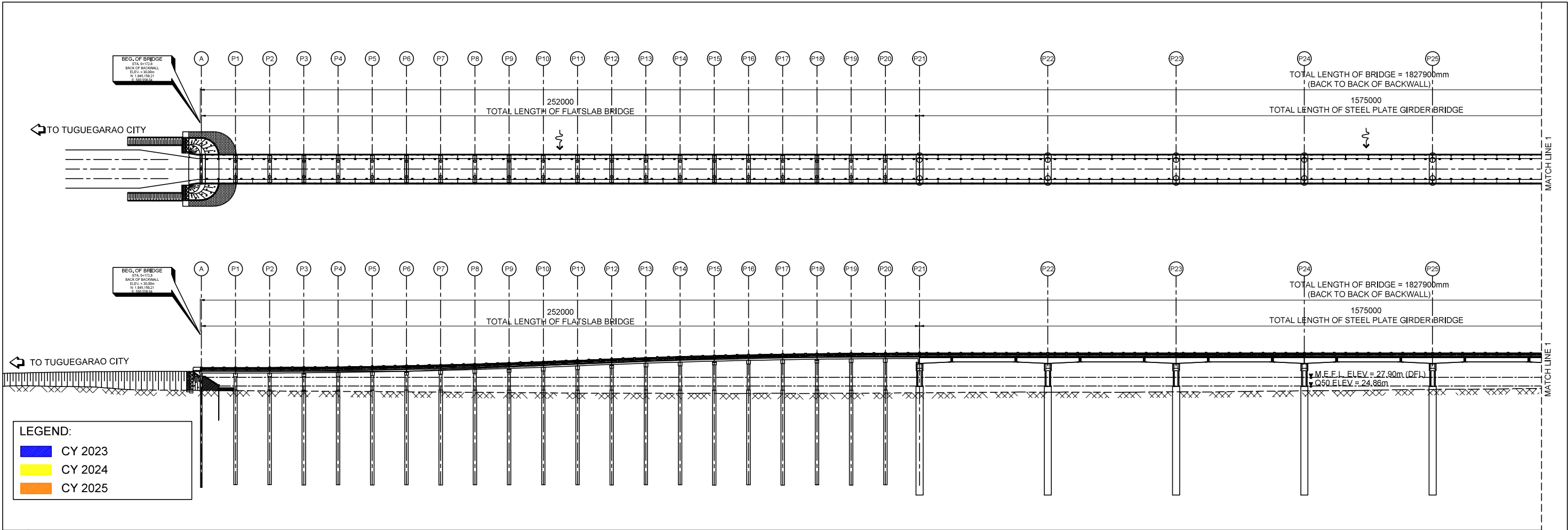
REVIEWED:
RHETT WILLEM P. VARILLA
SECTION CHIEF, BRIDGE AND OTHER
PUBLIC WORKS DESIGN SECTION
DATE:

SUBMITTED:
CECIL M. SANTOS
CHIEF, PLANNING AND DESIGN DIVISION
DATE:

RECOMMENDED:
EDITHA R. BABARAN, CSEE
ASSISTANT REGIONAL DIRECTOR
DATE:

APPROVED:
MATHIAS L. MALENAB
REGIONAL DIRECTOR
DATE:

SET NO.
G
02 05
SHEET



 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE II DALAN NA PAVVURULUN, RGC, CARIG SUR, TUGUEGARAO CITY, CAGAYAN	PROJECT AND LOCATION: C.Y. 2025 PROJECT DETAILED ENGINEERING DESIGN FOR ORGANIZATIONAL OUTCOME 1: ENSURE SAFE AND RELIABLE NATIONAL ROAD SYSTEM: NETWORK DEVELOPMENT PROGRAM: CONSTRUCTION OF BY-PASS AND DIVERSION ROADS: TUGUEGARAO-ENRILE DIVERSION RD (INCL. TUGUEGARAO-ENRILE BRIDGE AND APPROACHES), PACKAGE 2, CAGAYAN	SHEET CONTENTS: STRAIGHT-LINE DIAGRAM	PREPARED: RACHEL R. CAPA ENGINEER II	REVIEWED: RHETT WILLEM P. VARILLA SECTION CHIEF, BRIDGE AND OTHER PUBLIC WORKS DESIGN SECTION	SUBMITTED: CECIL M. SANTOS CHIEF, PLANNING AND DESIGN DIVISION	RECOMMENDED: EDITHA R. BABARAN, CSEE ASSISTANT REGIONAL DIRECTOR	APPROVED: MATHIAS L. MALENAB REGIONAL DIRECTOR	SET NO. G 03 05	SHEET NO. 4 6
			DATE:	DATE:	DATE:	DATE:	DATE:		

