

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE DISTRICT ENGINEER
LANAO DEL NORTE 1ST ENGINEERING DISTRICT
Seminary Drive, Del Carmen, Iligan City

REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO,
TUBOD, LANA O DEL NORTE, K1589+(-470)-K1589+(-455) RS AND
K1589+(-575)+K1589+(-570) RS

LIMITS:

BEG. OF PROJECT	1589 + (-470)
END OF PROJECT	1589 + (-455)
BEG. OF PROJECT	1589 + (-575)
END OF PROJECT	1589 + (-570)

TOTAL PROJECT LENGTH 20.00 M.

SCOPE OF WORK: REPAIR/MAINTENANCE OF
DRAINAGE STRUCTURE







 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE DISTRICT ENGINEER LANAO DEL NORTE 1ST ENGINEERING DISTRICT Seminary Drive, Del Carmen, Iligan City	PROJECT AND LOCATION REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO, TUBOD, LANA O DEL NORTE, K1589+(-470)-K1589+(-455) RS AND K1589+(-575)+K1589+(-570) RS	SHEET CONTAINING TITLE SHEET	DRAFTED PREPARED BY  KOSAMAD AU U. MALA ENGINEERING I	CHECKED BY  SIKASAKI HADJINOR ASSISTANT CHIEF MAINTENANCE SECTION	SUBMITTED BY  JASIDA O. MAMAN CHIEF MAINTENANCE SECTION	RECOMMENDATION APPROVAL  MARIA LIZA E. POMICOR ASSISTANT DISTRICT ENGINEER	APPROVED  ALY KHAN U. ALI MPA, AER DISTRICT ENGINEER	SET NO. 1/5 TS 2035	SHEET NO. 01 0102
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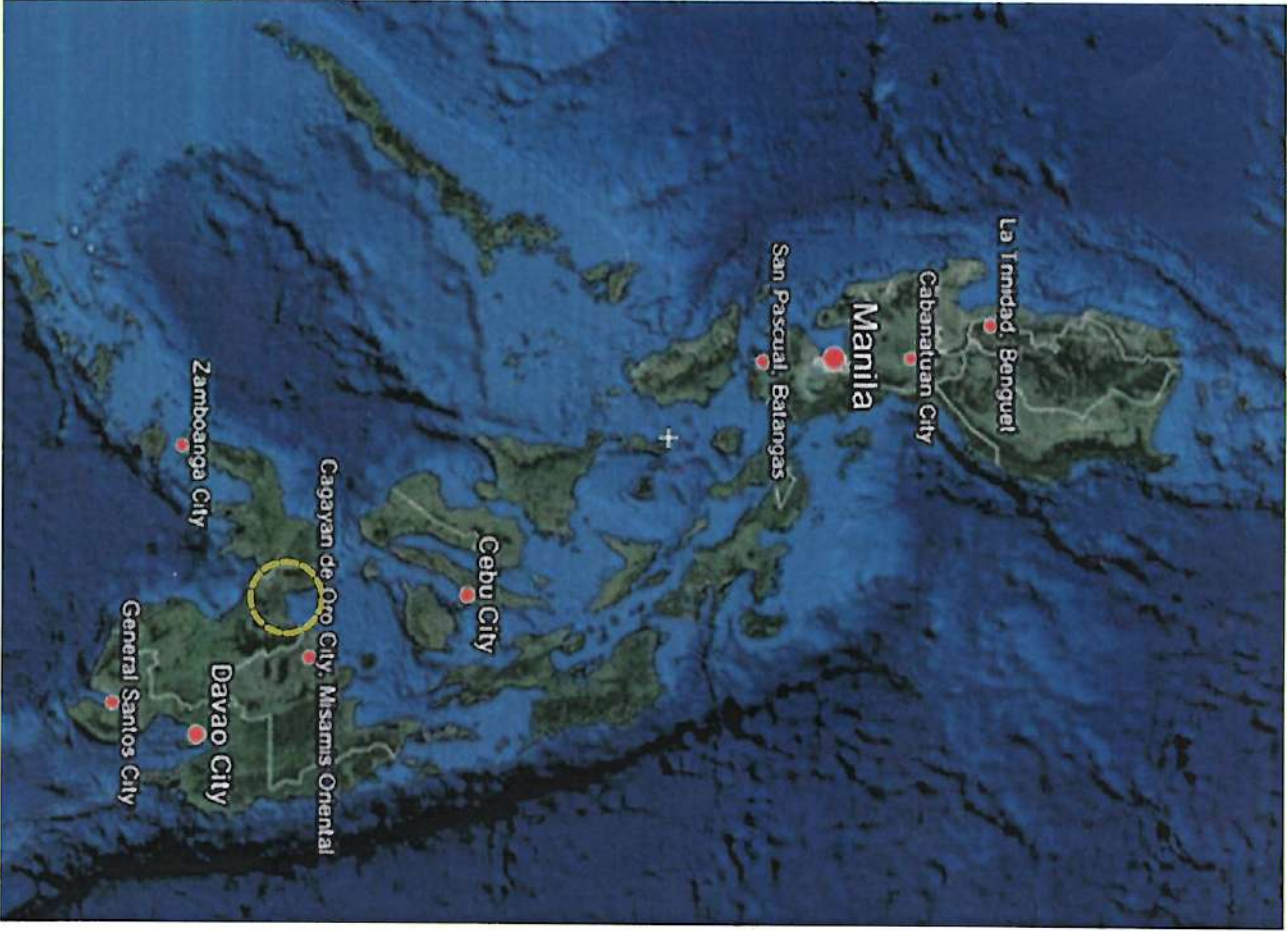
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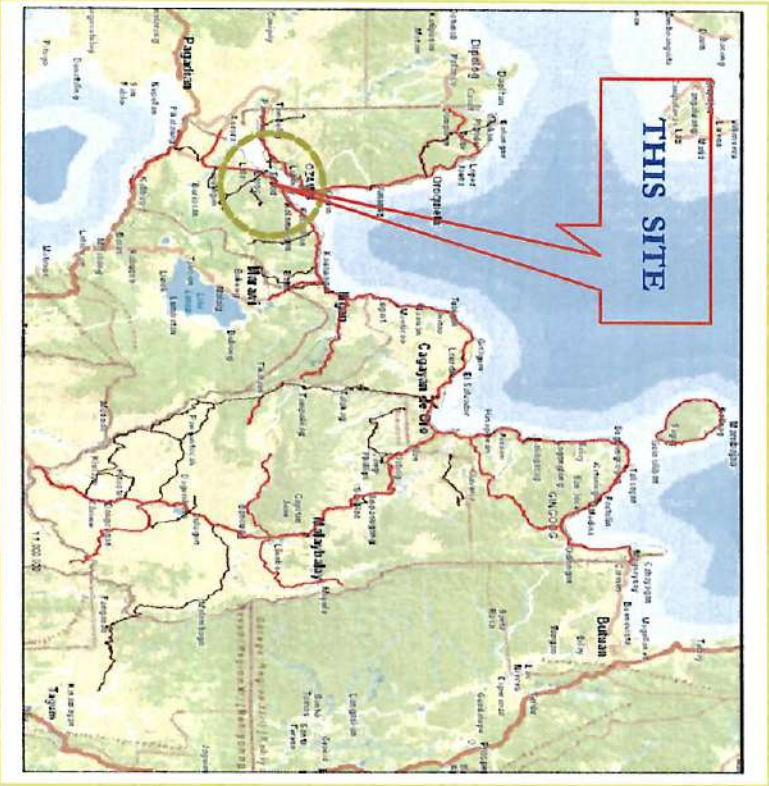
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DPWH
STANDARD SPECIFICATION
FOR
HIGHWAYS AND BRIDGES
REVISED 2013
SUPPLEMENTAL SPECIFICATION
SPECIAL PROVISION

 Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE DISTRICT ENGINEER LANA O DEL NORTE 1ST ENGINEERING DISTRICT Seminary Drive, Del Carmen, Iligan City	PROJECT AND LOCATION REPAIR MAINTENANCE OF GRADE STRUCTURE ALONG RUBOS-GAMASS ROAD (35002.00M, BARANAYAN SAN ANTONIO MUNICIPALITY, LANA O DEL NORTE PROVINCE) (K-15) AND K-15+000 TO K-15+050	SHEET CONTENT TABLE OF CONTENTS	DRAWING PREPARED BY MOHAMMAD ALI U. MALA ENGINEERING II	CHECKED BY SHARAFUDDIN HADJINOR ASSISTANT CHIEF MAINTENANCE SECTION	SUBMITTED BY RIDA O. MANAN CHIEF MAINTENANCE SECTION	RECOMMENDING APPROVAL MARIA LIZA E. POMICOP ASSISTANT DISTRICT ENGINEER	APPROVED ALY KHAN U. ALI, MPA, AER. DISTRICT ENGINEER	SEALS MS TOS 3035	SHEETS 02 02/02
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REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO,
TUBOD, LANAO DEL NORTE, K1589+(-470)-K1589+(-455) RS AND
K1589+(-575)+K1589+(-570) RS



KEY MAP
A
NOT TO SCALE

REGION MAP
B
NOT TO SCALE

VICINITY MAP
C
NOT TO SCALE

 Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE DISTRICT ENGINEER LANAO DEL NORTE ENGINEERING DISTRICT Seminary Drive, Del Carmen, Iligan City		PROJECT AND LOCATION	SHEET CONTENT	DRAFTED PREPARED BY	CHECKED BY	SUBMITTED BY	RECOMMENDING APPROVAL	APPROVED	STATUS	SHEETS
REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO, TUBOD, LANAO DEL NORTE, K1589+(-470)-K1589+(-455) RS AND K1589+(-575)+K1589+(-570) RS		KEY MAP REGION MAP VICINITY MAP		 MOHAMMAD ALI U. MULA ENGINEERING II	 SUKARNO M. HACHIJOR ASSISTANT MAINTENANCE SECTION	 ROSIDA O. MANAN CHIEF MAINTENANCE SECTION	 MARIA LIZA E. PONCE ASSISTANT DISTRICT ENGINEER	 ALI KHAN U. ALI, MPA, A.E.R. DISTRICT ENGINEER	MS-G-1 2015	03 0104

STANDARD SPECIFICATION
FOR
HIGHWAYS & BRIDGES
REVISED 2013
SPECIAL PROVISION
SUPPLEMENTAL SPECIFICATION

REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO,
TUBOD, LANA O DEL NORTE, K1589+(-470)-K1589+(-455) RS AND
K1589+(-575)+K1589+(-570) RS

LEGENDS
ABBREVIATIONS

PROJECT ROAD		BEG.	BEGINNING
Q OF PROJECT ROAD		CHB.	CONCRETE HOLLOW BLOCKS
PORTLAND CEMENT CONCRETE PAVEMENT		CON.	CONCRETE
SECTION IN EARTH		ELEV.	ELEVATION
SECTION IN STONE MASONRY		ENG.	ENGINEER
SECTION IN GRANULAR BEDDING		F.G.E.	FINISH GRADE ELEVATION
LIMITS OF DIMENSION		G.E	GROUND ELEVATION
CENTERLINE		H	HEIGHT
DIAMETER		HOR.	HORIZONTAL
PERCENT		KM.	KILOMETER
AND		K.O.	KILOMETER OUTPOST
AT		L	LENGTH
NORTHING		LVC	LENGTH OF VERTICAL CURVE
		M.	METER
		M.O.	MIDDLE ORDINATE
		MM.	MILLIMETER
		PCCP	PORTLAND CEMENT CONCRETE PAVEMENT
		PVC	POINT OF INTERSECTION OF VERTICAL CURVE
		RCBC	REINFORCEMENT CONCRETE BOX CULVERT
		RSB	REINFORCEMENT STEEL BAR
		S	SLOPE
		STA.	STATION
		THK.	THICK
		VERT.	VERTICAL
		&	AND

GENERAL

- 1. ALIGNMENT AND GRADES ARE SUBJECT TO ADJUSTMENT TO SUIT EXISTING FIELD CONDITIONS.
- 2. DISTANCES AND ELEVATIONS ARE IN METERS UNLESS INDICATED OTHERWISE
- 3. GRADES SHOWN ARE TOP OF FINISHED PORTLAND CEMENT CONCRETE PAVEMENT.
- 4. ALL WORKS SHALL COMPLY WITH THE "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES", REVISED 2013 OR THE "GENERAL SPECIFICATIONS FOR ROADS AND BRIDGES," 1976.

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE DISTRICT ENGINEER
LANAO DEL NORTE, INC. (DENR) DISTRICT
Seminary Drive, Del Carmen, Iligan City

PROJECT AND LOCATION: REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO, TUBOD, LANA O DEL NORTE, K1589+(-470)-K1589+(-455) RS AND K1589+(-575)+K1589+(-570) RS

SHEET CONTENT: STANDARD SPECIFICATION GENERAL NOTES ABBREVIATIONS

DRAFTED/PREPARED BY: MOHAMMAD ALI U. MALA ENGINEERING II

CHECKED BY: SUKAMAT HADJINOR ASSISTANT CHIEF, MAINTENANCE SECTION

SUBMITTED BY: FERRER, JONAS CHIEF, MAINTENANCE SECTION

RECOMMENDING APPROVAL: MARIA LIZA E. POMOPIG ASSISTANT DISTRICT ENGINEER

APPROVED: ALI KHAN U. ALI, MPA, A.E.R. DISTRICT ENGINEER

MS-G-2 1023

04 02/04







REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO,
TUBOD, LANA DEL NORTE, K1589+(-470)-K1589+(-455) RS AND
K1589+(-575)+K1589+(-570) RS

