

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

REGION IV-B, MIMAROPA
OFFICE OF THE DISTRICT ENGINEER
BOAC, MARINDUQUE

C.Y. 2023 PROJECT

DETAILED ENGINEERING DESIGN PLAN FOR CONSTRUCTION OF WATER SUPPLY SYSTEM, BARANGAY APITONG, BOAC, MARINDUQUE

BOAC, MARINDUQUE

SUBMITTED:

FERNAN S. DIAZ

CHIEF, PLANNING AND DESIGN SECTION

RECOMMENDED:

ARISTEO L. LINGA
ASSISTANT DISTRICT ENGINEER

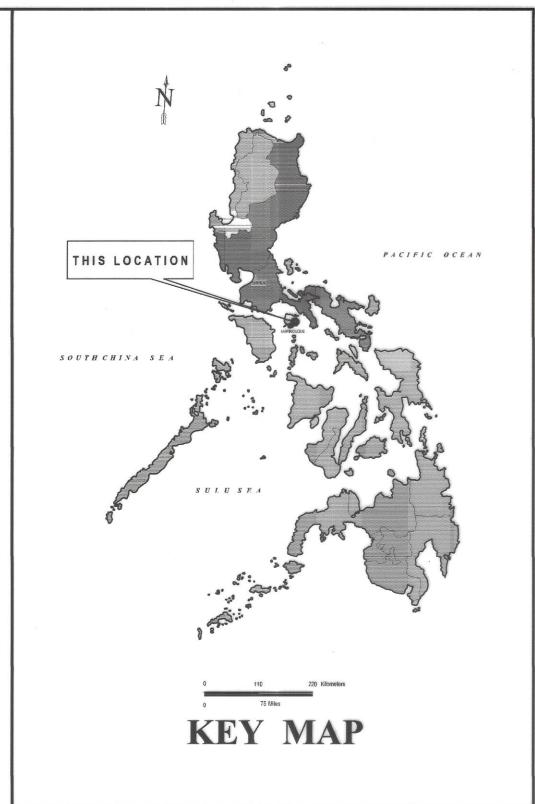
APPROVED:

DISTRICT ENGINEER

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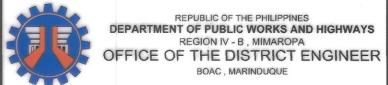
ITEM NO. DESCRIPTION		ORIGINAL QUANTITY	UNIT	REMARKS	
PART A:	FACILITIES FOR THE ENGINEER				
A.1.1(8)	PROVISION OF FIELD OFFICE FOR THE ENGINEER (RENTAL BASIS)	3.17	mos.		
A.1. 2(2)	PROVISION OF 4x4 PICK UP TYPE SERVICE VEHICLE FOR THE ENGINEER ON BARE RENTAL BASIS	3.17	mos.		
PART B:	OTHER GENERAL REQUIREMENTS				
B.4 (10)	MISCELLANEOUS SURVEY AND STAKING	1.00	LS	Staked Plan To be submitted by the contractor	
B.5	PROJECT BILLBOARD / SIGNBOARD	1.00	each	DPWH Standard Billboard	
B.7(2)	OCCUPATIONAL SAFETY AND HEALTH PROGRAM	1.00	LS	Includes Personal Protective Equipment (PPE), Safety Signages and Health Program	
B.9	MOBILIZATION / DEMOBILIZATION	1.00	LS		
PART C:	EARTHWORKS				
803(1)a	STRUCTURE EXCAVATION (COMMON SOIL)	16.78	m³	For Foundation and Pipelines	
804(4)	GRAVEL FILL	2.33	m³	For Concrete Foundation	
PART D:	PLAIN AND REINFORCED CONCRETE WORKS				
900(1)c2	STRUCTURAL CONCRETE FOR FOOTING AND SLAB (CLASS A, 28 DAYS)	34.95	m³	For Elevated Water Tank & Pump Motor House	
902(1)a	REINFORCING STEEL (DEFORMED), GRADE 40	3,044.61	kgs	For Pump Motor House	
104(1)a	FORMWORKS AND FALSEWORKS	123.08	m2	For WaterTank	
PART E:	FINISHING WORKS				
1027(1)	CEMENT PLASTER FINISH	160.20	m ²	For Elevated Water Tank & Pump Motor House	
1046(2)a1	100MM CHB NON-LOAD BEARING (INCLUDING REINFORCING STEEL)	21.60	m ²	For Elevated Water Tank & Pump Motor House	
1032(1)a	PAINTING WORKS (MASONRY CONCRETE)	140.05	m ²	For Elevated Water Tank & Pump Motor House	
1032(1)c	PAINTING WORKS (STEEL)	18.80	m ²	For Elevated Water Tank & Pump Motor House	
1018(1)	GLAZED TILES AND TRIMS	45.00	m ²	For Elevated Water Tank & Pump Motor House	
1047(1)	STRUCTURAL STEEL	1,00	LS	For Elevated Water Tank & Pump Motor House	
PART F:	PLUMBING WORKS				
1201(1)	WATER PUMPING SYSTEM	1.00	LS	For Pipe Drilling & Pump Motor House	
1001(10)	PIPES WITH FITTINGS CONNECTION	1.00	LS		
1602(5)	POLYETHYLENE PLASTIC PIPE (HDPE)	1.00	LS	For Distribution Line	
1603(1)	VALVE	1.00	LS		
1002(27)	PLUMBING WORKS	1.00	LS		
PART G:	ELECTRICAL WORKS	E .			
1100(10)	CONDUIT, BOXES, AND FITTINGS (CONDUIT WORKS/CONDUIT ROUGH-IN)	1.00	LS	For Pump Motor House	
1101(33)	WIRES AND WIRING DEVICES	1.00	LS	For Pump Motor House	
1102(1)	PANEL BOARD WITH MAIN & BRANCHES BREAKERS	1.00	LS	For Pump Motor House	
1103(1)	LIGHTING FIXTURES AND LAMPS	1.00	LS	For Pump Motor House	







LOCATION MAP



CONSTRUCTION OF WATER SUPPLY SYSTEM, BARANGAY APITONG, BOAC, MARINDUQUE BOAC, MARINDUQUE

PROJECT NAME AND LOCATION:

INDEX OF SHEETS
SUMMARY OF QUANTITIES
KEY MAP
LOCATION MAP

SHEET CONTENTS:



PREPARED:

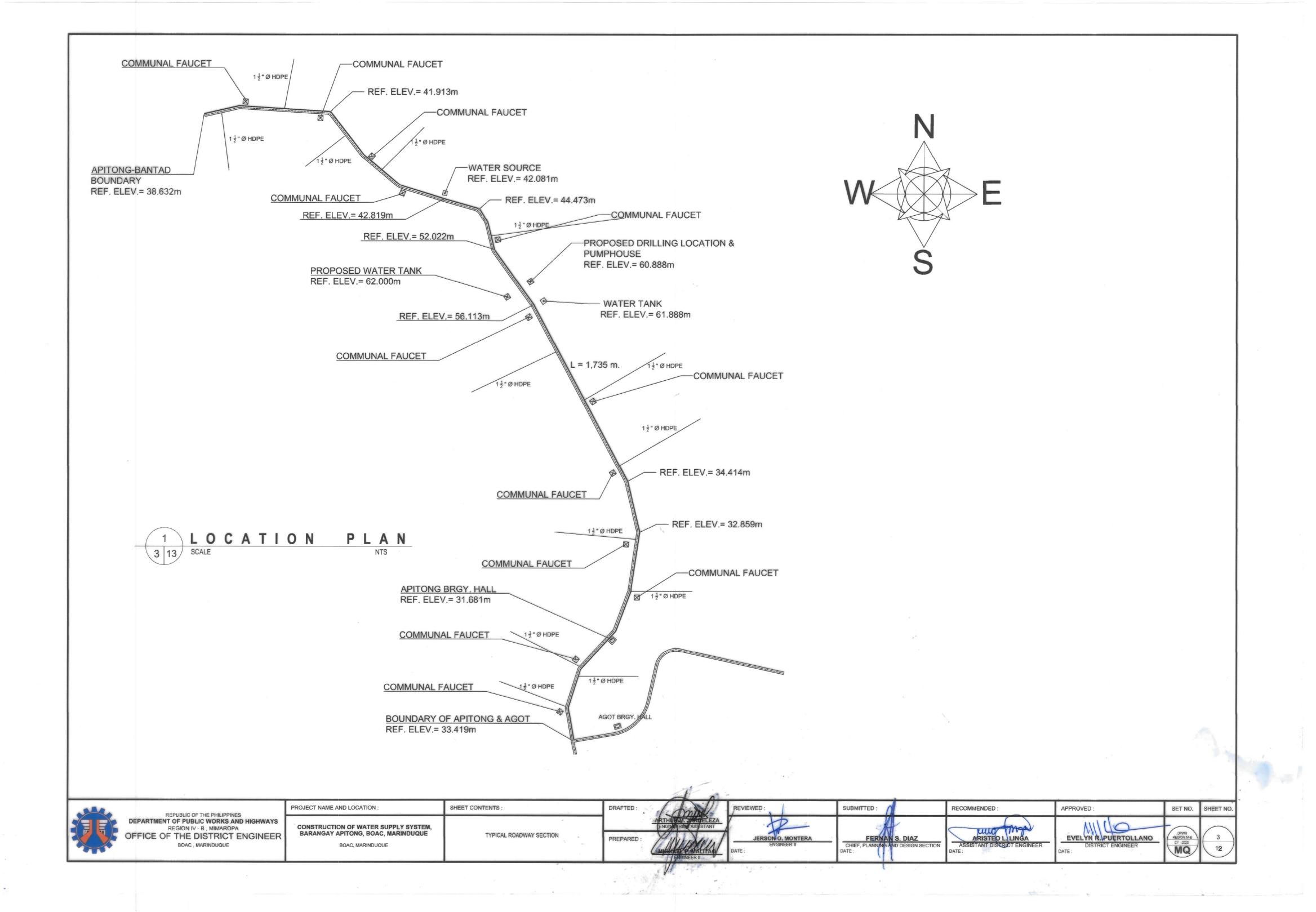
	REVIEWED:	
	1 2	
7	JERSON O. MONTERA	
	ENGINEER II	-
.	DATE:	

FERNAN S. DIAZ
CHIEF, PLANNING AND DESIGN SECTION
DATE:

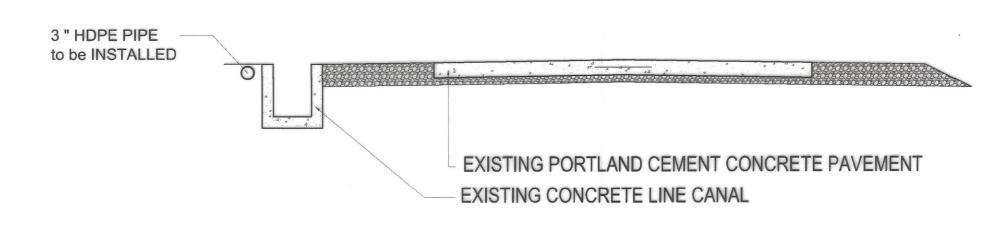
ARISTEO LLINGA
ASSISTANT DISTRICT ENGINEER
DATE:

EVELYN R. PUERTOLLAND DISTRICT ENGINEER

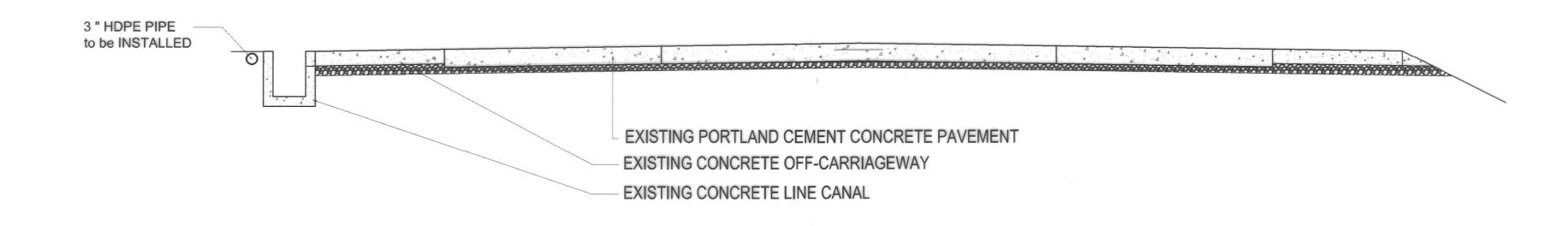




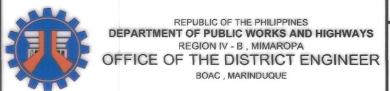
TYPICAL ROADWAY SECTION



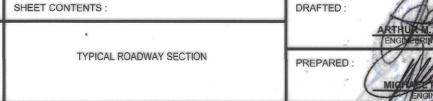








	PROJECT NAME AND LOCATION :
3	CONSTRUCTION OF WATER SUPPLY SYST BARANGAY APITONG, BOAC, MARINDUQ
- 1	BOAC MARINDUOLE



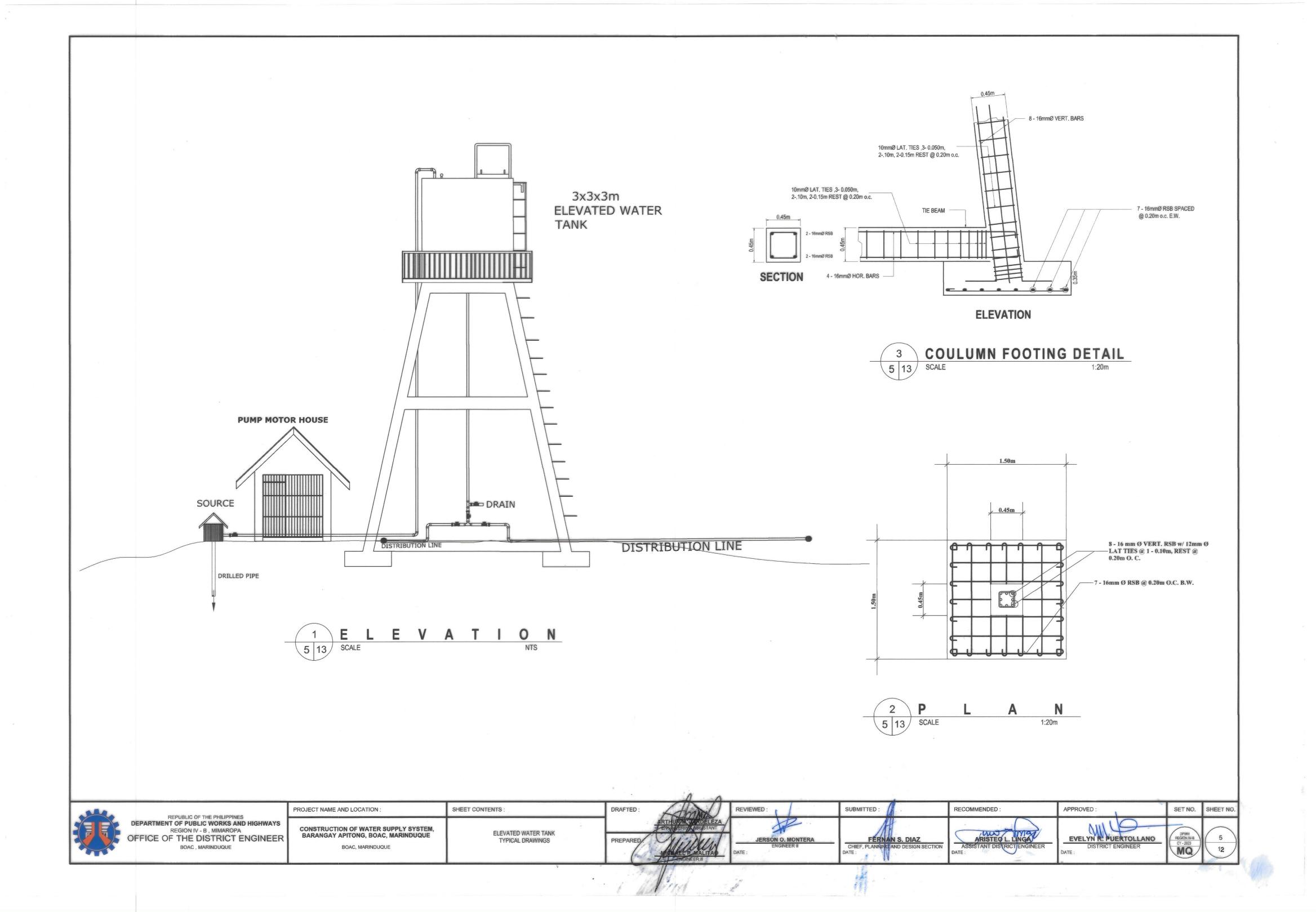
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Amin's	REVIEW
ANDELEZA ERING ASSISTANT	
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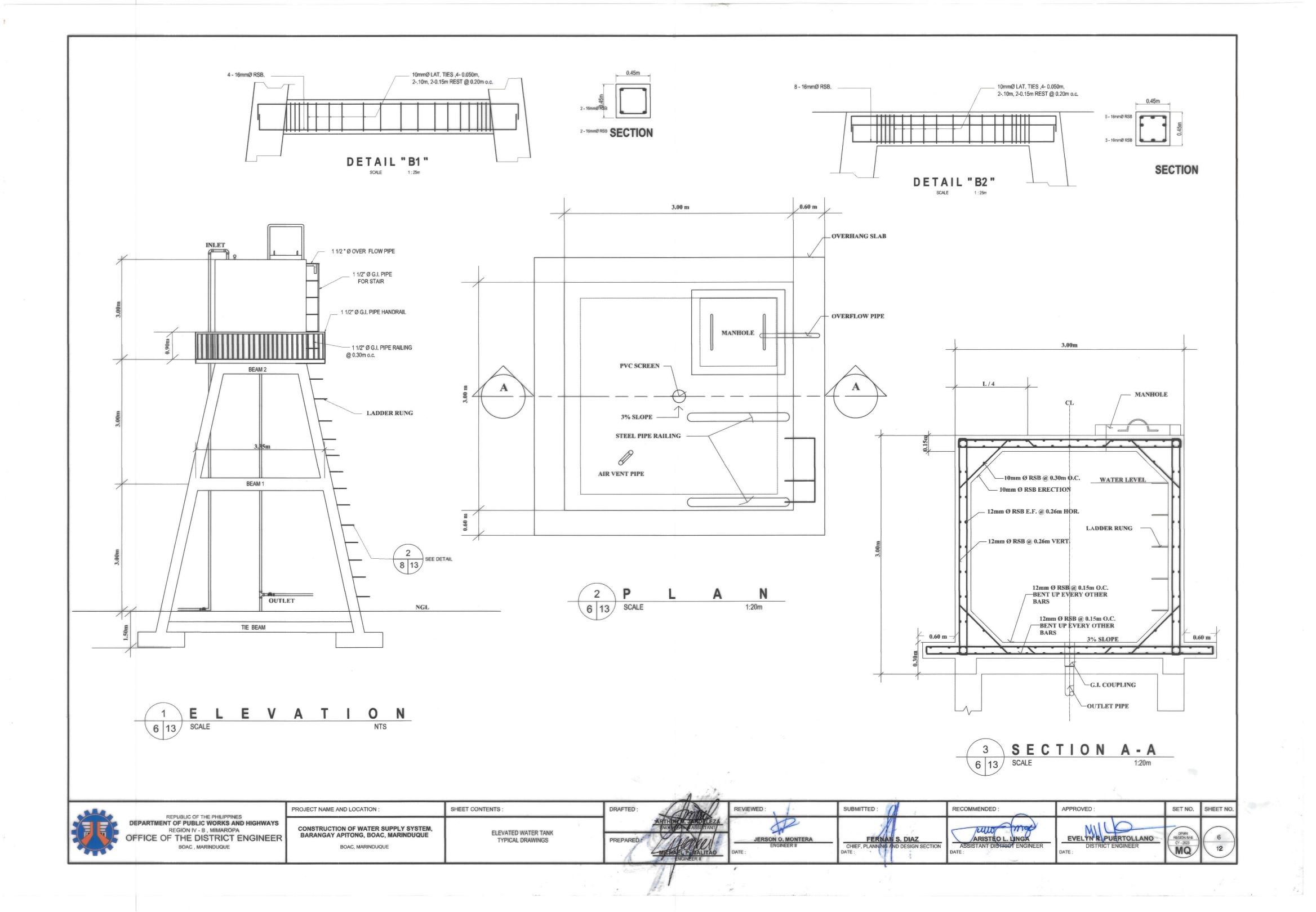
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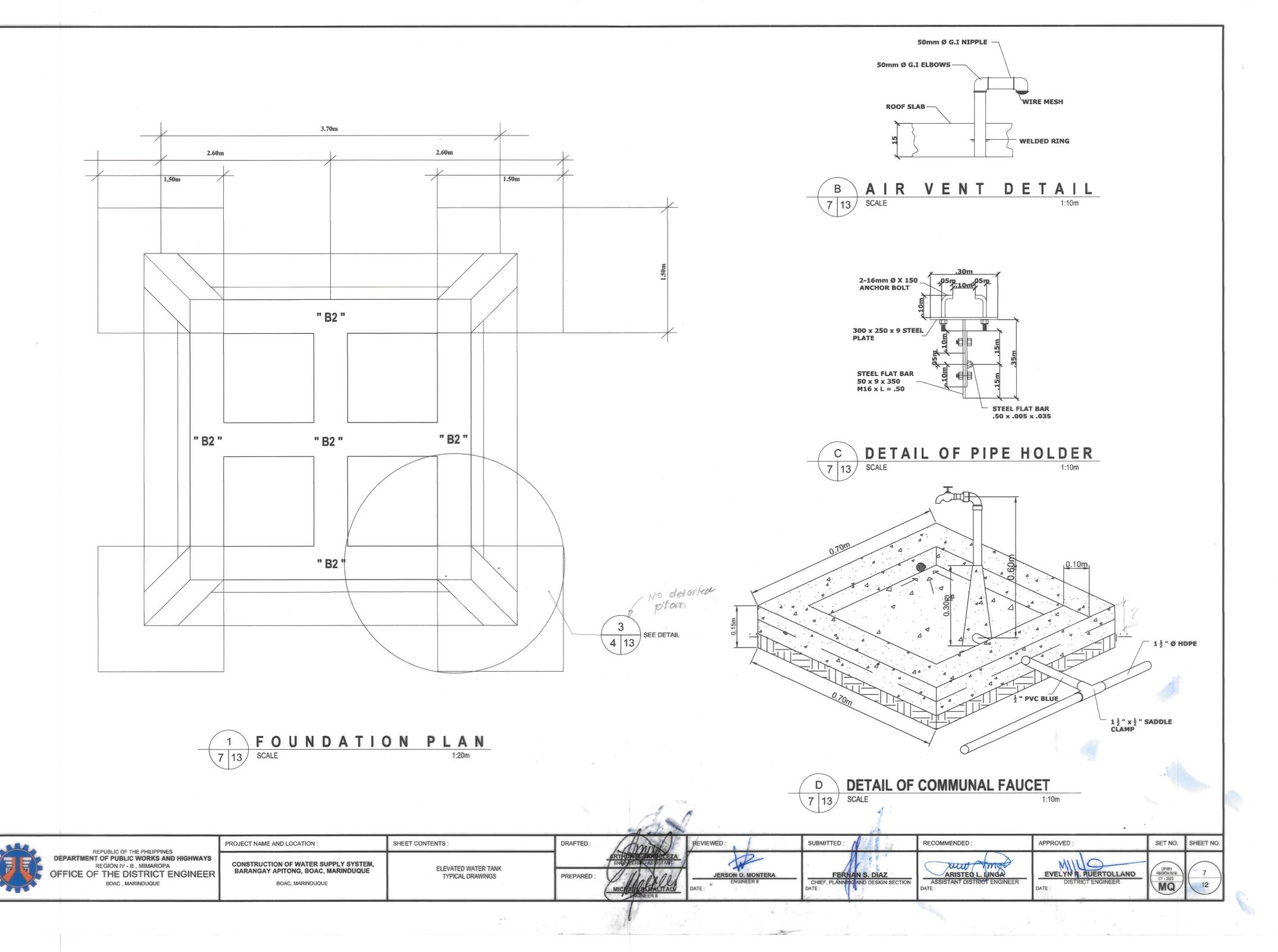
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ION	ARISTEO L. LINGA ASSISTANT DISTRICT ENGINEER DATE:

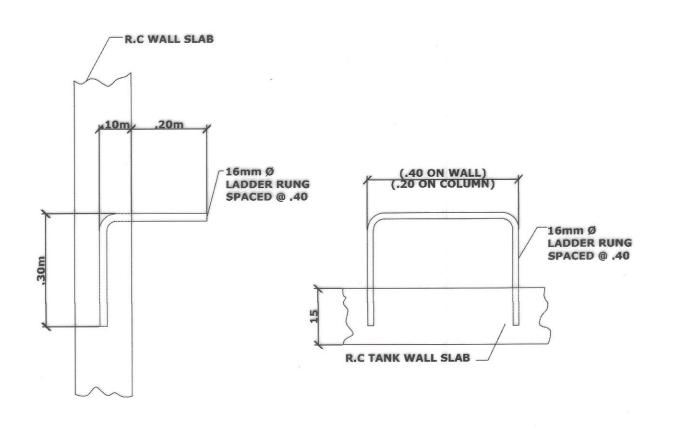
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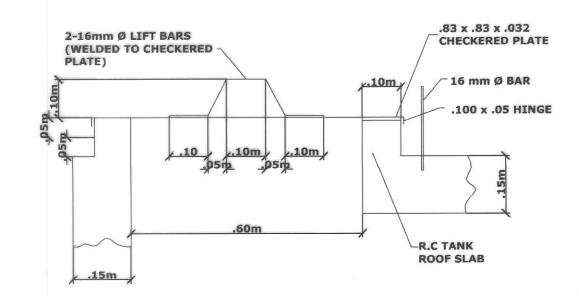