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	%	QTY.	UNIT
PART A				
FACILITIES FOR THE ENGINEER				
A.1.1 (3)	Construction of Field Office for the Engineer	AS SUBMITTED AS EVALUATED	1.00	LS
TOTAL OF PART A				
PART B				
OTHER GENERAL REQUIREMENTS				
B.5	Project Billboard / Signboard	AS SUBMITTED AS EVALUATED	2.00	Each
B.7 (2)	Occupational Safety and Health Program	AS SUBMITTED AS EVALUATED	1.00	LS
B.8 (1)	Traffic Management	AS SUBMITTED AS EVALUATED	3.20	Mon
B.9	Mobilization / Demobilization	AS SUBMITTED AS EVALUATED	1.00	LS
TOTAL OF PART B				
VOLUME III				
PART C				
EARTHWORKS				
101 (1)	Removal of Structures and Obstruction	AS SUBMITTED AS EVALUATED	1.00	LS
103 (1)a	Structure Excavation (Common Soil)	AS SUBMITTED AS EVALUATED	107.75	cum
104 (1)a	Embankment from roadway excavation (Common Soil)	AS SUBMITTED AS EVALUATED	107.75	cum
105 (1)a	Subgrade Preparation (Common Material)	AS SUBMITTED AS EVALUATED	22.50	sq m
TOTAL OF PART C				
PART D				
SUBBASE AND BASE COURSE				
200 (1)	Aggregate Subbase Course (Thick = 100 mm)	AS SUBMITTED AS EVALUATED	6.30	cum
TOTAL OF PART D				
PART E				
BRIDGE CONSTRUCTION				
401 (2)a	Concrete Railing, Standard	AS SUBMITTED AS EVALUATED	20.00	m
404 (1)a	Reinforcing Steel Grade 40	AS SUBMITTED AS EVALUATED	3.049 27	kg
404 (1)b	Reinforcing Steel Grade 60	AS SUBMITTED AS EVALUATED	2.563 14	kg
405 (1)b3	Structural Concrete, Class-A; 27.58 Mpa; 28 days	AS SUBMITTED AS EVALUATED	51.33	cum
414 (1)	Forms and Falsework	AS SUBMITTED AS EVALUATED	1.00	LS

NOTE:

1. THE QUANTITIES OF ALL ITEMS OF WORK PRESENTED ARE SUBJECT TO INCREASE / DECREASE DEPENDING ON THE ACTUAL ACCOMPLISHMENT AS CERTIFIED BY THE ENGINEER.
2. BEFORE THE START OF THE ACTUAL CONSTRUCTION, THE AS - STATED PLAN SHOULD BE SUBMITTED TO THE DISTRICT OFFICE IN ORDER THAT IMMEDIATE STEPS MAY BE UNDERTAKEN TO CORRECT OR ADJUST WHATEVER APPRECIABLE DEVIATION THERE MAY BE FROM THE ORIGINAL PLAN.
3. PRIOR TO CONSTRUCTION, SOIL INVESTIGATION SHALL BE CONDUCTED IN ACCORDANCE WITH DESIGN GUIDELINES AND TESTING REQUIREMENTS TO VERIFY AND VALIDATE DESIGN CBR.







 Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE DISTRICT ENGINEER LANAO DEL NORTE AND ENGINEERING DISTRICT Summary Drive, Del Carmen, Iligan City	PROJECT AND LOCATION REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG TUBOD-GANASSI ROAD(S00924MN), BARANGAY SAN ANTONIO, TUBOD, LANA DEL NORTE, K1589+(-470)-K1589+(-455) RS AND K1589+(-575)+K1589+(-570) RS	SHEET CONTENT SUMMARY OF QUANTITIES	DRAFTED PREPARED BY  M. AL U. MALA ENGINEERING 4	CHECKED BY  SUKARNO HADJINOOR ASSISTANT CHIEF MAINTENANCE SECTION	SUBMITTED BY  RINA O. MANAN CHIEF MAINTENANCE SECTION	RECOMMENDING APPROVAL  MARIA LIZA E. PONIOPTIC ASSISTANT DISTRICT ENGINEER	APPROVED  ALIY KHAN U. ALI, MPA, A.E.R. DISTRICT ENGINEER	SETHS MS G-3 2025	SHEET No. : 05 0314
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GENERAL NOTES :

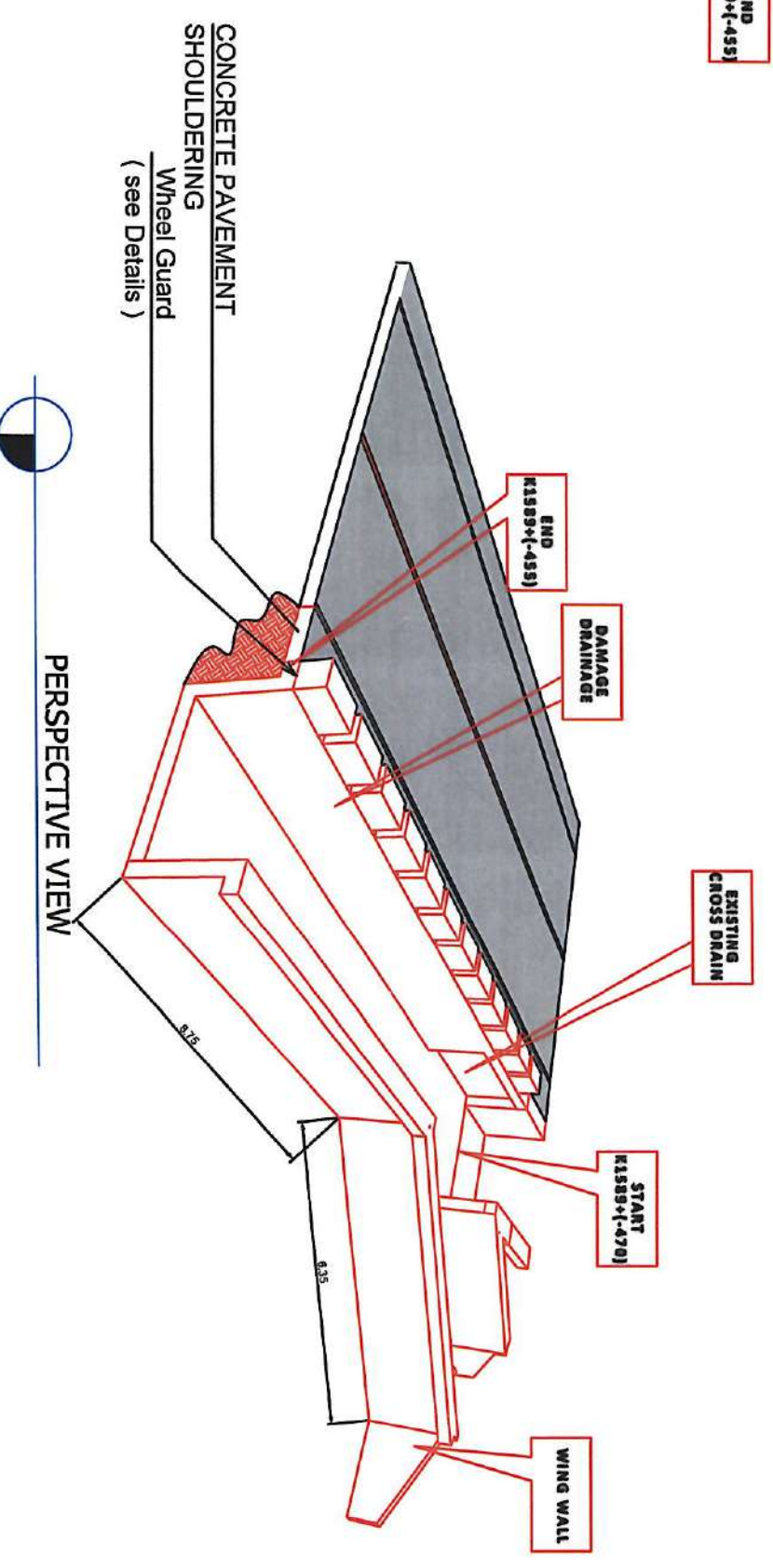
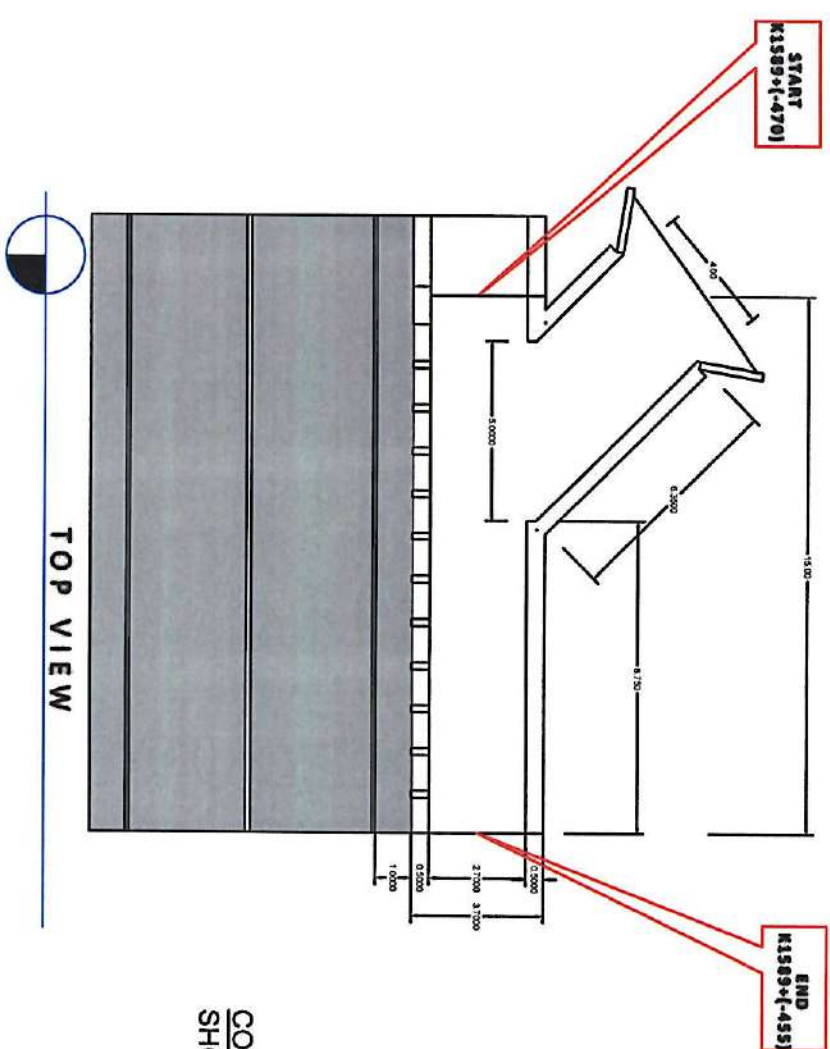
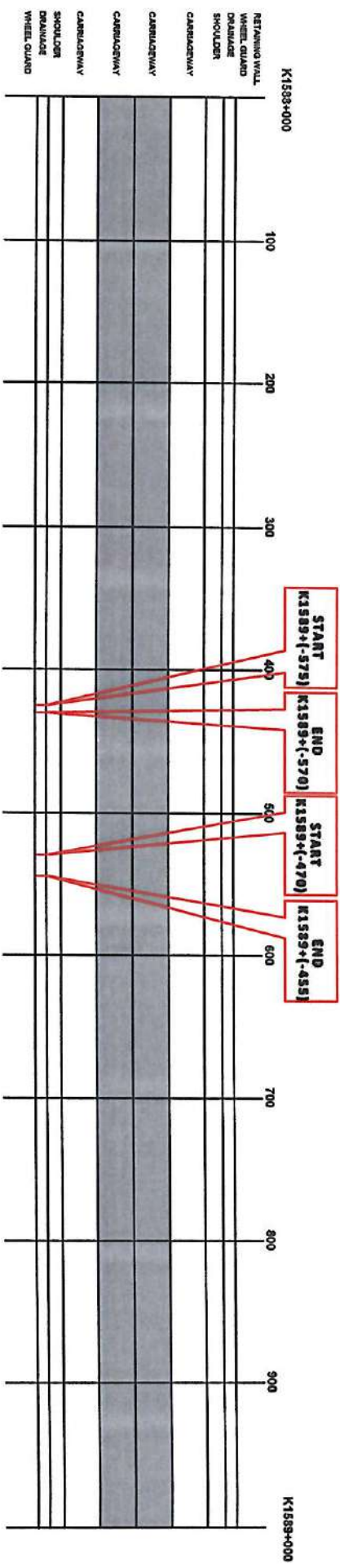
- 1.1 DIMENSIONS**
- a. STATIONS ARE GIVEN IN KILOMETERS WITH OR WITHOUT DECIMALS.
 - b. PIPE CULVERT DIAMETERS AND DIMENSIONS ARE GIVEN IN METERS.
 - c. ARE GIVEN IN METERS WITH OR WITHOUT DECIMALS.
 - d. UNLESS OTHERWISE SHOWN, ALL DISTANCES ARE IN METERS.
- 1.2 STATIONINGS**
- a. THE ROAD STATIONS AND ELEMENTS OF CURVES ARE RELATIVE TO THE CENTERLINE OF THE ROAD.
 - b. ALL STATIONS ALONG ROAD CENTERLINE ARE RECKONED FROM NATIONAL ROAD.
- 1.3 STRUCTURE EXCAVATION**
- a. EXCAVATION SHALL BE DONE IN ACCORDANCE TO THE LINES AND GRADES OR ELEVATION SHOWN ON THE PLANS OR AS STAKED BY THE ENGINEER.
- 1.4 EMBANKMENT PROTECTION**
- a. EMBANKMENT/SLOPE PROTECTION ARE GENERALLY PROVIDED AT SPECIFIED AREAS AND OTHER LOCATIONS SHOWN IN THE PLANS.
- 1.5 ELEVATIONS AND GRADES**
- a. ELEVATIONS GIVEN IN THE COLUMN "FINISHED GRADE ELEVATION" REFER TO THE GRADE AS SHOWN IN THE TYPICAL ROADWAY SECTION.
 - b. GROUND LEVEL AND FINISHED ROAD LEVEL OF THE ROAD REFER TO THE GROUND PROFILE FOR THE ROAD CENTERLINE.
- 1.6 SUBGRADE PREPARATION**
- a. SUBGRADE PREPARATION SHALL EXTEND TO THE FULL WIDTH OF THE ROADWAY, UNLESS AUTHORIZED BY THE ENGINEER AND NOT BE DONE UNLESS THE CONTRACTOR IS ABLE TO START IMMEDIATELY THE CONSTRUCTION OF THE PAVEMENT STRUCTURE & SHALL MEET THE REQUIREMENTS OF ITEM 104-EMBANKMENT.
- 1.7 AGGREGATE BASE COURSE**
- a. AGGREGATE BASE COURSE SHALL BE PLACED AFTER THE EXISTING SURFACE BE GRADED AND FINISHED AS PROVIDED UNDER ITEM 105 - SUBGRADE PREPARATION AND ITS MUST BE IN UNIFORM MIXTURE ON A PREPARED SUB-GRADE IN A QUANTITY THAT WILL PROVIDE THE REQUIRED COMPACTED THICKNESS.
- 2.0 CONCRETE JOINT SEALANT**
- a. JOINT SHALL BE SEALED WITH ASPHALT SEALANT SOON AFTER COMPLETION OF THE CURING PERIOD AND BEFORE THE PAVEMENT IS OPENED TO TRAFFIC. JOINT MUST BE THOROUGHLY CLEANED AND DRY BEFORE ASPHALT SEALANT APPLIED & WILL NOT BE SPILLED ON THE EXPOSED SURFACES OF THE CONCRETE. THE USE OF SAND OR SIMILAR MATERIAL AS A COVER FOR THE SEAL WILL NOT BE PERMITTED.
- 2.1 STONE MASONRY**
- MATERIALS REQUIREMENTS:
- STONES - SHALL BE CLEAN, HARD AND DURABLE & SHALL BE SUBJECT TO THE ENGINEERS APPROVAL. ADDED STONES SHALL NOT BE USED, UNLESS OTHERWISE SPECIFIED.
- SIZES & SHAPES:
- THICKNESS - NOT LESS THAN 150mm
- WIDTH - NOT LESS THAN 1.5 x THICKNESS (225 mm)
- LENGTH - NOT LESS THAN 1.5 x WIDTH (337.5 mm)
- MORTAR - SHALL CONSIST OF **1 PART CEMENT TO 2 PARTS FIN** AND SUFFICIENT WATER SUCH THAT THE MORTAR CAN BE HANDLED EASILY WITH A TROWEL.
- MIX MORTAR ONLY NEEDED FOR USE. MORTAR NOT USE WITHIN 90 MIN. AFTER WATER HAS BEEN MIXED SHOULD BE DISCARDED. RE-TEMPERING OF MORTAR IS NOT ALLOWED.
- MIXING: MIX SAND AND CEMENT IN A TIGHT BOX UNTIL IT ATTAINS A UNIFORM COLOR. ADD WATER AND CONTINUE UNTIL THE REQUIRED CONSISTENCY IS ATTAINED.
- 2.2**
- THIS PLAN WILL SERVE ONLY AS A GUIDE IN THE IMPLEMENTATION PARTICULARLY IN THE PRE-CONSTRUCTION STAGE. IT IS ALSO SUBJECT TO AN AS-STAKED SURVEY TO BE CONDUCTED JOINTLY BY THE DIRECT IMPLEMENTING OFFICE AND THE CONTRACTOR AND SUBSEQUENT PLAN BE PREPARED AND SUBMITTED FOR APPROVAL.