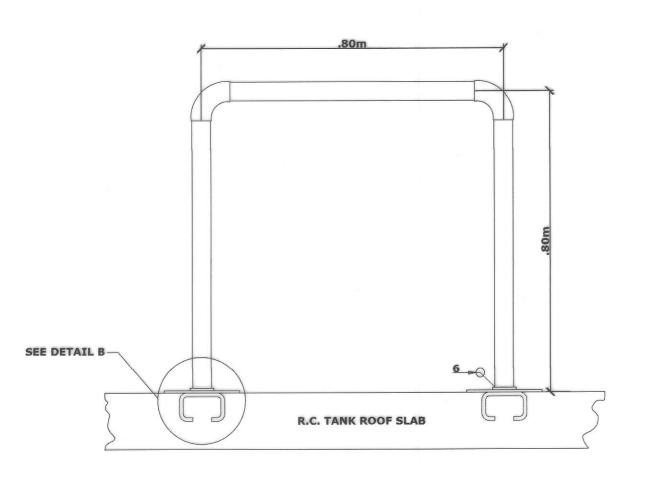




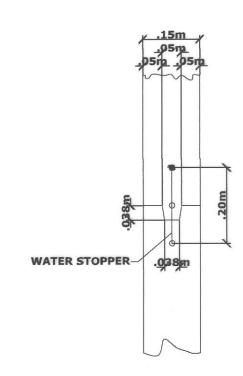
DETAIL OF LADDER RUNG 8 13 SCALE



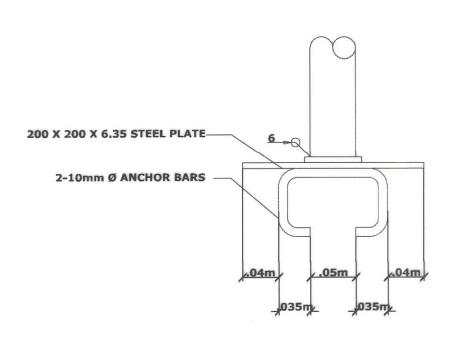
DETAIL OF MANHOLE 8 13 SCALE

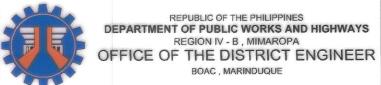


3 DETAIL OF STEEL PIPE RAILING
8 13 SCALE



CONST. JOINT DETAIL



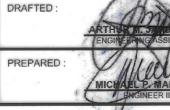


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HWAYS NEER	CONSTRUCTION BARANGAY A

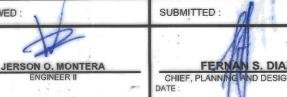
AND LOCATION: ION OF WATER SUPPLY SYSTEM, APITONG, BOAC, MARINDUQUE

ELEVATED WATER TANK TYPICAL DRAWINGS

SHEET CONTENTS:





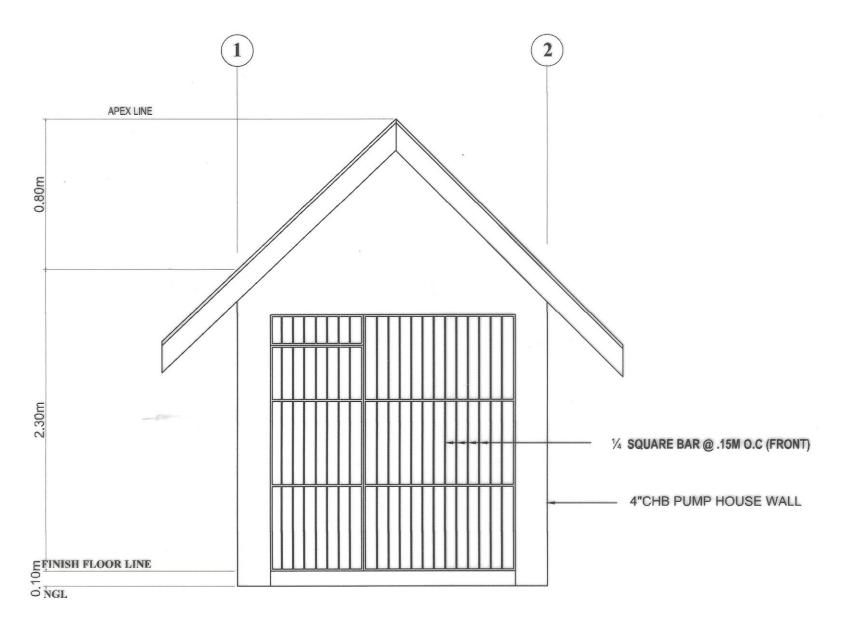


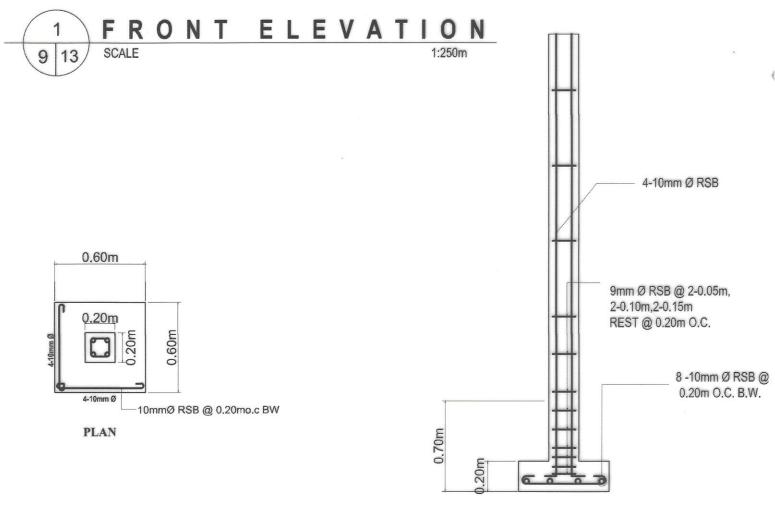
	RECOMMENDED:
7	ARISTEO L. LINGA ASSISTANT DISTRICT ENGINEER DATE:
7	ARISTEO L. LINGA ASSISTANT DISTRICT ENGINEER