SPECIFICATIONS:

DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES &
AIRPORTS, REVISED EDITION 2013

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE DISTRICT ENGINEER LINAO DEL NORTE DISTRICT ENGINEERING DISTRICT Serrano Drive, Del Carmen, Linao City	PROJECT AND LOCATION REPAIR MAINTENANCE OF DRAINAGE STRUCTURE ALONG TIBOCO GANASAI ROAD, 3002X200M, BANGAY SAN ANTONIO TIBOCO GANASAI ROAD, 3002X200M, BANGAY SAN ANTONIO MAYAGUAY, PANGLOSS (3002X200M)	SHEET CONTENT GENERAL NOTES	DRAWN PREPARED BY  ENGINEER	CHECKED BY  ASSISTANT DISTRICT ENGINEER	SUBMITTED BY  CHIEF, MAINTENANCE SECTION	RECOMMENDING APPROVAL  ASSISTANT DISTRICT ENGINEER	APPROVED  DISTRICT ENGINEER	REF. NO. MS G-4 3025	SHEET NO. 06 04/04
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STRAIGHT LINE DIAGRAM



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE DISTRICT ENGINEER
1 ANO DEL NORTE, IST ENGENEERING DISTRICT
Serrano Drive, Del Carmen, Iligan City

PROJECT AND LOCATION:
REPAIR MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TUBOD-DANASSI ROAD (300m x 10m), BARAGAY SAN ANTONIO,
TUBOD, LAOAG DEL NORTE, 1588+470 to 1588+455 AND
K1588+375 to K1588+325

SHEET CONTENT:
STRAIGHT LINE
DIAGRAM

DESIGNED BY:
MOHAMMAD ALI U. MALA
ENGINEER

CHECKED BY:
SUKASONG, HADJINOR
ASSISTANT MAINTENANCE SECTION

SUBMITTED BY:
TERESA O. MANAN
CHIEF MAINTENANCE SECTION

RECOMMENDING APPROVAL:
MARIA LEA E. POUIC-PE
ASSISTANT DISTRICT ENGINEER

APPROVED:
ALYKHAN U. ALI, MPA, A.E.R.
DISTRICT ENGINEER

DATE: 07/03/2025
SHEET NO.: 07



REPAIR/MAINTENANCE OF DRAINAGE STRUCTURE ALONG
TIBOD-GANJAS ROAD, 250024M, BARANGAY SAN ANTONIO
TUBOD (LAHO DEL NORTE) KI 153+470 KI 158+455 RS AND
KI 153+157 KI 153+470 RS

TYPICAL CANAL SECTION

CRAFTED/PREPARED BY

CHECKED BY

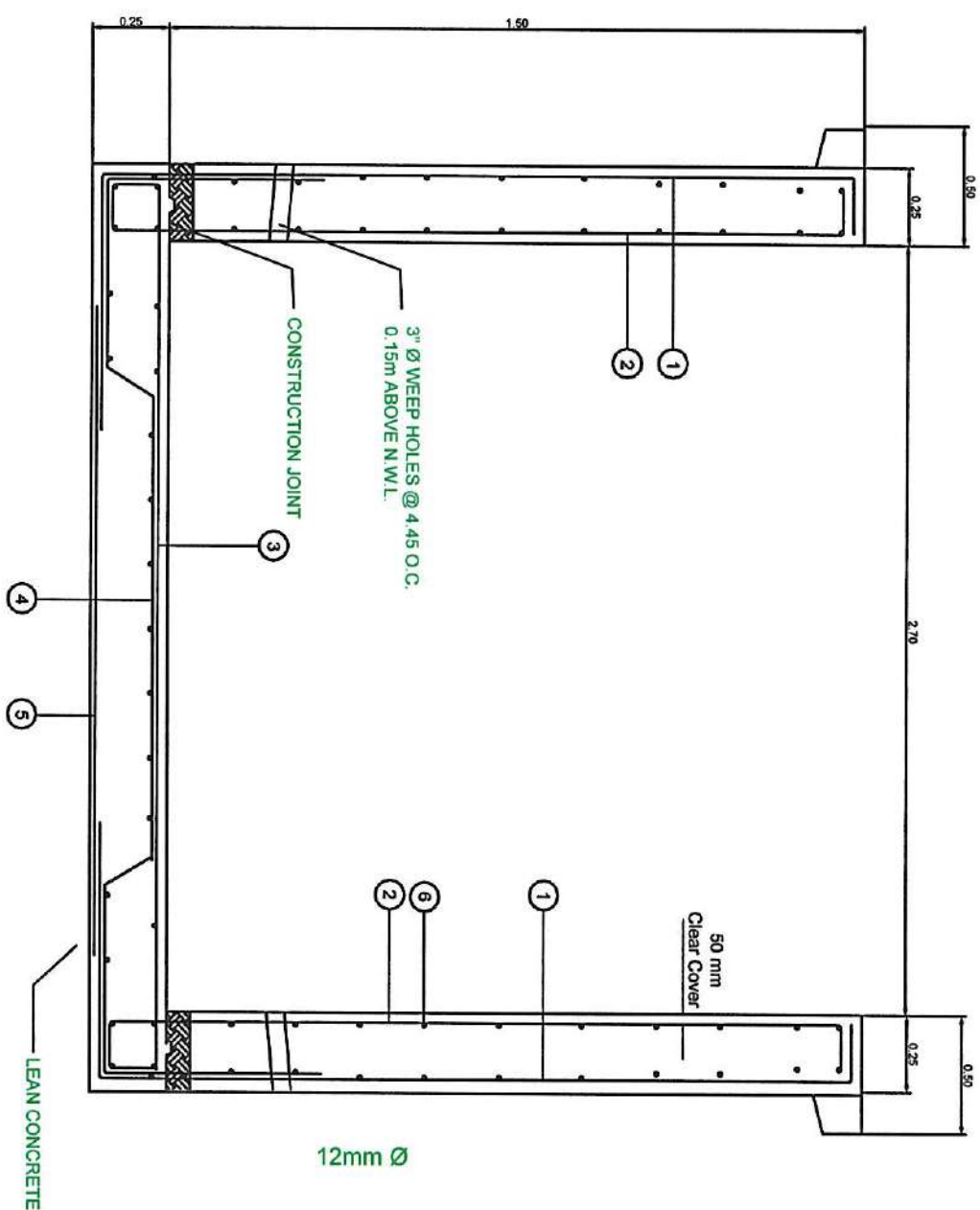
SUBMITTED BY

RECOMMENDING APPROVAL

APPROVED

251 603.

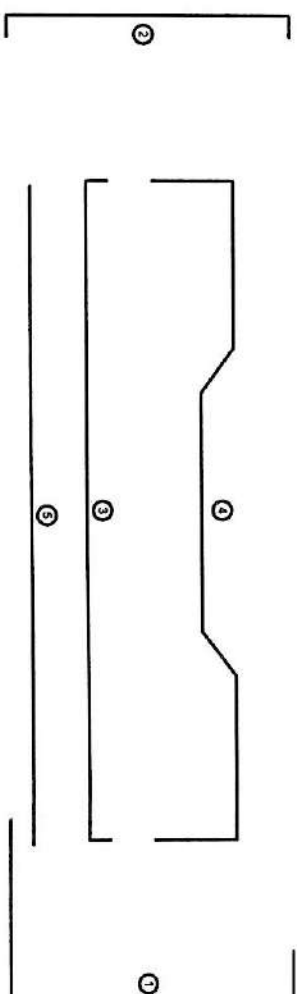
SHEET NO.



TYPICAL SECTION

PROPOSED TYPICAL SECTION OF DRAINAGE

	BAR SIZE	BAR SPACING	
①	16mm Ø DSB	SPACED @ 0.26 m ON CENTER	Reinforcing Steel; Grade 60
②	12mm Ø DSB	SPACED @ 0.30 m ON CENTER	Reinforcing Steel; Grade 40
③	12mm Ø DSB	SPACED @ 0.26 m ON CENTER	Reinforcing Steel; Grade 40
④	12mm Ø DSB	SPACED @ 0.26 m ON CENTER	Reinforcing Steel; Grade 40
⑤	16mm Ø DSB	SPACED @ 0.26 m ON CENTER	Reinforcing Steel; Grade 60
⑥	12mm Ø DSB	SPACED @ 0.26 m ON CENTER	Reinforcing Steel; Grade 40