APPROVED: EVELYN R. PUERTOLLANO

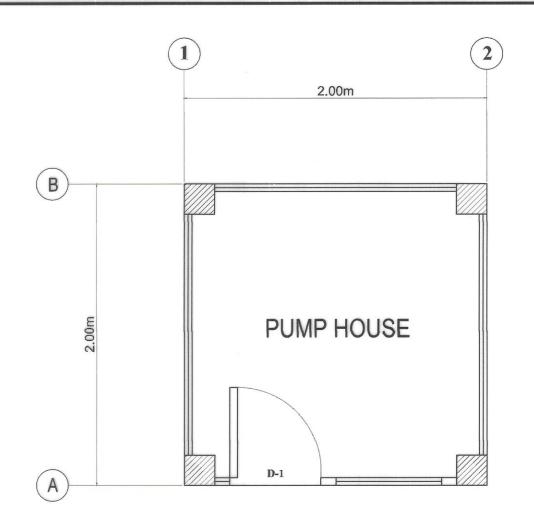




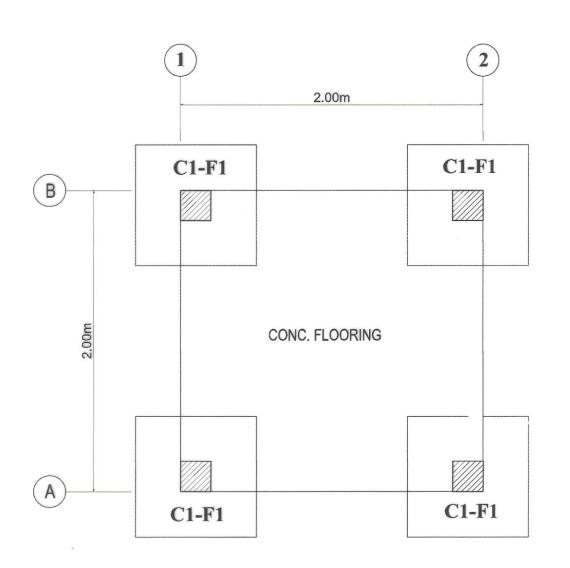








	2	F	L	0	0	R	Р	L	A	N
9	13	SCALE							1:250)m



9 13 SCALE 1:250m



ROJECT NAME AND LOCATION :	SHEET CONTENTS:	
CONSTRUCTION OF WATER SUPPLY SYSTEM, BARANGAY APITONG, BOAC, MARINDUQUE	PUMP HOUSE TYPICAL DRAWINGS	

(diment)	REV
ARTHUR IL JAHOELEZA ENGINEGRINI ASSISTANT	/
MALLORUM/	_
ENGINEER II	DATE

DRAFTED:

PREPARED:

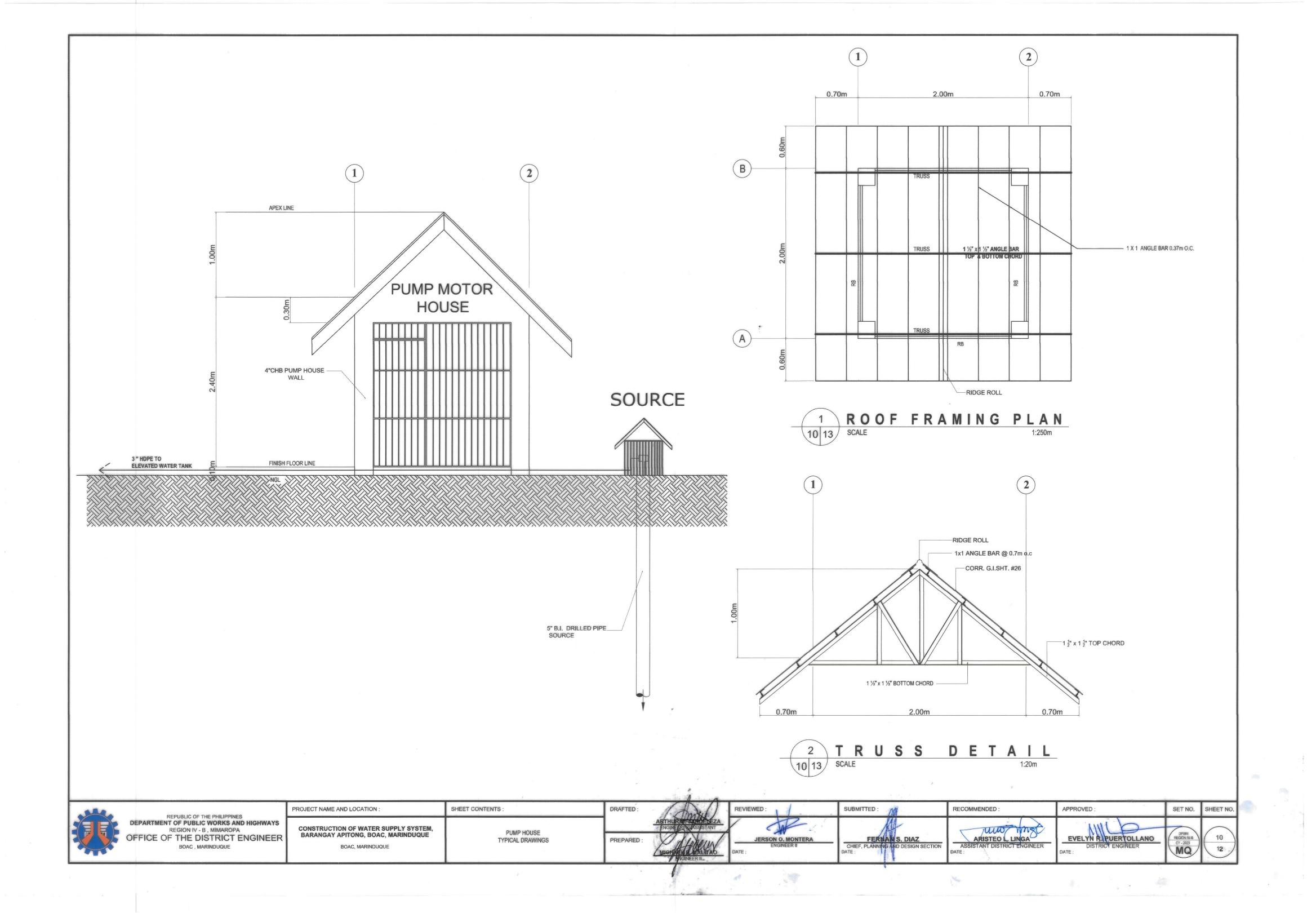
EVIEWED:	SUBMITTED:
AP.	
JERSON O. MONTERA	FERNAN S. DIAZ
ENGINEER II* TE:	CHIEF, PLANNING AND DESIGN SECTION DATE:

L	RECOMMENDED:
	ARISTEO L. LINGAD ASSISTANT DISTRICT ENGINEER DATE:



APPROVED:





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CIRCUIT	LOAD DESCRIPTION	НР		OUTI	LETS			SWIT	CHE	S	VOLT.	AMD	VOLTS	CPD	ВО	LT-O	N	CONDUCTORS	CONDUIT	AREA SERVED
NUMBER	LOAD DESCRIPTION	пР	O.L.	MOTOR	C.O.	L.O.	S	S2	S3	S3W	AMP.	AMP.	VOLIS	AF	P	AT	KAIC	THHN CU STRANDED	CONDOIT	AREA SERVED
	LIGHTING POINTS AND CONVENIENCE OUTLET							1			380	1.652	230V	50	2	20	10	2 # 3.5 mm ² E= 1 # 2.0 mm ²	20 MMØ	COMMERCIAL BLDG. INSIDE
2	WATER PUMP	ЗНР		1							3910	17.0	230V	50	2	40	10	2 # 5.5 mm ² E= 1 # 3.5 mm ²	20 MMØ	COMMERCIAL BLDG. INSIDE
3	SPARE										1500	6.26	230V	50	2	20	10			SPARE
4	SPARE										1500	6.26	230V	50	2	20	10			SPARE
	TOTAL										7290									
	MAXIMUM DEMAND IN KVA:		7,:	290						0	. С.Р.	D						CE ENTRANCE JCTOR: 2	# 14MM ² THF	IN WIRE
					В	REAK	ER	(QTY.	TYP	E A	ГАР	F		KAI	c G	ROUN	IDING JCTOR:		
MAXIMUM DEMAND IN 57.19		.19	MAIN 1			1	МСС	B 60	100) 2	2	10			1 # 8.0MM ² TW WIRE		/ WIRE			
	AMP:		37	110	DE	RANCI	UEC		1	MCE	3 40	50	2	2	10	M	IAIN (CONDUIT:		
					DI	KANCI	HES		3	MCE	3 20	50	2		10			2	5MMØ RSC C	ONDUIT

COMPUTATONS FOR MAIN SERVICE ENTRANCE CONDUCTOR

I_T 7,290VA + (3910VA x 0.25)

230V = 35.94A

USE 2NOS. 14.0mm² THHN WIRE 1NO. 8.0mm² TW WIRE (G) IN 1Ø 25mm²

COMPUTATONS

FOR MAIN DISCONNECTION EQUIPMENT

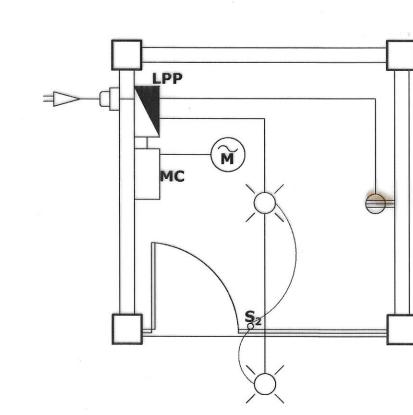
I₇ 7,290VA + (3910VA x 1.50)

230V = 57.19A

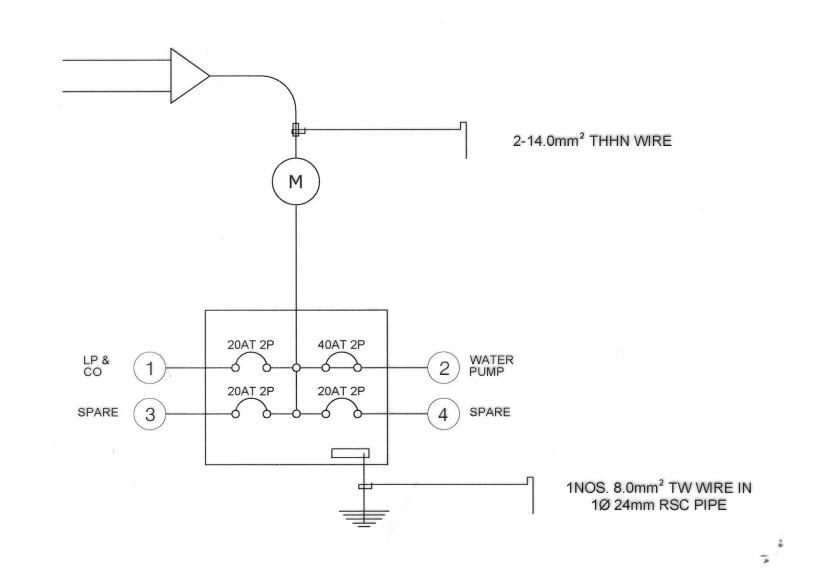
USE ONE 60AT, 100AF,2P, 230V, MCCB WITH GROUND BUS AND BRANCHES: 1NO-40AT, 50AF, 2P

LEGEND:

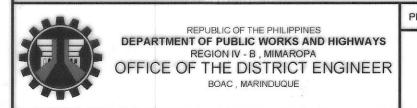




H O U S E



1 SINGLE LINE DIAGRAM
12 12 SCALE



CONCERNICATION OF WATER CURRY V CYCTEM	DRAFTED :	(South)	
BARANGAY APITONG, BOAC, MARINDUQUE ELECTRICAL	DADS - PUMP HOUSE - PUMP HOUSE L DRAWING	ARTHUM VARDELEZA ENGINEERING ASSISTANT : ADRIAN V. LOZANO ENGINEER II	C

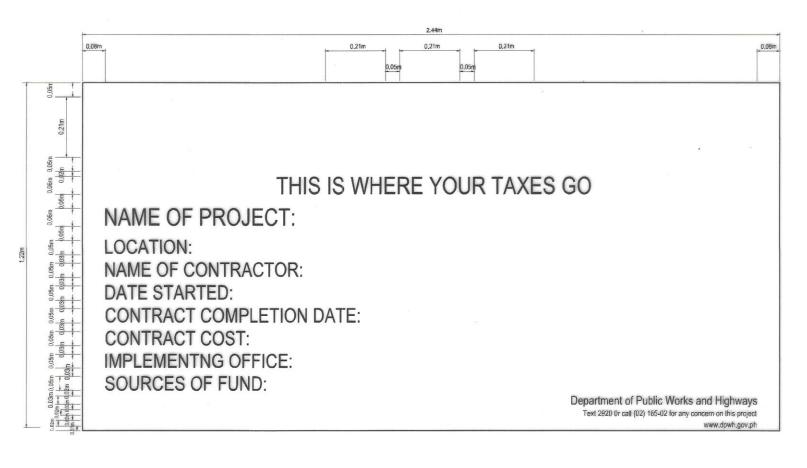


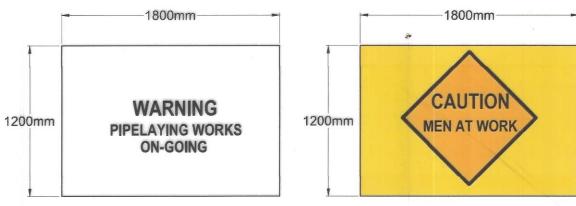
1000		L
	FERNAN S. DIAZ	
	CHIEF, PLANNING AND DESIGN SECTION DATE:	C

RECOMMENDED : APPROVED :

EVELYN R. PUERTOLLANO DISTRICT ENGINEER

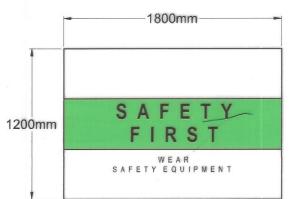


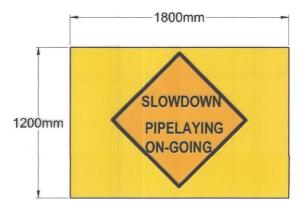
















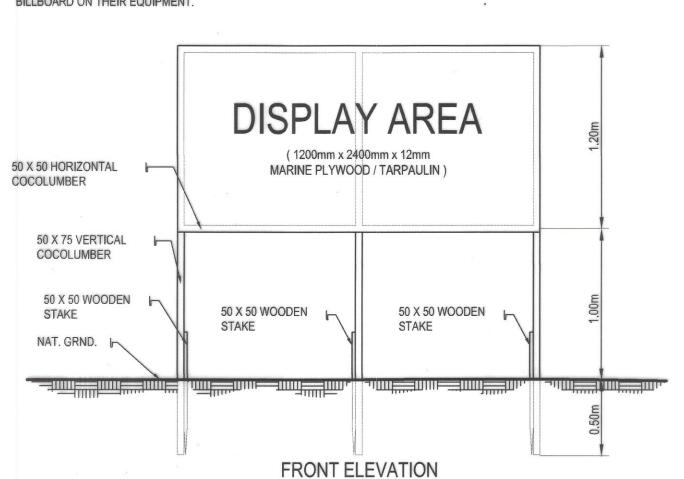
DETAIL OF BILLBOARD

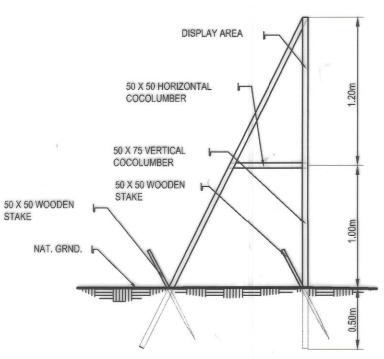
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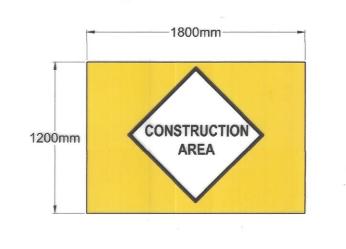
1. THE INSTALLATION OF THE REQUIRED STANDARD BILLBOARD SIZE (1200MM X 2400MM / 4 FT. X 8FT.) FOR ALL PROJECTS SHALL BE STRICTLY ENFORCED.

2. NO POLITICAL BILLBOARDS SHALL BE ALLOWED TO BE INSTALLED 100 METERS BEFORE AND 100 METERS AFTER ALL DPWH PROJECTS AND IN BETWEEN THE PROJECT LIMITS OR WITHIN THE ROAD RIGHT OF WAY.

3. DPWH CONTRACTORS SHALL NOT BE ALLOWED TO PLACE NAMES OF POLITICIANS ON THEIR EQUIPMENT OR CARRY POLITICAL BILLBOARD ON THEIR EQUIPMENT.











WATERWORKS CONSTRUCTION SIGNAGE

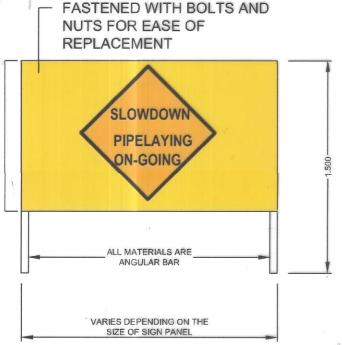
NOTE: SIGNS SHALL BE MADE FROM RETROFLECTIVE SIGN FACE MATERIAL AS PER DO 13 SERIES OF 2018

VARIES DEPENDING ON THE SIZE OF THE SIGN PANEL

ALL MATERIALS ARE 2" X 2" X 2.33 mm ANGULAR BAR

SIDE ELEV.

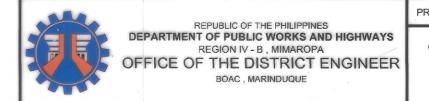
SCALE NTS



STANDARD SIGN PANEL OF APPROPRIATE SHEETING

SIGNAGE INSTALLATION DETAIL

FRONT ELEVATION



JECT NAME AND LOCATION :	SHEET CONTENTS:	
DNSTRUCTION OF WATER SUPPLY SYSTEM, ARANGAY APITONG, BOAC, MARINDUQUE	TYPICAL DRAWINGS	**
BOAC, MARINDUQUE	1.0	

DRAFTED:	(Amoul)
	ARTHUR M. JARDELEZA JENGINZERIJG ASSISTANT
PREPARED:	Lauren
	ENGINEER II

EWED:	SUBMITTED:
JERSON D. MONTERA	FERNAN S. DIAZ
ENGINEER II	CHIEF, PLANNING AND DESIGN SECTION DATE:

RECOMMENDED:	
ARISTEO L.	mg
ASSISTANT DISTRIC	TENGINEER

APPROVED:	
EVELYN R. PUE DISTRICT ENG DATE :	



SET NO.



SHEET NO.