BAR BENDING DIAGRAMS

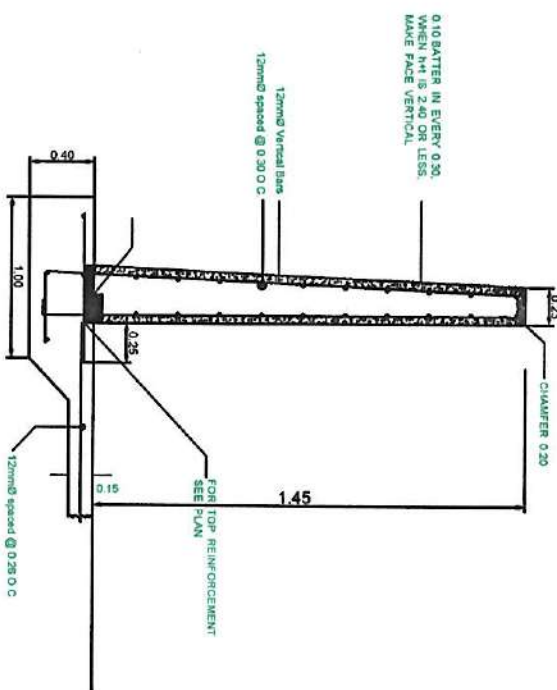
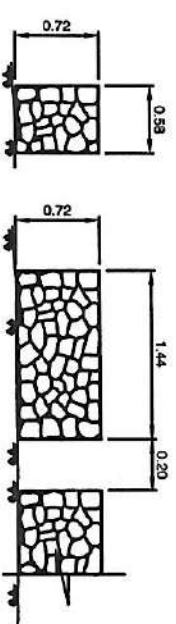
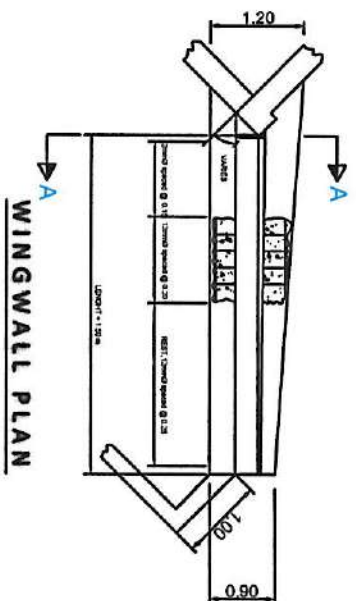
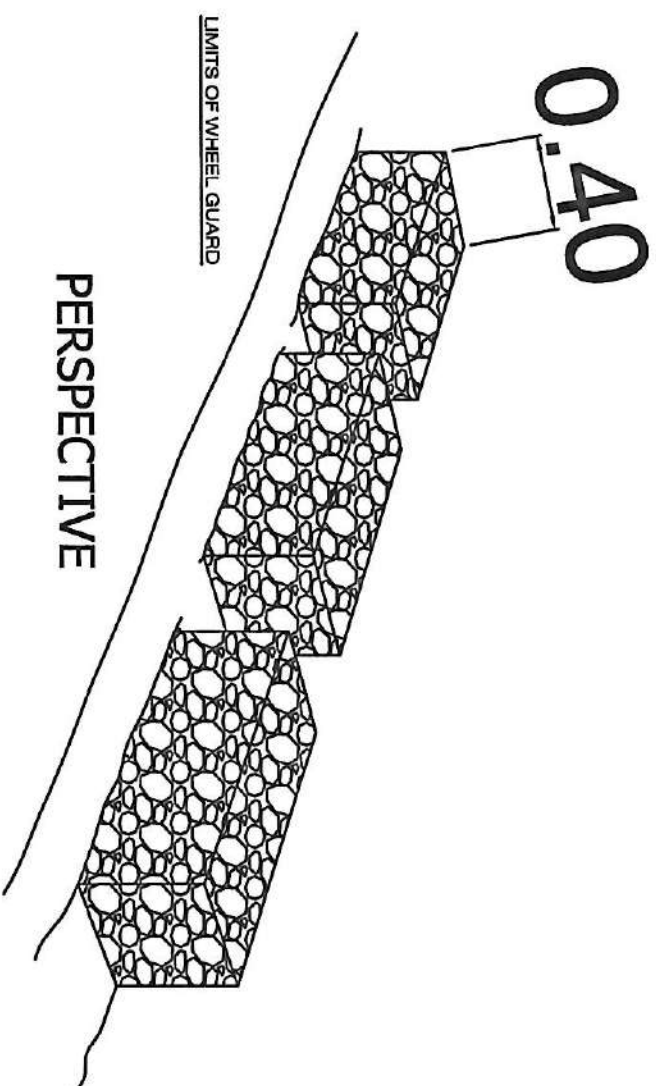
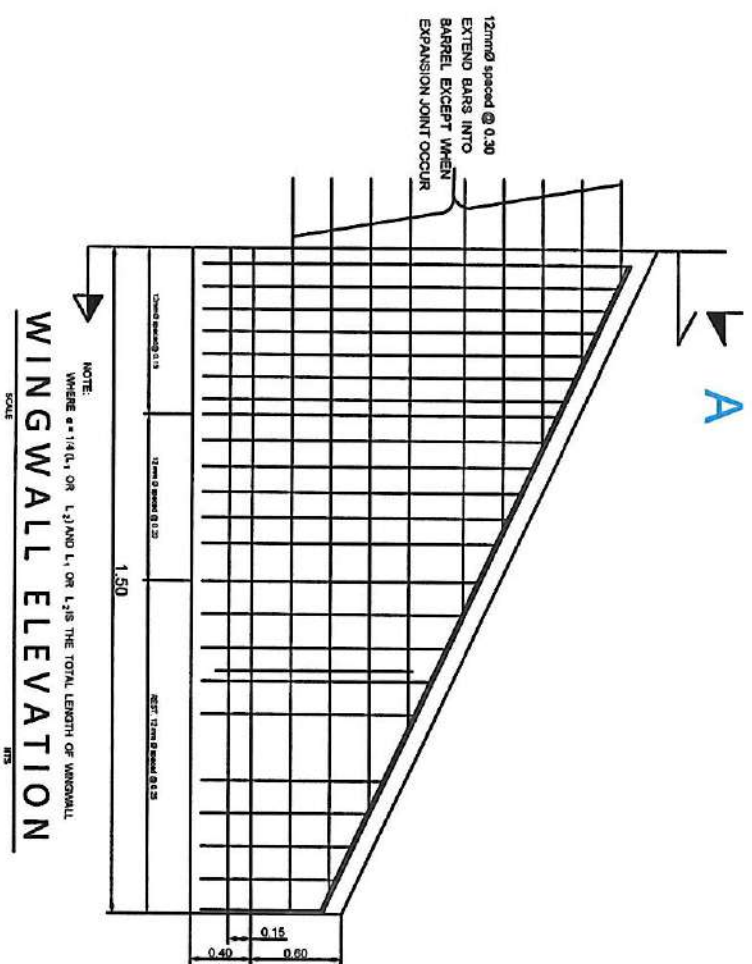
SCALE

NTS

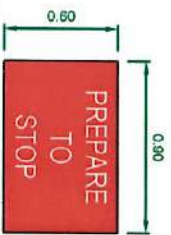


MS
S-2
2025





TRAFFIC SIGNS AND HAZARD MARKERS



SIGN NO.	SIZE (mm)	LETTERS	BACKGROUND
T1-18	900 x 900	LINE 1 - WHITE 120 MM LINE 2 - WHITE 120 MM REFLECTORIZED	RED REFLECTORIZED

T1 - 18 DETAIL



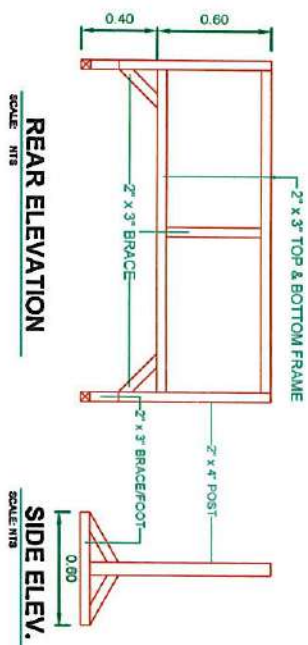
SIGN NO.	SIZE (mm)	LETTERS	BACKGROUND
T1-4	900 x 900	BLACK	REFLECTORIZED - FLOUORESCENT PINK DAY USE - REFLECTORIZED FOR NIGHT USE

T1 - 5 DETAIL



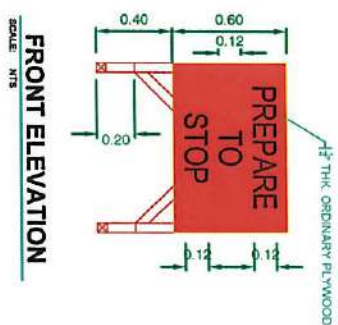
SIGN NO.	SIZE (mm)	LETTERS	BACKGROUND
R6-8	450 DIA.	WHITE 140 CM REFLECTORIZED (INCLUDING BORDER)	RED REFLECTORIZED

R6 - 8 DETAIL

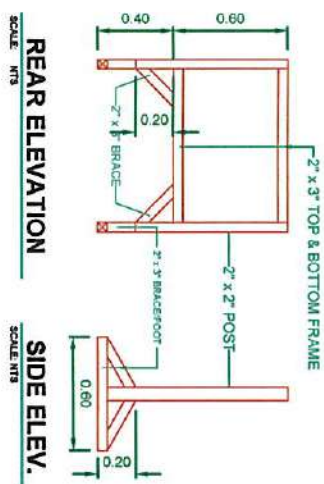


REAR ELEVATION

SIDE ELEV.

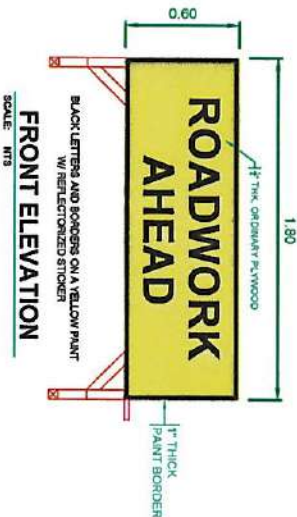


FRONT ELEVATION



REAR ELEVATION

SIDE ELEV.

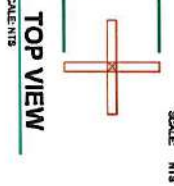


FRONT ELEVATION

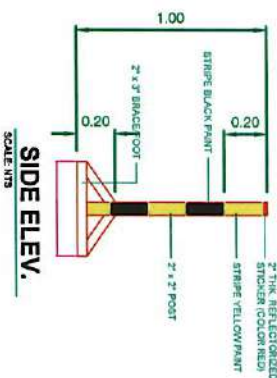
SIDE ELEV.

SIGN NO.	SIZE (mm)	LETTERS	BACKGROUND
T1-1	1800 x 600	LINE 1 - BLACK 120 CM LINE 2 - BLACK 120 CM REFLECTORIZED	YELLOW REFLECTORIZED

T1 - 1 DETAIL



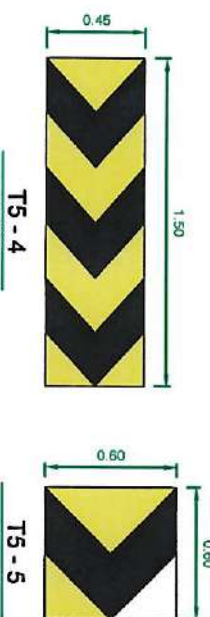
TOP VIEW



SIDE ELEV.

SPACING	ON LAYERS	CONDITION
5 - 10 M	WHEN USED AROUND SMALL WORK SITES MAY BE REQUIRED TO BE TO GUIDE PREVENTING OR TO PREVENT TRAFFIC TRAVEL AROUND SMALL WORK SITES	
10 - 20 M	WHEN USED AS LONGITUDINAL SEPARATION BETWEEN TRAFFIC FLOWS OR A CLOSED LANE MAY BE REQUIRED TO BE TO GUIDE PREVENTING OR TO PREVENT TRAFFIC TRAVEL AROUND SMALL WORK SITES	

- NOTES :
1. BOLLARDS SHALL BE FLOUORESCENT RED OR ORANGE PLASTIC THAT IS RESILIENT TO IMPACT AND WILL NOT DAMAGE VEHICLES WHEN HIT AT LOW SPEED.
 2. HEIGHT: UP TO 1 M.
 3. AT NIGHT TIME OPERATION THE BOLLARDS MUST BE FITTED WITH REFLECTIVE TAPE WITH A MINIMUM BANDWIDTH OF 250mm.

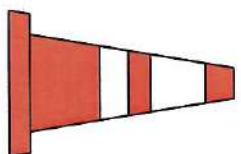


T5 - 4

T5 - 5

SIGN NO.	SIZE (mm)	ONEWAYS	BACKGROUND
T5-4	1800 x 600	BLACK 177 MM AT 450	YELLOW REFLECTORIZED
T5-5	600 x 600	BLACK 177 MM AT 450	YELLOW REFLECTORIZED

T5 - 4 & T5 - 5 DETAIL



TYPICAL TRAFFIC CONE DETAIL

SPACING	ON LAYERS	CONDITION
5 - 10 M	WHEN USED AROUND SMALL WORK SITES MAY BE REQUIRED TO BE TO GUIDE PREVENTING OR TO PREVENT TRAFFIC TRAVEL AROUND SMALL WORK SITES	
10 - 20 M	WHEN USED AS LONGITUDINAL SEPARATION BETWEEN TRAFFIC FLOWS OR A CLOSED LANE MAY BE REQUIRED TO BE TO GUIDE PREVENTING OR TO PREVENT TRAFFIC TRAVEL AROUND SMALL WORK SITES	

- NOTES :
1. TRAFFIC CONES SHALL BE FLOUORESCENT RED OR ORANGE PLASTIC. IT MUST BE RESILIENT TO IMPACT AND WILL NOT DAMAGE VEHICLES WHEN HIT AT LOW SPEED.
 2. HEIGHT VARIES FROM 450mm UP TO 750mm FOR USE ON EXPRESSWAYS OR IN VERY HIGH SPEED SITUATIONS.
 3. TRAFFIC CONES SHALL BE DESIGNED TO BE STABLE IN WIND AND THE AIR TURBULENCE FROM PASSING TRAFFIC.
 4. AT NIGHT TIME OPERATION THE CONES MUST BE FITTED WITH REFLECTIVE TAPE WITH A MINIMUM BANDWIDTH OF 150mm.



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE DISTRICT ENGINEER
LIVANO DEL NORTE DISTRICT ENGINEERING DISTRICT
Serrano Drive, Del Carmen, Iligan City

REPAIR MAINTENANCE OF DAMAGE STRUCTURE ALONG
TUBOD-BALANES ROAD (200+200) - BARBERS PT. ROAD
TUBOD, CAGAYAN DE ORO CITY, CAGAYAN PROVINCE, CAGAYAN
ISLAND, PHILIPPINES

SIGNAGES

DESIGNED BY
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CHECKED BY
SUKANILLO M. HADJINOR

SUBMITTED BY
FABIAN D. MANAN

RECOMMENDING APPROVAL
MARILIZA E. PANGING

APPROVED
LY KHAN U. ALI, MPA, A.E.R.

SET NO.
B-1

SHEET NO.
10